300MW Hydropower project by JHPL

Document Prepared by

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

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Client	JSW Hydro Energy Limited (formerly Himachal Baspa Power Company Ltd)

[1] https://registry.verra.org/app/projectDetail/VCS/92

Prepared by	LGAI Technological Center, S.A. (Applus+ Certification)
Approved by	Mr. Agustín Calle de Miguel LGAI Technological Center S.A. (Applus+ Certification) - VVB Technical Manager
Work carried out by	Mr. Amit Rai - Lead Auditor / Technical Expert Ms. Shruti Shrivastava – Auditor /Technical Expert in Trainee Mr. Denny Xue - Technical Reviewer.

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 "300MW Hydropower project by JHPL" (VCS ID 92).

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 300 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 Power Purchase Agreement signed with Himachal Pradesh State Electricity Board (HPSEB)/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 17.0"
- the project's monitoring plan is assessed against "ACM0002. - Version 17.0"
- 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 joint PD&MR/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-July-2024(including both days) and the project activity achieved 2,346,049 tCO_2e emission reductions during this monitoring period thereon displaced 2,529,980.71 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, 03 Corrective Action request (CARs) and 05 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 "300MW Hydropower project by JHPL." 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 17.0" /17/
- the project's monitoring plan is assessed against "ACM0002 – Version 17.0" /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 joint PD&MR/4/and registered approved methodology ACM0002 – Version 17.0. The MR is reviewed against the criteria (See Section 1.1 above) including the approved applied methodology ACM0002., Version 17.0/17/. 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/, JMRs/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 17.0"/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 involves installation of a run-of river hydropower plant system with capacity 300 MW. The unit consists of three phase of capacity 100 MW and three synchronous generators manufactured by Siemens A.G rated 111 MVA with 10% overload margin with higher temperature rise, resulting in net generation capacity of 300MW/03/. The project activity uses water diverted from the flow of river Baspa. The flow in the river Baspa is contributed by several seasonal streams or ephemeral rivers and numerous glaciers. The diversion barrage of the project is located across river Baspa, one of the major tributaries of river Satluj, at Kuppa in Himachal Pradesh.

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 VCS Joint PD&MR/4/. The Turbine Generators were commissioned on Unit-1: 24-May-2003, Unit-II: 29-May-2003 and Unit-III: 08-June-2003, which was verified against the registered VCS Joint PD & MR/4/ and commissioning certificates/1/.

By document review 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 Joint PD & MR/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-MR/4/ are followed onsite. All the emergency preparedness as mentioned in the registered PD-MR/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/92.

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 PP has entered into long term power purchase agreement with Himachal Pradesh State Electricity Board (HPSEB)/9/. The electricity generated by the project activity is supplied to the Indian electricity grid

The current monitoring period is covered from 01-August-2022 to 31-July-2024(inclusive of both dates) and the project activity is exported 2,529,980.71 MWh of net electricity to Indian grid and achieved 2,346,049 tCO_2e emission reductions.

2 VERIFICATION PROCESS

The registered VCS project is undergoing 5th verification period (2nd CP), 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	12-November-2024
Project design and characteristics	12-November-2024

Interview with relevant personnel	12-November-2024
Desk review	12-November-2024
Audit team internal meeting	12-November-2024
Final meeting.	12-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 Validation 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 joint PD&MR [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 12-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 MR Version 2.0/6/ 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 PD-MR 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 02, dated on 16-November-2024 /6/ and the Emission Reductions (ER) Calculations/7/ were assessed as part of the verification. In addition, the registered Project Description-Monitoring Report (PD-MR), version 2, 22-February-2019 /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	12-November-2024 (On-site visit)	Project Implementation, JMR & invoicing procedure,	Mr. Amit Rai (Lead Auditor/Technical Expert) & Ms. Shruti Shrivastava (Auditor/Technic
2.	Dadhwal	Mr. Rajeeb Singh	Assistant General Manager JSW Hydro Energy Limited		Management practices, data storage, QA/QC, calibration,	

3.	Sharma	Mr. Vikas	Manager (Technical). JSW Hydro Energy Limited		Grievance mechanism	al Expert in Trainee)
4.	Negi	Mr. Devi Chand	Local Stakeholder		Grievances, Issue related to local area development, Awareness about the project under GHGs reductions. SDGs	
5.	Negi	Ms. Amitabh	Local Stakeholder			
6.	Gian	Mr. Bharat	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 12-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: 12-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 village in district Kinnaur of Himachal Pradesh, India.	12-November-2024	Mr. Amit Rai (Lead Auditor/Technical Expert) & Ms. Shruti Shrivastava (Auditor/Technical Expert in Trainee)

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 03 and 05 CLs have been raised for this Verification.

2.5.1 Forward Action Requests

This is 5th periodic verification (2nd CP) 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

There are no any deviation taken under current verification period. However, few deviations approved in previous verification periods which were cross-checked and verified with registered documents/4/ and found acceptable.

The following deviation is included in Monitoring period 01-January-2018 to 31-October-2020 and 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 01-September-2018. The relevant document for change in company name and corresponding change in communication agreement to VCS has been provided. The project ownership and project name change deviation has been approved in Verification report (Monitoring duration 01-November-2020 to 31-July-2021)[2].

Timelines:

1st Crediting Period: 01-April-2006 to 31-March-2016 (inclusive of both days)

2nd Crediting Period: 01-April-2016 to 31-March-2026 (inclusive of both days)

Verification Number	Monitoring Period Dates (inclusive of both mentioned days)
First Verification of Second Crediting Period	01-September-2015 to 31-March-2016 (Under First Crediting Period)[3]
	01-April-2016 to 31-December-2012 (Under Second Crediting Period)

[2] https://registry.verra.org/mymodule/ProjectDoc/Project_ViewFile.asp?FileID=68049&IDKEY=2kjalskjf098234kj28098sfkjlf098098kl32lasjdflkj909293839571 section 3.3 page 14

[3] https://registry.verra.org/mymodule/ProjectDoc/Project_ViewFile.asp?FileID=64497&IDKEY=L0e98hfalksuf098fnsdalfkjfoijmn4309JLKJFjlaksjfla9088941363

Second Verification of Second Crediting Period	01-January-2018 to 31-October-2020[4]
Third Verification of Second Crediting Period	01-November-2020 to 31-July-2021[5]
Fourth Verification of Second Crediting Period	01-August-2021 to 31-July-2024

The following deviations are included in previous verification (Monitoring Period: 01-August-2021 to 31-July 2022, (inclusive of both start and end dates).

Deviation 2: The Longitude (E) and Latitude (N) of the location of the Baspa powerhouse 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 Baspa project have been revised and are now recorded as.

Longitude (E) : 78°11'23"
Latitude (N) : 31°29'48"

Deviation 3: A typo error was identified in the Joint PD & MR having monitoring date (01- September-2015 to 31-December 2017, (inclusive of both start and end dates)[3] regarding start date of project activity. The reports mention 08-June-2003 but the unit-I commissioned in 24-May-2003. The correct date is mentioned correctly in every monitoring previous and after the crediting period. The deviation doesn't impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

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] https://registry.verra.org/mymodule/ProjectDoc/Project_ViewFile.asp?FileID=64503&IDKEY=flksjoiuwqowrnoiuomnckjashoufifmln902309ksdflku098n88949637

[5] https://registry.verra.org/mymodule/ProjectDoc/Project_ViewFile.asp?FileID=68048&IDKEY=k98klasmf8jflkasf8098afnasfkj98f0a9sfsakjflsakjf8df93838192

4 VERIFICATION FINDINGS

4.1 Project Details

<table>
<tr><th>Item</th><th>Evidence gathering activities, evidence checked, and assessment conclusion:</th></tr>
<tr><td>Audit history</td><td>
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<tr><th colspan="2">Audit type</th><th>Period[6]</th><th>Program</th><th>Validation/verification body name</th><th>Number of years</th></tr>
<tr><td></td><td>First Verification & Validation of Second Crediting period</td><td>01-April-2016 -- 31-December-2017</td><td>VCS</td><td>LGAI TECHNOLOGICAL CENTER, S.A. (APPLUS+ CERTIFICATION)</td><td>01 Years 08 Month 30 Days</td></tr>
<tr><td></td><td>Second Verification</td><td>01-January-2018 -- 31-October-2020</td><td>VCS</td><td>TUV SUD SOUTH ASIA PVT LTD</td><td>02 Years 09 Month 29 Days</td></tr>
<tr><td></td><td>Third Verification</td><td>01-November-2020 -- 31-July-2021</td><td>VCS</td><td>LGAI TECHNOLOGICAL CENTER, S.A. (APPLUS+ CERTIFICATION)</td><td>08 Month 29 Days</td></tr>
<tr><td></td><td>Fourth Verification</td><td>01-August-2021 -- 31-July-2022</td><td>VCS</td><td>VKU CERTIFICATION PVT. LTD</td><td>00 Years 11 Month 30 Days</td></tr>
</table>
</td></tr>
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[6] 1st Crediting Period: 01-April-2006 to 31-March-2016 (inclusive of both days) and 2nd Crediting Period: 01-April-2016 to 31-March-2026 (inclusive of both days) whose audit history details are included under the above table.

		Fifth Verification	01-August-2022 -- 31-July-2024 (Current Verification)	VCS	LGAI TECHNOLOGICAL CENTER, S.A. (APPLUS+ CERTIFICATION)	02 Years 00 Month 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[7/24/], Validation-verification report, registered VCS PD-MR, 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[8], Gold Standard for the Global Goals (GS4GG[9]), Global Carbon Council (GCC[10]), International Carbon Registry (ICR[11]) /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. 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.					

[7] https://registry.verra.org/app/projectDetail/VCS/92

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

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

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

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

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-July-2024 (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 (via state electricity board). 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 2,529,980.71 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 2,346,049 tCO_2 in to the atmosphere. PP has imparted total 112 trainings during the project lifetime as verified from the training records/22/ submitted to PP and during the onsite visit/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 validation[12] of project activity as verified from validation report/4/ of the project activity. Project proponent has identified following stakeholders. 1. Local People 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 JHPL

[12] https://registry.verra.org/app/projectDetail/VCS/92

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 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 as project land fully acquired from project proponent instead of lease. 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 has 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. 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 5th verification of 2nd CP. 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 grievance's were 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	No Natural of human induced risks to stakeholder's wellbeing were identified for this project activity.

stakeholders' wellbeing	As per the section 3.4 of joint validation-verification report/4/, it was stated that there are no risks from the project. Furthermore, assessment team through the documentary review, reviewing the project location and 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 (JMRs & 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[13] 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

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

	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 labor 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 labor law and PPs not employ victims of human trafficking, forced labor, 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.
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[14], the UNDRIP [15] 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. 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 &

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

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

	Social Policy/28/ & Environment Impact Assessment report/33/ 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-MR 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-MR/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-MR/4/.
Findings	CAR03 was 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 Joint PD-MR/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 Joint PD-MR /4/. The assessment of each parameter identified in the project activity to calculate the GHG emission reductions have been done in the tables given below – 1. Data/Parameter, Unit Net Electricity supplied to the grid by the project activity during the year y ($EG_{PJ,y}$/$EG_{facility,y}$) in MWh

Purpose of data	Baseline emissions
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	The quantity of net electricity generation supplied by the project plant to the grid are monitored from the bi-directional energy meter of accuracy class 0.2s. Make – SECURE, Accuracy class by energy meter – 0.2s ,Calibration

		Frequency – Once in 5 years (refer section 4.4 for Meter/calibration details).
	Measuring/Reading/ Recording frequency	Continuous monitoring of electricity generation and import, monthly recording of net electricity export (Joint Meter Reading Reports)/11/.
	Data collection (from data generation, aggregation, to recording, calculation and reporting)	At the end of each month, the data from the monthly meter readings as provided in Joint Meter Reading Report/11/, will be added up to obtain the total monitoring period net electricity generation. The registered VCD PD-MR/4/ states that the calibration frequency of the equipment should as per the manufacturer specification i.e., once in five years. However, there is no delay in calibration has been observed confirmed from the submitted calibration certificates/5/ & registered previous verification documents/4/. Therefore, it was accepted by the assessment team.
	Verified value	2,529,980.71MWh
	Cross checks	The verified values were crosschecked from the monthly invoices raised to HPSEB. The values in Joint Meter reading reports/11/ and Invoices raised to HPSEB/11/ are same.
	QA/QC procedures applied	The necessary QA/QC procedures are in place and the data management system is effective and reliable. The technical details of the meters are specified in the MR/6/ are found consistent with calibration certificates/5/.
	The above-mentioned parameter was measured in accordance with the approved VCS Joint PD-MR/4/ and monitoring plan of the applied methodology/17/ as ex-post. The following parameters were directly taken from the approved VCS Joint PD-MR/4 to calculate the emission reduction as ex-ante fixed:	

	a) $EF_{Grid, CM,y}$: The parameter is CO_2 emission factor of the grid. The value of the parameter is 0.9273 as per the registered Joint PD-MR[4]. <u>Emission Reduction Calculations:</u> The calculation of emission reduction has been done in accordance to the applied methodology[17]. As per the applied methodology, the values of project emission and leakages are considered as zero for the project activity. The equation used for calculation of baseline emission is given below: Baseline emissions are calculated as follows: $BE_y = EG_{PJ,y} X EF_{grid,CM,y}$ Where, BE_y = Baseline Emissions (tCO_2/year) $EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh/year) $EF_{grid, CM, y}$ = Baseline Emission Factor (Combined margin CO2 emission factor for grid) Therefore, The baseline emissions for Year 2022 (from 01-August-2022 till 31-December 2022) : = 618,282.71MWh * 0 .9273 tCO_2/MWh = 573,333tCO_2e (Round down Value). The baseline emissions for Year 2023 (from 01-January 2023 till 31-December- 2023): = 1,163,976MWh * 0 .9273 tCO_2/MWh = 1,079,354tCO_2e (Round down Value) The baseline emissions for Year 2024 (from 01-January 2024 till 31-July-2024): = 747,722.71MWh * 0 .9273 tCO_2/MWh = 693,362tCO_2e (Round down Value) Hence, total baseline Emissions = (573,333+ 1,079,354 + 693,362) tCO_2e = 2,346,049tCO_2e. Project emissions are calculated as follows: As per para 38 of ACM0002 Version 17.0, for all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected. The calculation of project emissions according to the methodology includes accounting for the CH4 emission from the reservoir, as the project activity involves a run-of-the-river system with a reservoir used for storing water

during the day. Therefore, further calculation for project emissions are as follows:

Parameters	Unit of Measurement	Value
Capacity	MW	300
Running Hours	Hours	24
Reservoir area	Ha	33

PD= (Cap $_{PJ}$ – Cap $_{BL}$) / (A$_{PJ}$ - A$_{BL}$)

PD = Power density of the project activity, in W/m2

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).

A $_{PJ}$ = Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m2)

A $_{BL}$ = Area of the single or multiple reservoirs measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m2). For new reservoirs, this value is zero

Since the reservoir is a newly installed facility and does not result in the increase of existing reservoir, and Cap $_{BL}$ and A $_{BL}$ can be assumed to be zero. The reservoir area is 33 ha (FSL).

Thus,

PD = Cap $_{PJ}$/ A $_{PJ}$= (300*1000*1000)/ (33*10000) = 909 W/m^2

As per the methodology ACM0002 V17 para 43(c), if the power density (PD) of the power plant is greater than 10 W/m^2, then the project emission is zero. Hence the Project Emission are PEy =0 tCO_2e.

It has been clearly shown by the PP in the MR/6/ that the power density of the project activity is 909 W/m^2, which is greater than 10W/m^2. Therefore, as per ACM0002 it can be taken as zero. This consideration was found to be in line with the applied methodology ACM0002 version 17/17/.

Leakages have been considered as zero for the project activity as per the applied methodology/17/.

Therefore,
Net Emission reductions = Baseline emissions - Project emissions – Leakage

	= 2,346,049 – 0 – 0 =2,346,049 tCO_2e. 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 cross checked from the monthly electricity generation records/JMRs and 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-MR/4/. Assessment team confirmed that the GHG emission reductions and removals have been quantified correctly in line with the registered VCS PD-MR/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	CL 02 was raised during the verification process and closed successfully. Please refer Appendix 3 of this report for the detailed closure of the findings.
Conclusion	The metering arrangement is dedicated bi-directional electronic energy meters/3/ of accuracy class 0.2s (main and backup) at project site. These meters record several parameters including net electricity generation. These electricity meters are being used by PP and grid company for monthly generation reports/JMRs/11/. The details of meters are as follow There are four (4) meters in the project activity in two sets – two main meters and remaining two are check meters.

Feeder	Main Meter	Check Meter Serial Number	Calibration Date Serial Number	Due Date

Feeder 1	Q0333309	Q0333448	17-November-2021	16-November-2026
Feeder 2	Q0333368	Q0333403	18-November-2021	17-November-2026

As per submitted meter change "Minutes of Meeting" document/5/, New Meters are installed by HPSLDC as per regulations: 7(i), Table-1 of the Central Electricity Authority Regulations 2006 for implementation of SAMAST Framework in HP state as per decision of Forum of Regulators (FOR). The changed meter details are as follows:

Feeder	Meter	Old Meter Serial Number	Meter Change date	New Meter Serial Number
Feeder 1	Main Meter	Q0333309	11-November-2022	HPU13630
Feeder 1	Check Meter	Q0333448	11-November-2022	HPU13631
Feeder 2	Main Meter	Q0333368	11-November-2022	HPU13632
Feeder 2	Check Meter	Q0333403	11-November-2022	HPU13633

Below meters are calibrated & tested by PGCIL on dated 10-November-2022, jointly witnessed by JSWHEL & HPSEBL, solan representatives. Moreover, PP follows the good practice of calibrating/replacing meters annually confirmed during the interview the onsite visit/19/.

Feeder	Main Meter	Check Meter Serial Number	Calibration Date Serial Number	Due Date
Feeder 1	HPU13630	HPU13631	10-November-2022	09-November-2027
Feeder 2	HPU13632	HPU13633	10-November-2022	09-November-2027

Verification team has checked the calibration/replacement of meter evidences/5/ submitted for the electricity meters and confirmed that they are

	calibrated as per calibration frequency (once in five year) mentioned in registered monitoring plan. 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 PD-MR/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 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 5th periodic verification (2nd CP) of GHG Emission Reductions for the project activity "300MW Hydropower project by JHPL" (*VCS project ID #92*)/24/.

The monitoring period included in the Monitoring Report/6/ for which this verification applies is: 01-August-2022 to 31-July-2024 (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-Monitoring Report (PD-MR)/4/ and the approved methodology, ACM0002., version 17.0./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-MR 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 PD-MR/4/;
- The monitoring plan in registered PD-MR is as per the applied methodology/17/;
- The monitoring complies with the monitoring plan in the registered PD-MR/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 03 Corrective action requests (CARs), 05 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-MR/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-July-2024**]

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-August-2022 to 31-	573,333	0	0	0	0	573,333

December-2022						
01-January-2023 to 31-Decemebr-2023	1,079,354	0	0	0	0	1,079,354
01-January-2024 to 31-July-2024	693,362	0	0	0	0	693,362
Total	2,346,049	0	0	0	0	2,346,049

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-August2022 to 31-December-2022	508,202	573,333	12.82%	The actual emission reductions achieved during this vintage are 12.82% higher than the estimated emission reductions in VCS PD-MR[6] for corresponding vintage period. This is mainly due to the variations in water flow in a river which leads to higher PLF generation. As variations in the water flow in river are not in control of the PP and hence the justifications provided by project proponent during onsite interview are found acceptable.
01-January-2023 to 31-Decemebr-2023	1,212,379	1,079,354	-10.97%	The actual emission reductions achieved during this vintage are 10.97% lower than the estimated

				emission reductions in VCS PD-MR[6] for corresponding vintage period. This is mainly due to the water flow in a river and breakdown[13] & shutdown occurs during current monitoring period. This unavailability is detailed in Appendix-3 of the monitoring report[6] and Appendix-6 of this verification report. And hence the justifications provided by project proponent are acceptable.
01-January-2024 to 31-July-2024	707,497	693,362	-2.0%	The actual emission reductions achieved during this vintage are 2.% lower than the estimated emission reductions in VCS PD-MR[6] for corresponding vintage period. This is mainly due to the water flow in a river and breakdown[13] & shutdown occurs during current monitoring period. This unavailability is detailed in Appendix-3 of the monitoring report[6] and Appendix-6 of this verification report. And hence the justifications provided by project proponent are acceptable
Total	2,428,078	2,346,049	-3.38%	The actual emission reductions achieved during current monitoring period are 3.38% lower than the estimated emission reductions in VCS PD-MR[6] for corresponding vintage period. This is mainly due to the flow of water in a river and breakdown[13] & shutdown details during current monitoring period. This unavailability is detailed

				in Appendix-3 of the 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/	HPSEB	Commissioning certificate issued by HPSEB (Himachal Pradesh State Electricity Board Unit I Unit II Unit III	Office notification 598-809 dt.08-July-2003 Dt. 24-May-2003 Dt. 29-May-2003 Dt. 08-June-2003	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 VCS PD Approved VCS Joint PD-MR for RCP Joint Validation & Verification Report Previous Verification Report for period 01-August-2021 to 31-July-2022.	https://registry.verra.org/app/projectDetail/VCS/92 Version 1.0, dated 21-March-2018 Version 2, dated 22-February-2019 Version 2, dated 29-March-2018 Version 1, 27-February-2023	Others
/5/	PGCIL (Power Grid Corporation	Calibration Certificates/Minutes of Meeting for Meter Change & calibration of Energy Meters	Dated of Calibration:10-November-2022	Project Proponent

No.	Author	Title	References to the document	Provider
	of India Limited)			
/6/	Project Proponent	Monitoring Report version 01 (Initial) Monitoring Report version 02 (Final)	12-November-2024 16-November-2024	Project Proponent
/7/	Project Proponent	Emission reduction sheet version 01(Initial) Emission reduction sheet version 02 (Final)	12-November-2024 16-November-2024	Project Proponent
/8/	National Environmental Engineering Research Institute	Environment Impact Assessment (EIA) Report	April 2002	Project Proponent
/9/	Project Proponent And Grid Company	Power Purchase Agreement (PPA) • Signed Between PP (Jaiprakash Hydro-Power Limited and Himachal State Electricity Board (HPSEB) • Subsequent amendment in PPA	Dt. 04-June-1997 Dt. 28-February-2003	Project Proponent
/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	Monthly Generation Records/JMRs and respective invoices/sales records for the monitoring period 01-August-2022 to 31-July-2024	For the monitoring period 01-August-2022 to 31-July-2024	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 allowance trading for the concerned monitoring period	19-September-2024	Project Proponent

No.	Author	Title	References to the document	Provider
/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-July-2024	Project Proponent
/15/	Project Proponent	Grievance register maintained at site	For the monitoring period 01-August-2022 to 31-July-2024	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)	Version 17.0 https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQC0PIWPGWDN8ED5PG https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v6.pdf	Others
/18/	NA	Onsite photographs of WTGs, components /Videos /Meters photographs, etc	-	Project Proponent
/19/	VVB	Onsite audit records	Dated 12-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
/22/	Project Proponent	Training Records	01-August-2022 to 31-July-2024	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/92	Others
/25/	UNFCCC	Official registry website of Clean Development Mechanism	Last retrieved data on 16-November-2024	Others

No.	Author	Title	References to the document	Provider
		https://cdm.unfccc.int/Projects/projsearch.html		
/26/	GS	Official registry website of Gold Standard https://www.goldstandard.org/	Last retrieved data on 16-November-2024	Others
/27/	GCC	Official registry website of Global Carbon Council https://www.globalcarboncouncil.com/	Last retrieved data on 16-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-July-2024	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 16-September-2024	Others
/32/	I-REC	Official registry website of International REC (I-REC) registry: https://www.irecstandard.org/	Last retrieved data on 16-September-2024	Others
/33/	Govt. of Himachal Pradesh	Regulatory permissions: • Implementation Agreement signed between Governor of State Himachal Pradesh & PP	Dated – 18_November 1999	Project Proponent

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~~				

Table 1. CL from this validation / verification

CL ID	01	**Section no.**	3.2	**Date:** 12-November-2024
Description of CL				
In section 3.2.2, deviation details incorporated for current monitoring period are ambiguous as these were already approved under previous verifications. PP shall provide justification along with supportive evidences.				
Project participant response				**Date:** 16-November-2024
Typo Error are being corrected and Revised MR is now being submitted to verification team.				
Documentation provided by project participant				
Revised Monitoring Report				
DOE assessment				**Date: 18**-November-2024
Section 3.2.2, 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, CL is closed.**				

CL ID	02	**Section no.**	4.4	**Date:** 12-November-2024

Description of CL	
Under appendix 2 of submitted monitoring report, incorporated meter details are observed to be inconsistent with previous registered monitoring report and details provided under JMRs for current monitoring period. Thus, PP shall clarify the inconsistency and submit correct calibration report/meter change document.	
Project participant response	**Date:** 16-November-2024
Appendix 2 are being revised as per calibration details in revised MR and being submitted to verification team.	
Documentation provided by project participant	
Revised Monitoring Report Calibration Record	
DOE assessment	**Date: 18**-November-2024
Energy meter details under appendix 2, has now been updated in revised monitoring report, which are checked by the verification team and found consistent with submitted meter replaced/calibration documents and also found in-line with previous monitoring report. **Hence, CL is closed.**	

CL ID	03	Section no.	4.1	Date: 12-November-2024
Description of CL				
For SDG 7 & SDG 13 under the Table 1 of the MR mentions inconsistent values of the electricity generation and the actual emission reductions with reference to ER calculation sheet. PP shall clarify the inconsistency.				
Project participant response				**Date:** 16-November-2024
Table 01 information are being revised as approved monitoring reports in revised MR and being submitted to verification team.				
Documentation provided by project participant				
Revised Monitoring Report				
DOE assessment				**Date:** 18-November-2024
Table 1 of section 1.12 of revised monitoring report now incorporating consistent details of total emission reductions & energy generation during previous verification activities (2nd crediting period). Further, details are verified with registered report's (https://registry.verra.org/app/projectDetail/VCS/92) of previous verifications and found acceptable to the verification team. **Hence, CL is closed.**				

CL ID	04	Section no.	4.2	Date: 12-November-2024
Description of CL				
• In section 2.1.4, details pertaining to grievances received during current monitoring period observed to be missing. PP shall provide detailed clarification and grievance register/forms covering the entire monitoring period.				

Project participant response	Date: 16-November-2024
Section 2.1.4 are being revised in revised MR and grievance register is being submitted to verification team.	
Documentation provided by project participant	
Revised Monitoring Report Grievance register	
DOE assessment	**Date:** 18-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-July-2024. **Hence, CL is closed.**	

CL ID	05	Section no.	5.3	Date: 12-November-2024
Description of CL				
• In section 5.4, of submitted monitoring report, Higher generation for vintage years has been observed, PP shall incorporate justification in-line with registered VCS-PD & additionality requirement.				
Project participant response				**Date:** 16-November-2024
During the current monitoring period, there is no evidence of higher generation; instead, a total decrease of 3.38% in generation has been observed. In contrast, during the vintage year 2022 (from 01-August 2022 to 31-December-2022), a higher generation of 12.82% was recorded. The variation in GHG emission reductions is attributed to increased electricity generation during the vintage period, driven by a higher PLF.				
Documentation provided by project participant				
Revised Monitoring period Revised Emission reduction sheet				
DOE assessment				**Date:** 18-November-2024
Justification provided by project owner for the increase in electricity generation during vintage (01-August-2022 to 31-December-2022) due to higher PLF, found to acceptable as further, considering overall generation below by 3.38 % during the current monitoring period falls below the estimated generation, cannot affect project additionality defined under registered VCS PD-MR. **Hence, CL is closed.**				

Table 3.CAR from this validation / verification

CAR ID	01	Section no.	4.1	Date: 12-November-2024
Description of CAR				

Under the section 1.1 & 1.2 of the MR, the chronology of the verification activity along with the audit history shall be required in line with the MR template guidelines, V4.4
Project participant response **Date:** 16-November-2024
The chronology of the verification activity along with the audit history are being added in monitoring report under section 1.1 & 1.2.
Documentation provided by project participant
Revised Monitoring period
DOE assessment **Date: 18**-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, CAR is closed.**

CAR ID	02	**Section no.**	4.1	**Date:** 12-November-2024
Description of CAR				
Section 3.2.2 of the MR contains inaccurate monitoring period as checked with other sections respectively. PP shall rectify the same in specific section and throughout the report in-line with sign contract & previous verifications.				
Project participant response				**Date:** 16-November-2024
Typo error is being corrected and section 3.2.2 are being revised.				
Documentation provided by project participant				
Revised Monitoring period				
DOE assessment				**Date: 18**-November-2024
Monitoring period details for respective deviations which were approved by VERRA are updated under section 3.2.2, which is further checked and found acceptable to the verification team. **Hence, CAR is closed.**				

CAR ID	03	**Section no.**	4.3	**Date:** 12-November-2024
Description of CAR				
Under submitted ER spreadsheet: • The electricity generation values incorporated for column's referenced to invoices are observed to be inconsistent with submitted JMR/Invoices records. Corrective action shall be required for further assessment. • PP shall include consistent details/information provided under the submitted bifurcation sheet (supportive of JMR/Invoices) for electricity generation (details like generation at sending end, energy received at delivery point, net saleable energy _etc)				
Project participant response				**Date:** 16-November-2024
The ER spreadsheet is being revised to align with the JMR and Invoice values. Correct electricity generation values are being incorporated, ensuring consistency with the submitted records.				

Documentation provided by project participant	
Revised ER spreadsheet	
DOE assessment	**Date: 18**-November-2024
Under submitted ER spreadsheet: • The electricity generation values incorporated for column's references to invoices are now corrected, further checked and found in-line with submitted JMR/Invoices. • The nomenclature of details provided for the bifurcation of JMR/Invoices spreadsheet parameters has now been corrected and made in-line with Invoices/JMR's. **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
JMR	Joint Meter Reading
JPD-MR	Joint Project Description and Monitoring Report
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-July-2024.

Month	Remarks	Total Duration (Hrs:Min)
September-2022	Unit-2 under forced outage due to Hydraulic Oil Leakage and Deflector-1 assembly displacement from 03:00 hrs. to 17:30 hrs. of 05-September-2022.	14:30
June-2023	Unit-3 under Planned Shutdown due to Rotor Earth Fault Alarm from 23:30 Hrs. of 23-June-2023 to 02:30 Hrs. of 24-June-2023.	03:00
July-2023	Unit-3 under Planned Shutdown for checking of slip ring and carbon brushes due to observed sparking from 10:45 Hrs. of 07-July-2023 to 13:15 Hrs. of 07-July-2023.	02:30
	Unit-3 under Planned Shutdown due to replacement of defective Generator Air Cooler from 13:00 Hrs. of 08-July-2023 to 15:45 Hrs. of 08-July-2023.	02:45
April-2024	Unit-1 under planned shutdown for Upgradation of Excitation System from 14:00 Hrs. of 12-April-2024 to 08:00 Hrs. of 15-April-2024.	66:00
July-2024	Unit-3 under forced shutdown due to electronic governor major fault from 15:30 hrs. to 17:10 hrs. of 27- July-2024.	01:40
	Total	90:25