



**Validation report form for post-registration changes for  
CDM project activities  
(Version 03.0)**


*Complete this form in accordance with the instructions attached at the end of this form.*

**BASIC INFORMATION**

<b>Title and UNFCCC reference number of the project activity</b>	Run-of-the-river Hydroelectric Power Project in Uttarakhand by Alaknanda Hydro Power Company Limited (UNFCCC reference number:4776 <sup>1</sup> )
<b>Process track</b>	<input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
<b>Version number of the validation report</b>	02
<b>Completion date of the validation report</b>	04/11/2020
<b>Type(s) of PRCs</b>	<input type="checkbox"/> Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents <sup>2</sup> <input checked="" type="checkbox"/> Corrections <input type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan <input checked="" type="checkbox"/> Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents <input type="checkbox"/> Changes to the project design <input type="checkbox"/> Changes specific to afforestation and reforestation project activities
<b>Version number of PDD to which this report applies</b>	06
<b>Project participants</b>	M/s Alaknanda Hydro Power Company Limited
<b>Host Party</b>	India
<b>Applied methodologies and standardized baselines</b>	Selected Methodology: Consolidated baseline methodology for grid-connected electricity generation from renewable sources (ACM0002, Version 12.1.0) <b>Standardized baseline:</b> Not Applicable
<b>Mandatory sectoral scopes</b>	01

<sup>1</sup> <https://cdm.unfccc.int/Projects/DB/BVQI1304680909.79/view>

<sup>2</sup> Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

<b>Conditional sectoral scopes, if applicable</b>	NA
<b>Name and UNFCCC reference number of the DOE</b>	LGAI Technological Center, S.A. (Applus+ Certification) UNFCCC Ref. No.: E-0032
<b>Name, position and signature of the approver of the validation report</b>	Mr. Juan Sendín Caballero <i>Applus+ Certification Business Unit Managing Director</i> Signature: 

## SECTION A. Executive summary

Alaknanda Hydro Power Company Limited (AHPCL) is setting up a 330 MW 'run of the river' hydropower project in Uttarakhand. The 330 MW Shrinagar Hydro Electric Project is located on Alaknanda River, a major tributary of the Ganga River, a perennial river in Uttarakhand. The project site is 110 km from Rishikesh railhead, along Rishikesh - Badrinath highway. A weir has been proposed on Alaknanda River at Shrinagar, about 26 km downstream of Rudraprayag for generation of hydroelectricity. The power project is already started commercial operation in year 2015. The project proponent does not own or operate any other renewable energy project.

The purpose of the project activity is construction and operation of a grid connected renewable electricity generation hydroelectric power plant. The project activity reduces the GHG emission by use of a clean, renewable (hydropower) source for power generation in place of common fossil fuels. The project activity reduces the dependence on fossil fuel of the Indian GRID, which is dominated by emission intensive coal based thermal power plants. The project activity involves construction of a concrete gravity diversion weir across the river Alaknanda, and its left bank construction stage diversion tunnel, an intake on right bank consisting of 6 numbers intake tunnels joining two Head Race Tunnels (HRT) through a manifold section, of 9.8 m dia. circular head race tunnel followed by a RCC cut and cover conduit crossing the supana nallah, a desilting basin followed by power channel, fore bay, power house, tail race channel and switchyard. The powerhouse would accommodate 4 generating units of 82.5 MW each.

The project activity is evacuating the power generated from the project activity into four feeders at 400 KV at Srinagar, Vishnuprayag and Muzzfarnagar. The assessment team checks the same during the verification site visit.

As the project activity is a Greenfield activity and in the absence of the project activity the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources in the grid.

**Validation Scope:** The scope is defined as an independent and objective review of the project design document (PDD). The PDD is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology ACM0002 version 12.1.0. The validation was based on the requirements in the CDM Validation and Verification Standard for project activities version 02.0.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design document.

**Validation Process:** The project assessment is based on the CDM Validation and Verification Standard for project activities version 02.0 and is conducted using standard auditing techniques to assess the correctness of the information provided by the project participants. Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the CDM project activity are appointed.

Following are the task performed by the assessment team:

- I A desk review of the project design documentation;
- II Follow-up interviews with project stakeholders;
- III The resolution of outstanding issues and the issuance of the final validation report and opinion.

The prepared validation report and other supporting documents then undergo an internal quality control at the HQ (Accredited office) before being submitted to the CDM-EB.

In order to ensure transparency, assumptions must be clear and stated explicitly and background material must also be referenced. Applus+ Certification has developed a specific checklist customized for the project. The checklist demonstrates, in a transparent manner, the project criteria (requirements), discussion on each criterion by the assessment team, and the results from validating the identified criteria.

### **Appointment of the assessment team**

According to the sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center, S.A. (Applus+ Certification) has composed a project assessment team 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 shall be approved by the LGAI Technological Center, S.A. (Applus+ Certification) ensuring that the required skills are covered by the team.

The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A) / Auditor in Training (AiT).
- Technical Expert (TE).
- Technical Reviewer (TR).

The sectoral scope / technical area knowledge linked to the applied methodology/ies shall be covered by the assessment team.

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Mr. Sukanta Das	LA/TE	YES	YES	YES	YES
Mr. Denny Xue	TR	YES	YES	NA	NA

### **Document review**

The Project Design Document submitted by the Client was reviewed against the approved methodology 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. Please refer Appendix 3 of this report.

### **Follow-up interviews**

Applus+ Certification performed interviews, telephone conferences with project stakeholders to confirm selected information and to resolve issues identified in the document review.

### **Resolution of Clarification and Corrective Action Request**

The objective of this phase of the validation was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for Applus+ Certification's positive conclusion on the project design document. 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 validation process, the concerns raised and responses given are summarized in Appendix 4 below.

The final revised PDD version 06 dated 30/10/2020 submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the validation process are not considered to be significant with respect to the main CDM objectives. The two CDM 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 validation of the final documentation including the validation report and the checklist have to undergo an internal quality control by the technical review committee, i.e. each report has to be finally approved either by the head of the technical review committee or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one to avoid any conflict of interest.

After confirmation of the PP the validation opinion and relevant documents are submitted to the EB through the UNFCCC web-platform.

## **Conclusion**

Applus+ Certification has performed a validation of the “Run-of-the-river Hydroelectric Power Project in Uttarakhand by Alaknanda Hydro Power Company Limited”. The validation was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria, e.g. ACM0002 version 12.1.0) given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation and the subsequent follow-up interviews have provided Applus+ Certification with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by Applus+ Certification for registration with the UNFCCC.

Applus+ Certification has received a confirmation from the host Party that the project activity assists it in achieving sustainable development.

The validation has been performed following the requirements of the latest version of the CDM Validation and Verification Standard for project activities version 02 and on the basis of the contractual agreement. The single purpose of this report is its use during the registration process as part of the CDM/UNFCCC project cycle.

## **SECTION B. Validation team, technical reviewer and approver**

### **B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Validation findings
1.	Lead Auditor /Technical Expert	O R	Das	Sukanta	True Quality Certifications private Limited- Outsourced entity	Yes	Yes <sup>3</sup>	Yes	Yes

### **B.2. Technical reviewer and approver of the validation report on PRCs**

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	EI	Xue	Denny	Applus+ Certification
2.	Approver	IR	Sendin Caballero	Juan	Applus+ Certification

<sup>3</sup> The onsite inspection is the one conducted for the Verification Part on 15/07/2020 and the same is reflected in the Verification and Certification Report presented along with this PRC.

**SECTION C. Means of validation****C.1. Desk/document review**

The details of the document observed during the validation process are listed below in Appendix 3 of this report.

**C.2. On-site inspection**

Duration of on-site inspection: 30/10/2020 <sup>4</sup>				
No.	Activity performed on-site	Site location	Date	Team member
1.	<b>Assessment team confirmed the following:</b> <ol style="list-style-type: none"> <li><b>Calculation of Generation 3 year weighter average for OM</b></li> <li><b>The ER calculation and the conservative approach.</b></li> <li><b>Clarification on actual ER sheet</b></li> </ol>	<p>The project activity is located in Tehri Garhwal and Pauri Garhwal Districts in Uttarakhand, India. The Alaknanda River, on which the project has been proposed, rises in the glacier regions of the Greater Himalayas in the extreme northern part of the border district of Chamoli in Uttarakhand. The Mandakini River at Rudraprayag joins the Alaknanda. The length of Alaknanda up to Rudraprayag is 180 km with an average slope of 24.0 m per km. The Mandakini River runs for a length of 80.0 km up to the confluence at Rudraprayag with an average slope of 42.0 m per km</p>	30/10/2020	Mr. Sukanta Das

<sup>4</sup> Only Telephonic Interviews have been conducted for the PRC Part. The onsite inspection is the one conducted for the Verification Part on 15/07/2020 and the same is reflected in the Verification and Certification Report presented along with this PRC.

**C.3. Interviews**

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Verma	Aditya	Site In-charge	30/10/2020	As mentioned above in section D.2 of this report	Mr. Sukanta Das

**C.4. Sampling approach**

Not Applicable.

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

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	00	00	00
Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents	00	00	00
Corrections	00	00	00
Changes to the start date of the crediting period	00	00	00
Inclusion of a monitoring plan	00	00	00
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents	00	01	00
Changes to the project design	00	00	00
Changes specific to afforestation and reforestation project activities	00	00	00
Others (please specify)	00	00	00
<b>Total</b>	00	01	00

**SECTION D. Validation findings****D.1. Compliance with PDD form**

<b>Means of validation</b>	The guideline for completing CDM form version 11.0 for project activity is checked by the assessment team.
<b>Findings</b>	No findings raised for this compliance
<b>Conclusion</b>	The latest version 11.0 available in the UNFCCC site is used for the revision of PDD. The project activity description is in accordance to the PDD form and thus the same is acceptable to the assessment team.

**D.2. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents**

<b>Means of validation</b>	The post registration changes do not fall under this category.
<b>Findings</b>	The post registration changes do not fall under this category.
<b>Conclusion</b>	The post registration changes do not fall under this category.

**D.3. Corrections**

<b>Means of validation</b>	Assessment team checked the registered PDD version 06 dated 30/10/2020
<b>Findings</b>	No CAR is raised in this section
<b>Conclusion</b>	<p>Following corrections were carried out in the revised PDD version 06 dated 30/10/2020</p> <ol style="list-style-type: none"> <li>Due to new template format of the PDD version 11.0 of UNFCCC following text are added :</li> </ol> <p><b>Cover page:</b> Assessment team confirms that Completion of additional fields namely Project participant(s), Host Party, Sectoral scope and selected methodology(ies), mandatory and conditional sectoral scope and Estimated amount of annual average GHG emission reductions is in line</p>

with new PDD template. Also section F as per the new PDD template is now included which mentions the details of the Host country approval. The project obtained Host Country Approval from MoEFCC vide reference of 4/25/2008-CCC dated 06/02/2009. The same is checked from the UN home page as well (<https://cdm.unfccc.int/Projects/DB/BVQI1304680909.79/view>) and found correct.

**Section A.6 has been updated as per the latest PDD template.** Assessment team confirms that the proposed CDM project activity is registered as a CDM project activity with UN reference number as UN:4776. This project activity is not included as a component project activity (CPA) in a registered CDM programme of activities (PoA). The proposed CDM project activity was not a CPA that has not been excluded from a registered CDM PoA. This is a registered CDM project activity whose verification is ongoing and project exists in the same geographical location as the proposed registered CDM project activity.

**Section A.7 has been updated as per the latest PDD template:** The capacity of the project activity being 300 MW which is more than 15 MW type 1 limit and thus it qualifies as large scale project activity. Therefore section A.7 i.e. De-bundling criteria is not applicable for the present project activity.

**The contact details of the focal point as mentioned in the Appendix 1** of the revised PDD is in line with revised MoC as per UNFCCC project page and thus the correction is acceptable to the assessment team.

**Appendix 7** as per new PDD template is now incorporated which describes the PRC changes applied to the registered PDD version 03. The changes are acceptable to the assessment team as it complies with the requirement of Appendix of CDM Project Standard for project activities version 02.0

**The commissioning details** of the power plant now forms the part of the revised PDD version 06. The details of the commissioning are checked by the assessment team from the commissioning certificates and hence the correction is acceptable to the assessment team.

**The estimation ER value** is corrected in the revised PDD version 06 dated 30/10/2020. The correction in estimated emission reduction values is due to change in combined margin emission factor in section B.6.3 and B.6.4, Appendix 4 of the revised PDD. The correction in calculation of combined margin value is by considering 3 years **generation weighted average of 2005-06, 2006-07 and 2007-08** Operating Margin emission factor. This is in accordance to Tool to calculate emission factor for an electricity system ver 2. Thus Combined margin emission factor is changed in section B.6.2, B.6.3 and Appendix 4 of PDD which is part of ex-ante calculation and the same is acceptable to the assessment team.

**Assessment team observed** that in section B.6.3 of the registered PDD Auxiliary consumption and Transformation losses are assumed for Net Electricity Generation estimation. In actual onsite practice net electricity generation is monitored and it covers auxiliary consumption and transformation loss. The Meters present in the HT side of the transformer monitor the export and import value and Net electricity is calculated based on the difference of export and import. Since the metering is done at the supply end all the losses (including Auxiliary losses and Transformation losses) starting from generation point to supply point is taken into consideration and thus the practice is acceptable to the assessment team.

**Editorial correction** as per the new template requirement like section A.5 History of Project, section B.6.2 and B.7.1 "Purpose of data" and Section F Approval and Authorization is carried out and the same is acceptable to



	the assessment team.
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**D.4. Changes to the start date of the crediting period**

<b>Means of validation</b>	The post registration changes do not fall under this category.
<b>Findings</b>	The post registration changes do not fall under this category.
<b>Conclusion</b>	The post registration changes do not fall under this category.

**D.5. Inclusion of a monitoring plan**

<b>Means of validation</b>	The post registration changes do not fall under this category.
<b>Findings</b>	The post registration changes do not fall under this category.
<b>Conclusion</b>	The post registration changes do not fall under this category.

**D.6. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents**

<b>Means of validation</b>	Assessment team checked the revised PDD version 06 dated 30/10/2020			
<b>Findings</b>	CAR 01 was raised during the validation process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR			
<b>Conclusion</b>	Following are the observation of the DOE			
	<b>Sl. No</b>	<b>Detail as per Old PDD version 05.3 dated 22/03/2011</b>	<b>Detail as per New PDD version 06 dated 30/10/2020</b>	<b>Reason for change</b>
	1.	As per the registered PDD, E <sub>Gy</sub> is referred to have a cross check with 'electricity supply invoice from the grid	As per Appendix 5 of PDD "The power generated from the project will be supplied to UPPCL (88%) and 12% free power to Uttarakhand", thus for emission reduction calculations 100% electricity supplied to grid is considered as baseline emissions. The monthly tariff invoices are being raised based on the UPERC Generation Tariff Regulations in force. Invoices are being done for Energy Charges based on Schedule Generation certified by the UPSLDC for that month. The Invoices are based upon the scheduled energy and after deducting 12% of JMR electricity as free energy for Govt of Uttarakhand. Therefore Electricity as per Invoice should be added with 12% of actual JMR electricity to derive the scheduled energy (no of units exported as per Monthly Energy	Assesment team observed that as per the registered PDD version 05.3 the primary source of data for the parameter E <sub>Gy</sub> is JMR readings. The same source is therefore used for actual Net electricity supplied to the grid.  However for the secondary source or cross check purpose it was observed that The monthly tariff invoices are being raised based on the UPERC Generation Tariff Regulations in force. Invoices are being done for Energy Charges based on Schedule Generation certified by the UPSLDC for that month. The Invoices are based upon the scheduled energy and after deducting 12% of JMR electricity as free energy for Govt of Uttarakhand. Therefore Electricity as per Invoice should be added with 12% of

			<p>Account issued by UPSLDC). Minimum of scheduled Energy (invoice Electricity +12% JMR electricity Value) and JMR value is considered for emission reduction calculation as a conservative approach.</p>	<p>actual JMR electricity to derive the scheduled energy (no of units exported as per Monthly Energy Account issued by UPSLDC). There is difference between Scheduled Energy and Actual JMR Energy. Finally Deviation Settlement Mechanism (DSM) statements settles out the difference between Scheduled and Actual Energy as per Electricity Board regulations.</p> <p><b>As a conservative approach,</b> Minimum of Net electricity supplied by the project activity to grid as per JMR (MWh) and Scheduled Energy (invoice Electricity +12% JMR electricity Value) (MWh) is considered for ER calculations. Thus the same is acceptable to the assessment team.</p> <p>As per Appendix 5 of PDD "The power generated from the project will be supplied to UPPCL (88%) and 12% free power to Uttarakhand", thus for emission reduction calculations 100% electricity is considered as baseline emissions. The same approach is followed for the 2<sup>nd</sup> periodic verification for which this PRC is part of issuance track.</p> <p>The correction in the QA/QC procedure for the revised PDD version 06 dated 30/10/2020 is thus acceptable to the assessment team.</p>
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				<p>The revision is in accordance with Appendix 1 (c) and 1 (d) of CDM project standard for project activities version 02.0 and have no impact on the below:</p> <p>(i) The applicability and application of the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents with which the project activity has been registered;</p> <p>(ii) The additionality of the project activity;</p> <p>(iii) The scale of the project activity.</p> <p>PRC change in the monitoring plan is thus acceptable to the assessment team</p>
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#### D.7. Changes to the project design

<b>Means of validation</b>	The post registration changes do not fall under this category.
<b>Findings</b>	The post registration changes do not fall under this category.
<b>Conclusion</b>	The post registration changes do not fall under this category.

#### D.8. Changes specific to afforestation and reforestation project activities

<b>Means of validation</b>	The post registration changes do not fall under this category.
<b>Findings</b>	The post registration changes do not fall under this category.
<b>Conclusion</b>	The post registration changes do not fall under this category.

### SECTION E. Internal quality control

As final step of a validation of the final documentation including the validation report and the checklist have to undergo an internal quality control by the technical review committee, i.e. each report has to be finally approved either by the head of the technical review committee or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one to avoid any conflict of interest.

After confirmation of the PP the validation opinion and relevant documents are submitted to the EB through the UNFCCC web-platform.

## **SECTION F. Validation opinion**

Applus+ Certification has performed a validation of the “Run-of-the-river Hydroelectric Power Project in Uttarakhand by Alaknanda Hydro Power Company Limited”. The validation was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria, e.g. ACM0002 version 12.1.0 given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation and the subsequent follow-up interviews have provided Applus+ Certification with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by Applus+ Certification for registration with the UNFCCC.

Applus+ Certification has received a confirmation from the host Party that the project activity assists it in achieving sustainable development.

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project results in reductions of CO<sub>2</sub> emissions that are real, measurable and give long-term benefits to the mitigation of climate change. An analysis of the investment and technological barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of annual emission reductions of 1,203,884 tCO<sub>2e</sub> per year.

The validation has been performed following the requirements of the latest version of the CDM Validation and Verification Standard for project activities version 02.0 and on the basis of the contractual agreement. The single purpose of this report is its use during the registration process as part of the CDM/UNFCCC project cycle.

## Appendix 1. Abbreviations

Abbreviations	Full texts
BM	Build Margin
BHEL	Bharat Heavy Electricals Limited
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification request
CM	Combined Margin
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DISCOM	Distribution Company ( <i>India</i> )
DR	Document Review
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reductions sheet
FAR	Forward Action Request
JMR	Joint Meter reading
GHG	Greenhouse gas(es)
GWP	Global Warming potential
OEM	Original Equipment Manufacturer
PP	Project Participant

PPA	Power purchase agreement
UPSLDC	Uttar Pradesh State Electricity Load Dispatch Center
UPERC	Uttar Pradesh Electricity Regulatory Commission
UPPTCL	Uttar Pradesh Power Transmission Corporation Ltd

## Appendix 2. Competence of team members and technical reviewers

1. Mr. Sukanta DAS, has done M. SC in (Electronics and Photonics) and M. Tech in (Energy technology) from Tezpur Central University/ Indian Institute of technology Bombay in India. He is a certified lead auditor for ISO 14001 EMS LA and ISO 9001 QMS LA from International registry for Certified Auditors (IRCA) and Certified Lean Management practitioner from Quality Council of India (QCI). He has more than 10 years of working experience at TUV NoRD/ Re-consult/CRA/ Applus+ Certification under various categories of projects stating from Renewable to waste to supercritical projects. He was JI/ CDM Lead Assessor in TUV NoRD and was involved in more than 100 CDM validation and verifications activities in Gold Standard, VCS, CDM projects as a team leader/technical reviewer / validator / verifier covering the sectoral scope 1, 13 technical areas 1.2/1.1/13.1. Currently he is associated with True Quality Certifications Private Limited and is empanelled with Applus+ Certification to carry out GHG audit.
2. Mr. Denny Xue (Master Degree in Environmental Engineering, Bachelor Degree in Thermal Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment. He is based on Shanghai. He has 1.5 years of work experiences in CDM project development. Before he joined Applus+ LGAI, he has been worked for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development.

## Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	NA	Revised PDD version 06	Revised PDD version 06 dated 30/10/2020	PP
2	NA	Commissioning certificates of the hydro power plant	The commissioning certificate is 23/04/2015, 21/06/2015, 02/05/2015 & 21/06/2015	PP
3	NA	Joint Meter reading and Invoices for the present 2 <sup>nd</sup> monitoring period to which this PRC is part of issuance track	Joint Meter reading and Invoices	PP
4	NA	Estimation emission reduction Calculation	Estimation emission reduction Calculation Version 01 dated 30/10/2020	PP
5	NA	CDM Validation and	CDM Validation and	UNFCCC

		Verification Standard for project activities	Verification Standard for project activities version 02	
6	NA	CEA database	CEA database version 04	PP

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

**Table 1. CLs from this validation**

CL ID	**	Section no.	Date: DD/MM/YYYY
<b>Description of CL</b>			
<b>Project participant response</b>			<b>Date: DD/MM/YYYY</b>
<b>Documentation provided by project participant</b>			
<b>DOE assessment</b>			<b>Date: DD/MM/YYYY</b>

**Table 2. CARs from this validation**

CAR ID	01	Section no.	D.6	Date: 28/10/2020
<b>Description of CAR</b>				
As per the registered version 05.3 , the JMR value and invoice value is not matching.				
<b>Project participant response</b>				<b>Date: 30/10/2020</b>
The Post registration changes (PRC) are requested during current monitoring plan				
<b>Documentation provided by project participant</b>				
<i>Revised PDD version 06</i>				
<i>Declaration from the Manufacturer.</i>				
<b>DOE assessment</b>				<b>Date: 15/10/2020</b>
<p>Assesment team observed that as per the registered PDD version 05.3 the primary source of data for the parameter EGY is JMR readings. The same source is therefore used for actual Net electricity supplied to the grid.</p> <p>However for the secondary source or cross check purpose it was observed that The monthly tariff invoices are being raised based on the UPERC Generation Tariff Regulations in force. Invoices are being done for Energy Charges based on Schedule Generation certified by the UPSLDC for that month. The Invoices are based upon the scheduled energy and after deducting 12% of JMR electricity as free energy for Govt of Uttarakhand. Therefore Electricity as per Invoice should be added with 12% of actual JMR electricity to derive the scheduled energy (no of units exported as per Monthly Energy Account issued by UPSLDC). There is difference between Scheduled Energy and Actual JMR Energy.. Finally Deviation Settlement Mechanism (DSM) statements settles out the difference between Scheduled and Actual Energy as per Electricity Board regulations.</p> <p><b>As a conservative approach</b>, Minimum of Net electricity supplied by the project activity to grid as per JMR (MWh) and Scheduled Energy (invoice Electricity +12% JMR electricity Value) (MWh) is considered for ER calculations. Thus the same is acceptable to the assessment team.</p> <p>As per Appendix 5 of PDD “The power generated from the project will be supplied to UPPCL (88%) and 12% free power to Uttarakhand”, thus for emission reduction calculations 100% electricity is considered as baseline emissions. The same approach is followed for the 2<sup>nd</sup> periodic verification for which this PRC is part of issuance track.</p> <p>The correction in the QA/QC procedure for the revised PDD version 06 dated 30/10/2020 is thus acceptable</p>				

to the assessment team. The revision is in accordance with Appendix 1 (c) and 1 (d) of CDM project standard for project activities version 02.0 and have no impact on the below:

- (iv) The applicability and application of the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents with which the project activity has been registered;
- (v) The additionality of the project activity;
- (vi) The scale of the project activity.

PRC change is thus acceptable to the assessment team and CAR is therefore closed.

**Table 3. FARs from this validation**

<b>FAR ID</b>	<b>xx</b>	<b>Section no.</b>	<b>Date: DD/MM/YYYY</b>
<b>Description of FAR</b>			
<b>Project participant response</b>			<b>Date: DD/MM/YYYY</b>
<b>Documentation provided by project participant</b>			
<b>DOE assessment</b>			<b>Date: DD/MM/YYYY</b>



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**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"><li>• Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN);</li><li>• Make editorial improvements.</li></ul>
02.0	31 October 2017	Revision to align with the requirements in the “CDM validation and verification standard for project activities” (version 01.0).
01.0	23 March 2015	Initial publication.
Decision Class: Regulatory Document Type: Form Business Function: Registration Keywords: post-registration change, project activities, validation report		