PROJECT REVIEW REPORT

Project ID	*699*
Project Name	*Yiyang Xiushan Hydropower Project, P.R. China*
Program(s)	*VCS*
Project Proponent	*Taohuajiang Energy Development Co., Ltd.*
Methodology	*ACM0002 "Grid-connected electricity generation from renewable sources" version 6.0*
Sectoral Scope(s)	*Scopes 1: Energy*
Validation/Verification Body (VVB)	*LGAI Technological Center, S.A. (Applus+ Certification)*

Assessment Criteria	*VCS Standard, v4.1 and VCS Standard V4.2*
Date of First Issue	28th March 2022
Date of Final Issue	27th October 2022

Summary:

An accuracy review of the *Yiyang Xiushan Hydropower Project, P.R. China* verification approval request has been conducted by Verra in accordance with Section 4.3 of the *Registration and Issuance Process*.

The accuracy review has raised 5 assessment findings and 2 minor findings, detailed below. The VVB, in coordination with the project proponent, is hereby required to provide a response to the assessment findings presented in Section 1. The 5 assessment findings must be addressed to the satisfaction of Verra. The VVB need not address the minor findings during this review. Please note, however, that where Verra finds consistent minor findings by the VVB in future reviews, minor findings shall be escalated to assessment findings.

This project review report will be made publicly available. Confidential information may be provided as separate attachments.

1. ASSESSMENT FINDINGS

Finding 1
As per the *VCS Monitoring Report Template V4.1* section 1.9 should indicate whether the project is registered under any other GHG programs and, where this is the case, provide the registration number and details. Provide details of any GHG credits claimed under such programs. However, it was observed that the section 1.9 of the submitted MR does not indicate the details of the GHG credits claimed under the CDM project. The PP is required to include the same and the VVB is required to assess the accuracy of the reported values.
VVB Response: The detailed GHG credits of the project activity claimed under the CDM scheme has been supplemented in section 1.9 of the MR (version 2.1 dated 18/04/2022) and verified by the assessment team to be correct through checking UNFCCC website (https://cdm.unfccc.int/Projects/DB/DNV-CUK1205730913.74/view?cp=1).
Verra Response: The above response is found to be OK. This finding is now closed, and no further action is required.

Finding 2
As per VCS *Monitoring Report Template V4.1*, section 4.1 should provide all data and parameters that are determined or available at validation and remain fixed throughout the project crediting period. However, it was observed that the PP has not included all the parameters mentioned section B6.2 of the registered CDM PDD. Therefore, the PP is required to include these in section 4.1 of the submitted MR and VVB is required to assess the same.
VVB Response: As the footnote of 4 in the monitoring report, *"All the parameters listed in the section B.6.2 of the registered CDM PDD are used to calculate EF_y."*. VVB is able to confirm all the parameters listed in the section B.6.2 of the registered CDM PDD are used to calculate the EF_y and find the calculation of EF_y is correct. Such explanation for has already been included in the FVR and MR.
Verra Response: The explanation on excluding parameters used to calculate emission factor is acceptable. However, section B.6.2 of the registered CDM PDD also include certain parameters which are used to estimate the project emissions like the CAP_{Total}, $CAP_{Thermal}$ CAP_{BL} and A_{BL}. The VVB is required to include these parameters in section 4.1 of the monitoring report. **The finding remains open and requires further action.**
VVB Response: The verification is based on registered PDD version 03.2 dated 08/04/2009 as indicated in the FVR. By

checking B.6.2 of registered PDD, it is confirmed that there are no parameters related to the calculation of power density of the project. All parameters listed in the B.6.2 are used to calculate EF_y.

Moreover, there are no PD calculation process required ex-post in the monitoring plan of registered PDD. The calculation of PD is determined ex-ante, no ex-post monitoring is required.

Even apply the calculation of power density, CAP_{Total} and $CAP_{Thermal}$ are not related to calculation of power density. The power density is calculated by Cap_{BL}, A_{BL}, Cap_{PJ} and A_{PJ} as below:

$PD = (Cap_{PJ} – Cap_{BL}) / (A_{PJ} - A_{BL})$

As the project is newly built hydropower project, according to ACM0002, Cap_{BL} and A_{BL} are considered as zero. A_{PJ} (Area: Surface area at full reservoir level) has been determined according to monitoring plan as fixed in the whole crediting period which is 6,300,000 m^2. Cap_{PJ} could be determined by the nameplate of the project which should be 65,000,000 W.

Then PD is determined **ex-ante** as (65,000,000 – 0) / (6,300,000 - 0) = 10.3 W/m^2 which is the same in the registered PDD.

No revision has been made for both MR and FVR for this finding.

Verra Response:

Section 4.1 of the MR should include all ex-ante parameters as per the requirement, whether or not a particular parameter is used to calculate EF_y.

Section B.6.2 of the registered PD does include the parameter $CAP_{m,y,j}$.

Data / Parameter:	$CAP_{m,y,j}$
Data unit:	MW
Description:	Installed capacity of hydropower resources i in province(s) m in year y （2000-2004, Chongqing City, Sichuan Province, Henan Province, Jiangxi Province, Hubei Province and Hunan Province)
Source of data used:	China Electric Power Yearbook （2001-2005）
Value applied:	See Annex 3 for details
Justification of the choice of data or description of measurement methods and procedures actually applied :	Official Statistics
Any comment:	/

Therefore, the PP is required to include the same in section 4.1 of the MR. **The finding remains open and requires further action.**

VVB Response:

All parameters listed in the registered PDD has been included in the MR and confirmed to be consistent with registered PDD.

Verra Response:

The above response is found to be OK. This finding is now closed, and no further action is required.

Finding 3

As per *VCS Standard V4.2* (which the VVB has referred to in the VR) section 3.8.7 states that, " Projects registered under other GHG programs are not eligible for VCU issuance beyond the end of the total project crediting period under those programs. For example, a CDM project with a seven year twice renewable project crediting period is not eligible for VCU issuance beyond the end of those 21 years. Where projects have been registered under more than one other GHG program, they are not eligible for

VCU issuance after the date that is the earliest end date of all applicable project crediting periods."

Therefore, the PP and VVB are required to update all relevant sections of the MR and VR accordingly.

VVB Response:

The project is registered under VCS scheme in 2011 and completed validation before 19/03/2020, thus it remains eligible to apply the crediting period requirements under VCS scheme in 2011, the project VCS crediting period is applicable to a maximum of 10 years which may be renewed at most two times. Therefore, the first VCS crediting period of the project should be updated from 01/10/2007 - 09/05/2009 to 01/10/2007 - 30/09/2017. Accordingly, the total VCS crediting period should be 01/10/2007 - 30/09/2037. However, as the project is also registered as a CDM project with a seven year twice renewable project crediting period, which is from 10/05/2009 to 09/05/2030. Therefore, the total length of VCS crediting period should be no more than 21 years which is from 01/10/2007 to 30/09/2028.

The same has been supplemented in section 3.2.2 of the MR (version 2.1 dated 18/04/2022) and section 3.1 of the FVR.

Verra Response:

The above response is found to be OK. This finding is now closed, and no further action is required.

Finding 4

As per the *VCS Verification Report Template V4.1*, section 4.4 of the should also describe the steps taken to assess whether manual transposition errors between data sets have occurred. Provide an overall conclusion regarding whether GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology.

However, the above details are missing in section 4.4 of the Verification Report. Therefore, the VVB is required to update the same.

VVB Response:

The monitoring process of all parameters have been included and verified by the VVB in the FVR, an overall conclusion has been included in the updated FVR as the GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology.

Verra Response:

The VVB has still not stated the if any steps were taken to assess the manual transposition errors between data sets. Therefore, the VVB is required to include this information in section 4.4 of the VR. **This finding is still open and requires further action.**

VVB Response:

By checking the original record, crosscheck with the supporting evidence issued from other party than project owner, checking calibration related documents and interview with project owner through the site visit, the VVB is able to confirm there are no transposition errors between data sets. All data are consistent in all data sets.

The same has been included in the updated FVR.

Verra Response:

The above response is found to be OK. This finding is now closed, and no further action is required.

Finding 5
As per section 3.15.5 of the *VCS Standard V4.2*, Where measurement and monitoring equipment is used, the project proponent shall ensure the equipment is calibrated according to the equipment's specifications and/or relevant national or international standards. As per VCS *Verification Report Template V4.1*, section 4.3 should identify the evidence used to determine the GHG emission reductions and removals and describe the steps taken to assess the sufficiency of quantity, and appropriateness of quality, of the evidence. Include details of any cross-checks performed on the reported data and how the following were assessed: • The reliability of the evidence, and the source and nature of the evidence (external or internal, oral or documented) for the determination of GHG emission reductions or removals. • The information flow from data generation and aggregation, to recording, calculation and final transposition into the monitoring report. • Where the project description does not specify calibration frequency of monitoring equipment, the appropriateness of implemented calibration frequency. • Provide an overall concluding statement with respect to the sufficiency of quantity, and appropriateness of quality, of the evidence used to determine the GHG reductions and removals. However, some of the information stated above is missing from section 4.5 of the submitted Verification Report. The VVB shall include details on how the calibration frequency was assessed covering the entire monitoring period.
VVB Response: The requirement of calibration of meters has been indicated in the registered PDD as once a year which is in line with the requirement of related regulation as the common practice for meter calibration in China. By checking calibration report issued by the third party, it is confirmed during this monitoring period, the meters used for monitoring (M1, M2, M3 and M4) have been calibrated at least once a year in this monitoring period which is the same as the requirement in the PDD. All above information has already been included in the FVR. Please refer to FVR for more detail such as calibration date and calibration body.
Verra Response: The above response is found to be OK. This finding is now closed, and no further action is required.

2. MINOR FINDINGS

Finding 1
Please adjust the following minor findings in the project description document: 1) The VVB is required to provide the signoff from the appropriate VVB office corresponding with accreditation in the VR. 2) The value of parameter 'Area' under section 4.4 of the Verification Report and section 4.3 of the Monitoring Report are inconsistent. The VVB is required to check and ensure all monitored

	parameters are correct and consistent between the documents, and in this case, the CDM PDD as well.
VVB Response: 1) The deed was provided by LGAI Technological Center, S.A. (Applus+ Certification) signed by CDM Technical Manager: Agustín Calle de Miguel which is consistent with the information in the FVR. 2) Correction has been made in the FVR and consistent with MR and evidence provided for verification.	

3. ASSESSMENT CONCLUSION

On 11th April 2022 Verra concluded a review of the verification approval request for project Yiyang Xiushan Hydropower Project, P.R. China and raised the 5 assessment findings detailed above.

On 18th April 2022 Verra submitted the review report to the VVB LGAI Technological Center, S.A. (Applus+ Certification) and the project proponent Taohuajiang Energy Development Co., Ltd.

On 27th October 2022, Verra closed all findings.