



**Verified Carbon
Standard**

KOYULHISAR HYDRO ELECTRICITY POWER PLANT



By KBS Certification Services Pvt. Ltd.

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Summary:

KBS Certification Services Pvt. Ltd. has been contracted by, "AYDEM YENİLENEBİLİR ENERJİ A.Ş." to undertake 3rd verification and certification for the greenhouse gas (GHG) emission reductions reported from 'KOYULHISAR HYDRO ELECTRICITY POWER PLANT' for the monitoring period 01/08/2013 to 16/11/2019, under the crediting period 17/11/2009 to 16/11/2019, in the initial monitoring report version 01 dated 23/09/2020, with regard to the relevant requirements of VCS Standard Version 4.

The KOYULHISAR HYDRO ELECTRICITY POWER PLANT with a total capacity of 63 MW is located near Kelkit Stream, within the jurisdiction of Koyulhisar Town of Sivas Province, Turkey. The hydroelectric power plant is designed to convert the potential energy of the Kelkit Stream into electricity by means of 3 turbines each of 21 MW capacity. The electricity generated is sold to the Turkish National Electricity Grid.

The project activity has been operational since commissioning (17/11/2009) and during the third monitoring period i.e. from 01/08/2013 to 16/11/2019 this has generated 1,225,974.30 MWh net electricity, thereby resulting in 647,574 tCO₂e of emission reductions. The monitoring period subject to this monitoring report is inclusive of first and last day of period.

The verification is based on the VCS PD, Monitoring report (MR), Emission reduction calculation spread sheet (ER sheet), proof of title, proof of right, additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and supporting documents made available to the verification team by project proponent.

A risk based approach has been followed to perform the verification of the project activity. In the course of verification, 02 Corrective Action Requests (CARs) and 05 Clarification Requests (CLs) have been raised. All the CARs and CLs have been closed out successfully.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 01/08/2013 to 16/11/2019 based on the reported emission reductions in the final monitoring report version 1.04 dated 10/12/2020 for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, KBS planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

As a result of the verification, the verification team confirms that:

- The project fulfils criteria of VCS Standard Version 4.
- The project is in line with all relevant VCS requirements /5/.
- Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board and VCS Association;
- All information and references relevant to the project activity resulting in emission reductions;

The monitoring is transparent, adequate and in line with applied baseline and monitoring methodology of ACM0002: Consolidated Baseline Methodology for grid-connected electricity generation from renewable sources version 12.1.0 /10/.

Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 647,574 tCO₂e emission reductions during the 3rd monitoring period (01/08/2013 to 16/11/2019), under the first crediting period (17/11/2009 to 16/11/2019).

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1 INTRODUCTION

1.1 Objective

KBS Certification Services Pvt. Ltd. has been contracted by, “AYDEM YENİLENEBİLİR ENERJİ A.Ş.” to undertake 3rd verification and certification for the greenhouse gas (GHG) emission reductions reported from ‘KOYULHISAR HYDRO ELECTRICITY POWER PLANT’ for the monitoring period 01/08/2013 to 16/11/2019, under the crediting period 17/11/2009 to 16/11/2019, in the initial monitoring report version 01 dated 23/09/2020, with regard to the relevant requirements of VCS Standard Version 4. The VCS projects must undergo an independent third-party verification and certification of emission reductions as the basis for issuance of Voluntary Emission Reductions (VERs).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented and operated as per the project description (PD) and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Monitoring report and other supporting documents are complete;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.
- To confirm that the monitoring system is implemented and fully functional to generate Voluntary Emission Reductions (VERs/VCUs) without any double counting, and
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

1.2 Scope and Criteria

The verification scope is defined as an independent and objective review of monitoring report, VCS project description (VCS PD), including the monitored data, and other relevant documents made available to verifier and information collected through performing interviews during Remote assessment(interviews) of the project activity.

The project is assessed against the requirements of VCS standard version 4 and related rules and guidance /5/. KBS has, based on the recommendations in the latest version of Verified Carbon standard, and employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring.

The aspects to be covered under the purview of verification are:

- Ensure that the project activity has been implemented and operated as per the registered VCS PD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place as per the documents provided by the client and during remote audit;
- Ensure that the monitoring report and other supporting documents provided are complete
- Ensure that the practiced monitoring system and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved CDM methodology /10/;
- Evaluate the data recorded and stored are as per the monitoring methodology.

1.3 Level of Assurance

☒ Reasonable level of assurance

The verification is based on the VCS PD, MR, proof of title, proof of right, additional documents related to baseline and monitoring methodology, the subsequent background investigation, monitoring plan, follow-up interviews and supporting documents made available to the verification team by project proponent. The information in these documents is reviewed against the requirements of VCS Standard Version 4.0. KBS has employed a risk-based approach in the verification, focusing on the identification of significant risks for project implementation and the generation of Emission Reductions.

The items covered in the verification are described below:

- Criteria of VCS Version 4 (VCS Program guide Version 4 & VCS Standard Version 4)
- Criteria of CDM approved methodology, ACM0002- Version 12.1
- VCS Monitoring Report
- Monitoring Plan
- Background investigation and follow up interviews
- Stakeholder feedback
- Registered VPS-PD and Validation Report
- project's compliance with other relevant rules, including the project country (Turkey) legislation and assurance to stakeholders of the quality

Furthermore, the verification team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data available on public domain. A desk review is carried out to assess the following:

- Compliance with relevant law and regulations

- Stakeholder comments (If any)
- Proof of title
- Single line diagram and site location map
- Technical specifications of turbines, meters etc.
- Electricity production license
- Commissioning Certificate
- Remote auditing (04/11/2020) for verification
- Invoices
- Export/Import data records
- Calibration Certificates

The Verification team has checked all the above-mentioned details and confirms that all the information provided is accurate.

Through the remote interviews host country rule and regulations related to project activity, Project description, technological measures, Implementation, Operation, Management of project activity and Training of personnel, Baseline and Monitoring plan, Stakeholder consultation etc. has been checked and found appropriate.

KBS applies the risk-based approach aimed at focusing on high risk issues to the verification results whilst not omitting any part of the mandatory processes. A few discrepancies were found during the verification and the findings were submitted to the project proponent, indicated under the titles corrective action requests (CARs) and clarification requests (CLs). CARs and CLs require the PP to take relevant actions.

Hence the above steps were followed for achieving the level of assurance in verification report. Based on the process and procedures conducted, KBS confirms that the information in the MR:

- is materially correct and is a fair representation of the actual project details, and
- is prepared in accordance with VCS requirements /4//5/ and the applied CDM methodology for information pertaining to GHG qualification, monitoring and reporting.

The verification work is carried out as per this requirement and the verification opinion is assured, provided the credibility of all above. Details are presented in the Verification statement in section 5 below.

1.4 Summary Description of the Project

The KOYULHISAR HYDRO ELECTRICITY POWER PLANT with a total capacity of 63 MW is located near Kelkit Stream, within the jurisdiction of Koyulhisar Town of Sivas Province, Turkey. The hydroelectric power plant is designed to convert the potential energy of the Kelkit Stream into electricity by means of 3 turbines each of 21 MW capacity. The electricity generated is sold to the Turkish National Electricity Grid.

The project activity has been operational since commissioning (17/11/2009) and during the third monitoring period i.e. from 01/08/2013 to 16/11/2019, it has generated 1,225,974.30 MWh net electricity, thereby resulting in emission reduction of 647,574 tCO₂e. The monitoring period subject to this monitoring report is inclusive of first and last day of period

During the remote audit inspection /11/, location (as mentioned in section 1.7 of MR) and all the technical aspects of the project activity (equipment, serial no., type, date of calibration etc.) mentioned in the PD /03/ have been verified. The same was also crosscheck during the desk review of supporting documents /6//7//8//9/.

Project entity information as verified is presented below:

Item	Data
Project Entities	AYDEM YENİLENEBİLİR ENERJİ A.Ş. (Project Owner) ¹
	Ekobil Environmental Services and Consultancy Limited ²
	(Project developer: Responsible for development of emission reduction through the Verified Carbon Standard)

2 VERIFICATIONPROCESS

2.1 Method and Criteria

The verification process was carried out in line with the requirements of VCS Version 4 /4/. In addition, the verification team followed the guidelines of the CDM Validation and Verification Standard. Standard auditing techniques and KBS's CDM Procedures were also applied during

¹The name of the company has changed from Bereket Enerji Üretim San. ve Tic. A. Ş. to Aydem Yenilenebilir Enerji A.Ş. Therefore, the contact person also changed.

² Registered to the Ankara Chamber of Trade, with the full name of "EkobilÇevreHizmetleriDanışmanlıkEğt.Tar. Hayv. Mad. İnş. İth. İhr.Tur. ve Tic. Ltd. Şti

the verification. A risk-based approach was followed to carry out verification and access all the factors and concerns that relate to the issuance of emission reductions from a project activity.

They include:

- Identification of all the sources contributing to the project emissions and emission reductions.
- Authenticity of the provided data is checked.
- A risk-based analysis is carried out to ensure a clear and transparent assessment. The risks involved in this process are mainly with the informational flows and data recording.

KBS follows a risk-based verification approach, wherein a desk review of the project documentation is undertaken, which is followed by a remote discussion/video inspection by the members of verification team. The verification protocol is filled by the verification team that is based on standard auditing practices and VCS requirements. The verification protocol provides transparent means to record the observations by the verification team members and the non-conformities, if any. The verification protocol is an internal document, and available on request.

Duration of Verification:

Verification Contract	19/05/2020
Remote audit	04/11/2020 (Justification section 2.4 below)
Draft Verification Report	11/12/2020
Final Verification Report	11/12/2020

2.2 Document Review

A desk review is undertaken, involving but not limited to,

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

The list of documents reviewed is included in the section 'References'.

2.3 Interviews

Please refer section 2.4, where complete list of interviewed personnel and key points discussed is provided.

2.4 Site Inspections

As a result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the VVB offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB, email clarification for Verra guidance on site visits, notification of Covid-19 Travel Guidance for Projects <https://verra.org/covid-19-travel-guidance/> and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the VVB has skipped the on-site visit. Further Email from VERRA dated 24/03/2020 from “Andrew Beauchamp” has been referred as per which *“The VCS Program does not explicitly mandate site visits as part of the validation and verification process, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per Section 4.1.2 of the VCS Standard, v4.0). Therefore, where a VVB can achieve a reasonable level of assurance without conducting a site visit, or through a remote site visit, this is in conformance with the VCS rules, and no request for an exemption or pre-approval from Verra is required. However, where a validation/verification has been conducted without a site visit, or through a remote site visit, please ensure that the applicable section of the validation/verification report includes a discussion of how a reasonable level of assurance was achieved without an in-person site visit”*.

Hence, the VVB has used other standard auditing techniques/33/ for validation or verification as referred to in VCS Rules/requirements, VCS Validation and Verification Manual version 3.2.

Verification team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of verification. Along with desk review, audit team has conducted remote audit interview as follows:

- A complete desk review of the MR, as well as all applicable country legal requirement and supportive evidences have been checked by the verification team.
- Verification team has performed Zoom Application interview with PP in order to check implementation, project boundary, current situation, monitoring and metering equipment, monitoring procedures, calibration etc.
- Cross-check evaluation, for information received from interviews, under the scope of all information and references provided in MR and supporting documents.
- A check of the monitoring equipment including performance and observations of monitoring practices against the requirements of the registered VCS PD and the selected methodology.

Details of interviewees, topics covered and additional information are presented below:

Dates:	04/11/2020 (Zoom Application)	
Key points discussed:	Name of person, interviewed	Designation, Organization

Operational data, Calibration, Data collection, QA/QC procedures, Calculation of ERS,	Durmuş Görkem Kurt	Coordination engineer, AYDEM YENİLENEBİLİR ENERJİ A.Ş.
	Hasim Bedir	Regional Manager, Black Sea
	Ihsan Seker	Aydem Yenilenebilir A.S, Plant Manager
	Dr. G. Asli Sezer Ozcelik	Manager, Ekobil Environmental Services and Consultancy Ltd.
	Zeynep Artac	Consultant, Ekobil Environmental Services and Consultancy Ltd.

2.5 Resolution of Findings

KBS applies the risk-based approach aimed at focusing on high risk issues to the verification results whilst not omitting any part of the mandatory processes. A few discrepancies were found during the verification and the verification report was submitted to the project proponent, indicated under the titles corrective action requests (CARs) and clarification requests (CLs). CARs and CLs require the PP to take relevant actions. Criteria for judging items as CAR or CL are as follows:

Corrective action request (CAR):

- the project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions
- the Voluntary Carbon Standard's requirements have not been met, or
- there is a risk that emission reductions cannot be monitored or calculated.

Clarification request (CL):

- Information is insufficient or not sufficiently clear to determine whether the applicable VCS requirements have been met.

FAR (Forward Action Request):

FARs is to be raised to highlight issues related to project implementation that require review during the first verification of the project activity. FARs does not relate to VCS requirements for registration.

CARs and CLs are to be resolved or closed out if the PP modifies the project description, rectifies the MR or provides adequate additional explanations or evidence that satisfies the concerns. If this is not completed, the project activity cannot be recommended for issuance under VCS registry.

The monitoring report was revised addressing the CARs & CLs issued by KBS. After reviewing the revised and resubmitted MR/1.2/; resolving the CARs & CLs raised and outstanding concerns, KBS issues this final verification report and opinion.

05 CLs and 02 CARs were found during verification and closed satisfactorily. The list of CARs/CLs raised and the response provided, the means of verification, reasons for their closure and references to correction in the MR are provided in appendix 2 of this report. The revised MR/1.2/ with changes incorporated as per the issues raised were rechecked with the documentary evidences and found to be inline.

2.5.1 Forward Action Requests

No FAR has been raised during this Verification.

2.6 Eligibility for Validation Activities

KBS conducted the verification activity; the validation was performed by the other VVB. KBS has a valid UNFCCC accreditation in the sectoral scope from UNFCCC.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is not registered or seeking registration under any other GHG programs. The project has not participated under any other GHG programme.

3.2 Methodology Deviations

The verification team confirms that the registered PDD complies with the requirements in the applied monitoring methodology ACM0002 version 12.1.0/10/. Therefore, no methodology deviations are applied during the monitoring period.

3.3 Project Description Deviations

The name of the project proponent has been changed from “Bereket Enerji Üretim Anonim Şirketi” to Aydem Yenilenebilir Enerji A.Ş which is the current project proponent. The same has been verified by the verification team from the supportive/19/.

3.4 Grouped Project

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

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity is in operation stage as evidenced by the remote inspection /11/ of the site. All the physical components and project boundary are in conformity with the description in registered VCS PD /03/. The capacity of project equipment's have been confirmed during the remote inspection, also through the technical specifications /06/ and found in-compliance with the registered VCS PD/03/. The project activity was commissioned on 17/11/2009 as per commissioning certificate/09/.

On the basis of the remote inspection and the reviewed project documentation like the technical specification, photographs of meters, turbines/6/, single line diagram/7/, electricity production license/8/, commissioning certificate/9/, area of reservoir map/12/, calibration certificates of energy meters/13/, and invoices/14/ etc. the verification team confirms that the project was implemented and operated as described in the registered VCS PD/3/. Further, the verification team confirms that-

- There is no any material discrepancy between project implementation and the project description in the registered VCS PD.
- The monitoring plan is completely implemented and is suitable with actual monitoring system (i.e., process and schedule for obtaining, recording, compiling and analysing the monitored data and parameters)
- The project has not participated or been rejected under any other GHG programs and further has not received or sought any other form of environmental credit since validation or previous verification.
- There is no methodology deviation applied to this project.

The total generation capacity of the power plant due to 3 turbines (each turbine is of 21 MW) is 63 MW which was verified during the remote audit.

Further it was noticed that during the monitoring period the project activity operated under normal conditions and no significant event that may have impact on monitoring of GHG emission reductions was observed. Same has been checked from the operational data during remote auditing.

Ownership and other programs:

PP has declared that the project is not registered in other GHG programs; PP confirmed that the project will only be going forward with VCS registry, as declared in VCS-PD /03/. Thus emission

reductions generated by project will be solely claimed by PP and PP has the right of use, which is acceptable. Net GHG emission reductions or removals generated by this project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions as the host country i.e. Turkey is not a participant in any emission trading programs and nor does it have any binding limits.

PP will not claim environmental/carbon credits under any other GHG emission reduction scheme for the crediting period under VCS and PP has provided declaration on the same during the validation. Hence, there is no possibility of double counting.

Sustainable Development Contributions:

As confirmed during the remote audit, the project displaces electricity produced in fossil fuel based power plants, by using clean renewable source to generate electricity and thereby contributes to sustainable development through reduction in greenhouse gas (GHG) emissions. It has also been confirmed that the project implementation has led in significant environmental and socio-economic benefits (as stated in section 1.11 of the submitted MR) and contributes to the sustainable development goals (SDG 7, SDG 8 and SDG 13). Under SDG 7, the project supplies clean, affordable and renewable energy (1,225,974.30 MWh net electricity under the monitoring period) without reliance on fossil fuels for generation of electricity to meet the growing demands in the region. For SDG 8, the implementation of project is providing employment to locals with a decent and secure work environment by reducing emissions otherwise generated by the operation of fossil fuel based power plants. The emission reductions generated due to the project activity are accounted under SDG 13 (emission reduction of 647,574 tCO₂e achieved under the monitoring period).

Management and operational system:

Verification team was able to verify that authorities and responsibilities /15/ for monitoring and reporting of all data related to the emission reductions were clearly defined for the monitoring period from 01/08/2013 to 16/11/2019.

The allocation of the responsibilities is documented in a written form and is followed as described in the registered VCS PD/03/. Routines for the archiving of data are defined and documented.

The monitoring plan described in section 4.3 of the MR/1.2/ is confirmed to be correct. All the parameters of the monitoring plan are monitored using appropriate metering system.

The verification team has interviewed the plant personnel /11/ who is involved in the monitoring of the parameters that are used to determine the emission reductions of the VER project. It is confirmed based on the interviews /11/ that the plant's team is competent enough to monitor the parameters as described in the monitoring plan.

As discussed above, the verification team concludes that management and operational system of the project is implemented and operated well. Thus, it ensures the quality of data which is required in calculating the emission reductions.

Implementation status of the monitoring plan:

Verification team confirms through remote inspection /11/ and from the document review /08//09//13//14/ the actual monitoring system complies with the monitoring plan mentioned in the registered VCS PD /3/ and there is no deviation in monitoring plan and procedures, equipments.

During the verification, all relevant monitoring parameters of the registered monitoring plan have been verified with regard to the appropriateness of the verification method; the correctness of the values applied for ER calculation, the accuracy and applied QA/QC measures. All monitoring parameters have been measured / determined without material misstatements and are in line with all applicable standards and relevant requirements. It is confirmed that the monitoring mechanism is effective and reliable.

Therefore, from the document review and remote inspection, it is confirmed that all the parameters were monitored in accordance with the registered monitoring plan during the monitoring period. Following are the details of monitoring in accordance with the monitoring plan of the registered VCS PD/03/:

Data - Parameter	EGPP-self consumption, y
Data unit	MWh
Description	Quantity of electricity imported by the power plant from the Grid for self-consumption, in year y
Source of data	The Primary source of data is the Main TEIAS meter recorded at the monthly reading protocols, the column related to electricity obtained from the Grid. The secondary source of data will be the web site for generation data ³ .
Description of measurement methods and procedures to be applied	Verification team confirms that the data has been measured directly from meters. The verification team cross checked the data from the web site of SEFFAFLIK ⁴ and was able to verify the same.
Frequency of monitoring-recording	Recorded continuously, reported monthly on TEIAS Meter Reading Protocols, Reported annually on the VCS Monitoring Report as verified by the verification team through remote assessment.

³Electricity generation data <https://seffaflik.epias.com.tr/transparency/> .

⁴Electricity generation data <https://seffaflik.epias.com.tr/transparency/>.

Value monitored	721.81 MWh The verification team cross checked the data from the web site of SEFFAFLIK⁵ and was able to verify the same.																																
Monitoring equipment	During the remote inspection /11/ and through document review, it has been confirmed that the data has been monitored continuously by metering devices, which provides the data for the monthly invoicing /14/ to TEİAŞ. All meters were found to be in compliance with the communiqué for Metering Devices to be used in the Electricity Market⁶. The Calibration dates of the meters and their validity is as follows: <table><tr><th>Meter Serial number</th><th>Accuracy class</th><th>Calibration Date</th><th>Valid Until</th></tr><tr><td>Main Meter:53030781</td><td>0.2s</td><td>24/12/2009</td><td>24/12/2019</td></tr><tr><td>Spare/check Meter:53030782</td><td>0.2s</td><td>24/12/2009</td><td>24/12/2019</td></tr><tr><td colspan="4">New Meters</td></tr><tr><td>Main Meter: 8923761</td><td>0.2s</td><td>25/11/2019</td><td>25/11/2029</td></tr><tr><td>Spare/check Meter : 8923762</td><td>0.2s</td><td>25/11/2019</td><td>25/11/2029</td></tr><tr><td>Main Meter: 8923763</td><td>0.2s</td><td>25/11/2019</td><td>25/11/2029</td></tr><tr><td>Spare/check Meter: 8923764</td><td>0.2s</td><td>25/11/2019</td><td>25/11/2029</td></tr></table> The meters are factory calibrated and tested at installation and tested periodically by the grid operator. The calibrations	Meter Serial number	Accuracy class	Calibration Date	Valid Until	Main Meter:53030781	0.2s	24/12/2009	24/12/2019	Spare/check Meter:53030782	0.2s	24/12/2009	24/12/2019	New Meters				Main Meter: 8923761	0.2s	25/11/2019	25/11/2029	Spare/check Meter : 8923762	0.2s	25/11/2019	25/11/2029	Main Meter: 8923763	0.2s	25/11/2019	25/11/2029	Spare/check Meter: 8923764	0.2s	25/11/2019	25/11/2029
Meter Serial number	Accuracy class	Calibration Date	Valid Until																														
Main Meter:53030781	0.2s	24/12/2009	24/12/2019																														
Spare/check Meter:53030782	0.2s	24/12/2009	24/12/2019																														
New Meters																																	
Main Meter: 8923761	0.2s	25/11/2019	25/11/2029																														
Spare/check Meter : 8923762	0.2s	25/11/2019	25/11/2029																														
Main Meter: 8923763	0.2s	25/11/2019	25/11/2029																														
Spare/check Meter: 8923764	0.2s	25/11/2019	25/11/2029																														

⁵Electricity generation data <https://seffaflik.epias.com.tr/transparency/>.

⁶ The latest version of the communiqué (in Turkish) can be found in the following link:
<http://www.epdk.gov.tr/web/elektrik-piyasasi-dairesi/44>

	are valid for 10 years and the same has been confirmed through the registered VCS-PD and the validation report. The validity of calibration for 10 years is also as per the host country requirements⁷. The requirements also mandate the meters to be replaced every 10 years, and accordingly new meters have been introduced in 2019. Both the meters are in compliance with the host country calibration regulations and had valid calibrations during the entire monitoring period.
QA-QC procedures to be applied	There are four meters, 2 main and 2 check meter as confirmed during remote inspection /11/ and through snapshot/8/. Imported electricity was also monitored by the operator using software for internal monitoring, which was again confirmed during the remote inspection /11/.
Purpose of the data	Data has been used for the calculation of Baseline Emissions.
Calculation method	Direct Continuous Measurement
Comments	As confirmed during the remote inspection /11/, the collected data will be kept by AYDEM YENİLENEBİLİR ENERJİ A.Ş. during the crediting period and until two years after the last issuance of VERs for the “KOYULHISAR HYDRO ELECTRICITY POWER PLANT” project activity for that crediting period.

Data - Parameter	EGPP-gross, y
Data unit	MWh
Description	Quantity of electricity produced by the power plant , in year y
Source of data	The Primary source of data is the Main TEIAS meter recorded at the monthly reading protocols, the column related to electricity obtained from the Grid. The secondary source of data will be the web site for generation data⁸.

⁷The latest version of the communiqué (in Turkish) can be found in the following link:
<http://www.epdk.gov.tr/web/elektrik-piyasasi-dairesi/44>

⁸Electricity generation data <https://seffaflik.epias.com.tr/transparency/> .

Description of measurement methods and procedures to be applied	Verification team confirms that the data has been measured directly from meters. The verification team cross checked the data from the web site of SEFFAFLIK ⁹ and was able to verify the same.																				
Frequency of monitoring-recording	Recorded continuously, reported monthly on TEİAŞ Meter Reading Protocols, Reported annually on the VCS Monitoring Report as verified by the verification team through remote assessment.																				
Value monitored	1,226,696.11 MWh The verification team cross checked the data from the web site of SEFFAFLIK ¹⁰ and was able to verify the same.																				
Monitoring equipment	During the remote inspection /11/ and through document review, it has been confirmed that the data has been monitored continuously by metering devices, which provides the data for the monthly invoicing /14/ to TEİAŞ. All meters were found to be in compliance with the communiqué for Metering Devices to be used in the Electricity Market¹¹. The Calibration dates of the meters and their validity is as follows: <table><tr><th>Meter Serial number</th><th>Accuracy class</th><th>Calibration Date</th><th>Valid Until</th></tr><tr><td>Main Meter:53030781</td><td>0.2s</td><td>24/12/2009</td><td>24/12/2019</td></tr><tr><td>Spare/check Meter:53030782</td><td>0.2s</td><td>24/12/2009</td><td>24/12/2019</td></tr><tr><td colspan="4">New Meters</td></tr><tr><td>Main Meter: 8923761</td><td>0.2s</td><td>25/11/2019</td><td>25/11/2029</td></tr></table>	Meter Serial number	Accuracy class	Calibration Date	Valid Until	Main Meter:53030781	0.2s	24/12/2009	24/12/2019	Spare/check Meter:53030782	0.2s	24/12/2009	24/12/2019	New Meters				Main Meter: 8923761	0.2s	25/11/2019	25/11/2029
Meter Serial number	Accuracy class	Calibration Date	Valid Until																		
Main Meter:53030781	0.2s	24/12/2009	24/12/2019																		
Spare/check Meter:53030782	0.2s	24/12/2009	24/12/2019																		
New Meters																					
Main Meter: 8923761	0.2s	25/11/2019	25/11/2029																		

⁹Electricity generation data <https://seffaflik.epias.com.tr/transparency/>.

¹⁰Electricity generation data <https://seffaflik.epias.com.tr/transparency/>.

¹¹ The latest version of the communiqué (in Turkish) can be found in the following link:
<http://www.epdk.gov.tr/web/elektrik-piyasasi-dairesi/44>

	Spare/check Meter : 8923762	0.2s	25/11/2019	25/11/2029
	Main Meter: 8923763	0.2s	25/11/2019	25/11/2029
	Spare/check Meter: 8923764	0.2s	25/11/2019	25/11/2029
The meters are factory calibrated and tested at installation and tested periodically by the grid operator. The calibrations are valid for 10 years and the same has been confirmed through the registered VCS-PD and the validation report. The validity of calibration for 10 years is also as per the host country requirements¹². The requirements also mandate the meters to be replaced every 10 years, and accordingly new meters have been introduced in 2019. Both the meters are in compliance with the host country calibration regulations and had valid calibrations during the entire monitoring period.				
QA-QC procedures to be applied	There are four meters, 2 main and 2 check meter as confirmed during remote inspection /11/ and through snapshot/8/. Imported electricity was also monitored by the operator using software for internal monitoring, which was again confirmed during the remote inspection /11/.			
Purpose of the data	Data has been used for the calculation of Baseline Emissions.			
Calculation method	Direct Continuous Measurement			
Comments	As confirmed during the remote inspection /11/, the collected data will be kept by AYDEM YENİLENEBİLİR ENERJİ A.Ş. during the crediting period and until two years after the last issuance of VERs for the “KOYULHISAR HYDRO ELECTRICITY POWER PLANT” project activity for that crediting period.			

¹²The latest version of the communiqué (in Turkish) can be found in the following link:
<http://www.epdk.gov.tr/web/elektrik-piyasasi-dairesi/44>

Data - Parameter	PEFC,j,y
Data unit	Litre of diesel per year
Description	Fossil fuel consumption from auxiliary diesel generators during the year y
Source of data	Onsite logs and measurements
Description of measurement methods and procedures to be applied	Verification team through remote audit interviews and though diesel fuel purchase receipts /18/ confirms that there has been diesel consumption during the monitoring period.
Frequency of monitoring-recording	Recorded continuously, Reported annually on the VCS Monitoring Report as verified by the verification team through remote assessment.
Value monitored	640.5 litre (for monitoring period)
Monitoring equipment	Not applicable.
QA-QC procedures to be applied	Verification team through remote audit interviews and though diesel fuel purchase receipts /18/ confirms that there has been diesel consumption during the monitoring period.
Purpose of the data	Data has been used for the calculation of Project Emissions.
Calculation method	Not applicable.
Comments	Not applicable.

Remaining Issues from Validation or Previous Verification:

This is the third verification of the registered project activity and from the review of validation report and the previous verification reports, verification team confirms that no FAR was to be addressed during this verification.

Finding: CL 01, CL 03, CL 05, CAR 01, CAR 02 were raised and successfully closed. Refer to appendix 2 for further details.

Opinion:

The verification team confirms that

- The project activity has been implemented and operated as per the registered VCS PD /3/ and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place, as per the documents provided by the PP and remote audit /11/

- The monitoring complies with the requirement of the applied methodology /10/;
- The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included above under each parameter and confirms to the requirement of the PD /3/;
- The values included in the monitoring report /1.2/ and corresponding emission reduction sheets /2.2/ are verified and included under each monitoring parameter.

4.2 Safeguards

4.2.1 No Net Harm

PP has adopted mitigation measures to minimise the impact of construction and operation as per the Project Presentation Report submitted to the authorities. Necessary precautions have been taken for the minimization of dust, discharge of wastewater in accordance with Water Pollution Control regulations, collection of waste oil Hazardous Waste Control Regulations and Waste Oil Control Regulations, and disposal of waste to landfill site in coordination with Koyulhisar Municipality. Also, a fish passage/ladder has been constructed to ease up and down stream movements of the fish living in Kelkit Stream. During the remote investigation /11/, PP confirmed that water transmission channel maintenance works were carried out in November 2014, April 2017, November 2018 and September, October, November of 2019 and after that no such incident had occurred during the current monitoring period. Hence, there was no electricity production during November 2014, April 2017, November 2018 and September, October, November of 2019 as confirmed from the ER sheet (Refer to appendix 2, CL 01 for further details).

4.2.2 Local Stakeholder Consultation

The local stakeholder consultation meeting for the project activity was conducted on project site on 13/11/2006 and the process was validated during the registration of project activity in VCS. VCS validation report /3/ was verified to confirm the same. The PP had invited identified stakeholders well in advance in by invitation letters to village heads of nearby settlements, NGO's, relevant governmental institutions with details of venue and time of meeting.

During the monitoring period there were no complaints about or demands from the project. The same was confirmed through the remote audit conducted during the monitoring period.

4.3 AFOLU-Specific Safeguards

This is not an AFOLU project.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The verification team has reviewed the emission reduction (ER) spread sheet /2.2/ and checked all the formulae and verified them to be correct and in line with the monitoring plan of the registered VCS PD and the applied monitoring methodology /10/.

All the monitored parameters are described above in section 4.1. All the ex-ante parameters which are used in the calculation of emission reduction are presented in section 4.1 of the MR /1.2/ transparently. It is confirmed that all the ex-ante parameters have been correctly used in the emission reduction calculation.

Baseline emissions:

The baseline emissions (BE_y) are calculated based on the following formula:

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

Where:

BE_y = Baseline emissions in year y (tCO₂-yr)

EG_{PJ,y} = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh-yr)

EF_{grid,CM,y} = Combined margin CO₂ emissions factor in year y (tCO₂-MWh)

And

$$EG_{PJ,y} = EG_{Facility,y}$$

EG_{Facility,y} = Quantity of net electricity generation supplied by the project plant to the grid in year y (MWh-y)

The Combined margin CO₂ emissions factor in year y (tCO₂ -MWh), EF_{grid,CM,y}, is fixed ex-ante for the duration of the crediting period, and is 0.52826 tCO_{2e} -MWh.

Therefore,

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

$$BE_y = (1,225,974.30) \times 0.52826$$

$$BE_y = 647,631 \text{ tCO}_2$$

It is noted that the formula and calculation used for baseline emission calculation in the monitoring report and ER sheet /2.2/ is in compliance with the registered VCS PD/3/. The default values and data used in the monitoring report /1.2/ is in-line with the registered PD/3/. Hence, acceptable to the verification team.

Project Emissions:

As per the methodology /10/ the PE_y in case of a hydro power project is Emissions from water reservoirs of hydro power plants (PE_{HP,y})

“For hydro power project activities that result in new reservoirs and hydro power project activities that result in the increase of existing reservoirs, project proponents shall account for CH₄ and CO₂ emissions from the reservoir, estimated as follows:”

“...the power density of the project activity (PD) is greater than 4 W/m² and less than or equal to 10 W/m²:”

The project has a power density of 52 W/m².

Hence, $PE_{HP,y} = 0$ is acceptable to the verification team.

However, there has been diesel consumption by diesel generator only utilized as a back-up or emergency generators during the monitoring period. Hence, the project emissions due to diesel consumption have been calculated based on the "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion" (Version 02).

The actual diesel consumption records were not available for the entire current monitoring period. Thus, PP has calculated the diesel consumption based on available working hours data for each generator and opted highest value of working hours of the generator during the monitoring period of the year i.e. year 2019 for the entire monitoring period. The resultant diesel consumption values have been then considered to calculate the project emissions for each generator. In above case, as the diesel consumption values for each generator shows increasing trend the consideration of highest value of diesel consumption of any year of the current monitoring period and apply the same for entire monitoring period is found reasonably acceptable as conservative approach.

As per the calculation checked by the verification team, PE due to diesel consumption = 9 tCO₂e/year. Thus, during the monitoring period $PE_y = 57$ tCO₂e.

Leakage:

As per the methodology ACM0002, version 12.1.0 /10/ and as defined in the registered VCS PD/3/ no leakage is considered in the project activity and the same is followed in this monitoring period also. Thus, it is in compliance with the registered VCS PD/3/.

The following are the ex-ante parameters used in the ER calculation which are in compliance with registered VCS PD/3/:

Parameter	Description	Justification
FC _{i,y} cubic meter	Amount of fuel i consumed by relevant power plants in Turkey in years, 2007, 2008, 2009	The value is used in the calculation of the Emission factor (0.52826 tCO_{2e} /MWh). The emission factor has already been calculated ex-ante as 0.52826 tCO_{2e} /MWh. The value data on the parameter is available in the Annex-2-Table-1@validated PDD version 1.4, which has been checked. Hence it is confirmed that the ex-ante details presented on the ex-ante parameter is found appropriate.
NCV _{i,y} GJ/Mass	Net Calorific Values for fossil fuel type I in year, for the years 2007, 2008, 2009	The value is used in the calculation of the Emission factor (0.52826 tCO_{2e} /MWh). The emission factor has already been calculated ex-ante as 0.52826 tCO_{2e} /MWh. The value data on the parameter is available in the Annex-2-Table-1b@validated PDD version 1.4, which has been

		checked. Hence it is confirmed that the ex-ante details presented on the ex-ante parameter is found appropriate.
EFCO _{2,i,y} tCO ₂ /GJ	CO ₂ emission factor of fossil fuel type i in year y	The ex-ante value (0.52826 tCO_{2e} /MWh) has been determined in the registered VCS-PD and the validation report has been checked and the emission factor is found to be correct. The value data on the parameter is available in the Annex-2-Table-2@validated PDD version 1.4, which has been checked. Hence it is confirmed that the ex-ante details presented on the ex-ante parameter is found appropriate.
EG _y MWh	Net electricity generated in the project electricity system in other words, net electricity generated and delivered to the grid by all power sources serving the system, not including low-cost / must-run power plants / units, in year y	The value is used in the calculation of the Emission factor (0.52826 tCO_{2e} /MWh). The emission factor has already been calculated ex-ante as 0.52826 tCO_{2e} /MWh. The value data on the parameter is available in the Annex-2-Table-3 and Table 4@validated PDD version 1.4, which has been checked. Hence it is confirmed that the ex-ante details presented on the ex-ante parameter is found appropriate.
EG _{m,y} MWh	Net electricity generated and delivered to the grid by power unit m in year y	The value is used in the calculation of the Emission factor (0.52826 tCO_{2e} /MWh). The emission factor has already been calculated ex-ante as 0.52826 tCO_{2e} /MWh. The value data on the parameter is available in the Annex-2-Table-8@validated PDD version 1.4, which has been checked. Hence it is confirmed that the ex-ante details presented on the ex-ante parameter is found appropriate.
η _{m,y}	Average net energy conversion efficiency of power unit m in year y	The value is used in the calculation of the Emission factor (0.52826 tCO_{2e} /MWh). The emission factor has already been calculated ex-ante as 0.52826 tCO_{2e} /MWh. The value data on the parameter is available in the Annex-1 of the “Tool to calculate emission factor for an electricity sector (Version 02.2.1)”, which has been checked. Hence it is confirmed that the ex-ante details presented on the ex-ante parameter is found appropriate.
NCV _{i,y} GJ per mass or volume	Weighted average net calorific value of fuel type i in year y	The ex-ante value (43.3 GJ/ton) has been determined in the registered VCS-PD and the validation report has been checked and is found to be correct.

unit (GJ/ton)		
EF _{CO₂,i,y} tCO ₂ /GJ	Weighted average CO ₂ emission factor of fuel type <i>i</i> in year <i>y</i> (<i>I stands for diesel fuel in this case</i>)	The ex-ante value (74.80 tCO ₂ /GJ) has been determined in the registered VCS-PD and the validation report has been checked and is found to be correct.

According to the applied methodology /10/, the conservativeness of the achieved emission reduction was checked and the detailed emission reduction calculation has been transparently provided in the ER sheet /2.2/. 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/2.2/ during the current monitoring period. It is confirmed that the data has been measured directly from meters and it was cross checked from the web site of SEFFAFLIK¹³ and was able to verify the same.

Finding: CL 04 was raised and successfully closed. Refer to appendix 2 for further details.

Opinion: The verification team confirms;

- The monitoring plan has been implemented as per the registered PD /3/;
- The monitoring complies with the requirement of the applied methodology/10/;
- The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included above under each parameter and confirms to the requirement of the PD /3/;
- The values included in the monitoring report /1.2/ and corresponding emission reduction sheet /2.2/ are verified and included under each monitoring parameter, wherever appropriate.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

All relevant documents were checked to assess the correctness and quality of data submitted by the project participants, which are used to determine emission reductions.

All records needed for monitoring are archived in line with the requirements of the registered monitoring plan /3/. No significant lack of evidence and missing data were detected during remote audit discussion and video inspection /11/. 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

¹³Electricity generation data <https://seffaflik.epias.com.tr/transparency/>.

parameters have been measured / determined without material misstatements and is in line with all applicable standards and relevant requirements. Also, the verification team confirms that there were no special events that may have impacted on the monitoring of GHG emission reductions other than the water transmission channel maintenance activities. The Water transmission channel maintenance works were carried out in November 2014, April 2017, November 2018 and September, October, November of 2019 as verified from the remote audit due to which there was no generation of electricity during these months. The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included in section 4.1 under each parameter and confirms to the requirement of the PD /3/. The export and import data is measured by the electricity meters, recorded continuously on the web site of SEFFAFLIK¹⁴ and the invoices are generated monthly/14/. The data is then reported annually on the VCS Monitoring Report as verified by the verification team through remote assessment.

It was also verified through remote audit inspection/11/ 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 remote audit discussion that internal training program for the monitoring staff is conducted on regular basis.

4.6 Non-Permanence Risk Analysis

Not applicable to the project activity.

5 VERIFICATION CONCLUSION

KBS Certification Services Pvt. Ltd. has been commissioned by 'AYDEM YENİLENEBİLİR ENERJİ A.Ş.' to perform 3rd verification of its registered VCS project 'KOYULHISAR HYDRO ELECTRICITY POWER PLANT', to undertake verification and certification for the greenhouse gas (GHG) emission reductions reported from 'KOYULHISAR HYDRO ELECTRICITY POWER PLANT' for the monitoring period 01/08/2013 to 16/11/2019 (both dates included), under the crediting period 17/11/2009 to 16/11/2019, with regard to the relevant requirements of VCS Standard Version 4.

The management of the 'Ekobil Environmental Services and Consultancy 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 final Monitoring Report Version 1.04 and dated 11/12/2020. The calculation and determination of GHG emission reductions from the project is the responsibility of the management of the 'Ekobil Environmental Services and Consultancy Ltd'. The development and maintenance of records and reporting procedures are in accordance with the Monitoring Report Version 1.04 and dated 11/12/2020.

¹⁴Electricity generation data <https://seffaflik.epias.com.tr/transparency/>.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 01/08/2013 to 16/11/2019 based on the reported emission reductions in the final Monitoring Report Version 1.04 dated 11/12/2020 for the same period.

As a result of the verification, the verification team confirms that:

- All operations of the project are implemented and installed as planned and described in the project description.
 - The monitoring system is in place and functional.
 - The installed equipment essential for generating emission reductions runs reliably.
 - The GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner.
- Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, KBS planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

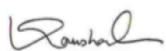
Verification period: From 01/08/2013 to 16/11/2019

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
01/08/2013 – 31/12/2013	53,515	4	0	53,511
01/01/2014-31/12/2014	43,921	9	0	43,912
01/01/2015-31/12/2015	130,755	9	0	130,746
01/01/2016-31/12/2016	140,234	9	0	140,225
01/01/2017-31/12/2017	94,344	9	0	94,335
01/01/2018-31/12/2018	88,351	9	0	88,342
01/01/2018-16/11/2019	96,511	8	0	96,503
Total	647,631	57	0	647,574

Location: Faridabad

Date: 11/12/2020



Authorized Signatory: Kaushal Goyal

Designation: Managing Director

KBS Certification Services Pvt. Ltd.

APPENDIX 1: REFERENCES

/1/	/1.1/ Monitoring Report, Version 01, dated 23/09/2020 (Initial Version) /1.2/ Monitoring Report, Version 1.04 dated 10/12/2020 (Final Version)
/2/	/2.1/ Emission Reduction calculation sheet, Version 01 dated 23/09/2020 (corresponding to initial Version of VCS MR) /2.2/ Emissions Reduction calculation Sheet, Version 1.04 dated 10/12/2020 (corresponding to final Version of VCS MR)
/3/	- Registered VCS-PD version 1.4 dated 08/11/2011 - Validation report dated 11/11/2011
/4/	VCS Standard Version 4
/5/	VCS Programme guide Version 4
/6/	Technical specifications/photographs of turbines, electricity meters etc.
/7/	Single line diagram and meter location / Layout
/8/	Electricity production license dated 18/01/2007 (Valid for 40 years)
/9/	Commissioning Certificate dated 17/11/2009
/10/	ACM0002: Consolidated baseline methodology for grid-connected electricity generation from renewable sources --- Version 12.1.0
/11/	Remote auditing (04/11/2020) for verification of measuring and monitoring procedure, - Video recordings & snapshots of the project site/equipment's - Interviews and data/log review
/12/	Area of reservoir map
/13/	Calibration Certificates for main meter and check meter
/14/	Invoices raised during the monitoring period Electricity generation data https://seffaflik.epias.com.tr/transparency/
/15/	Organization structure/chart
/16/	Tool to calculate the emission factor for an electricity system
/17/	PP name change supportive
/18/	Diesel fuel purchase receipts for the monitoring period

/19/	Supportive for name change of PP
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APPENDIX 2: FINDINGS

Summary of findings	CL	CAR	FAR
	05	02	00

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

No remaining FAR from validation and/or previous verifications.

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

Table 2. CL from this verification

CL ID	01	Section no.	4.1	Date: 06/11/2020
Description of CL				
PP shall clarify and provide reasons regarding no electricity production during November 2014, April 2017, November 2018 and September to November 2019.				
Project participant response				Date: 25/11/2020
Water transmission channel maintenance works were carried out at Koyulhisar HPP on the given dates. For this reason, electricity has not been produced in these dates.				
Documentation provided by project participant				
The project owner shared this information.				

DOE assessment	Date: 30/11/2020
The provided clarification regarding no electricity generation during November 2014, April 2017, November 2018 and September to November 2019 is checked and is accepted. Thus, this CL is closed.	

CL ID	02	Section no.	3.2	Date: 06/11/2020
Description of CL				
Under section 3.2 of the submitted VCS MR, the number sequencing of the subtitles is inconsistent.				
Project participant response				Date: 25/11/2020
The number sequencing of the subtitles are fixed.				
Documentation provided by project participant				
Please see Version 1.02 of Koyulhisar HPP.				
DOE assessment				Date: 30/11/2020
The number sequencing of sub sections under section 3.2 of the revised MR is found appropriate. Thus, this CL is closed.				

CL ID	03	Section no.	4.1	Date: 06/11/2020
Description of CL				
- Under section 4.2 and 4.3 of the submitted VCS MR, PP has mentioned futuristic language which is not applicable since the project has been already implemented. - Under section 4.2 of the submitted VCS MR, the recent calibration dates for the meters can be provided under QA/QC procedure. Also, the representation of the accuracy class of the meters is incorrect. It shall be "0.2" instead of '0,2". - Under section 4.2 of the submitted VCS MR, the value monitored for the parameter "$PE_{FC,j,y}$" is not clear. PP shall mention if no diesel consumption took place during the monitoring period and mention justification for the same. - Under section 4.3 of the submitted VCS MR, PP shall provide line diagram showing the meter locations and the monitoring points. Also, the web link provided for TEİAŞ – PMUM web site (http://pmum.teias.gov.tr) is not functional.				
Project participant response				Date: 25/11/2020
- Future tense usage in the report are corrected. - Calibration dates and serial number of the meters are provided. Representation of the accuracy class is corrected. - Section 4.2 is corrected by calculating project emission. - Web links are corrected. Number of meters are added.				
Documentation provided by project participant				

Please see version 1.02 of Koyulhisar HPP.	
DOE assessment	Date: 30/11/2020
1. Now, PP have corrected the futuristic statements in the section 4.2 and 4.3 of the revised MR. Thus, this part of CL is closed. 2. Now, PP have mentioned the calibration details and corrected the accuracy class of the energy meter in the section 4.2 of the revised MR. Thus, this part of CL is closed. 3. In the section 4.2 of the revised MR, PP have now mentioned the value monitored for the parameter “PE_{FC,j,y}”. The mentioned value diesel consumption and supportive evidences is found appropriate. Thus, this part of CL is closed. 4. Now, PP have corrected the web link in the section 4.3 of the revised MR and clarified on-site metering arrangements during remote audit interview. The same have been checked and found appropriate. Thus, this part of CL is closed.	

CL ID	04	Section no.	4.1	Date: 06/11/2020
Description of CL				
Under section 5.1 of the submitted VCS MR, PP shall mention the final baseline emissions and ER values arrived based on the calculations. Also, the decimals and commas applied for all the electricity production and consumption values are inconsistent with the provided ER sheet.				
Project participant response				Date: 25/11/2020
Necessary arrangements has been made.				
Documentation provided by project participant				
Please see Version 1.02 of Koyulhisar HPP.				
DOE assessment				Date: 30/11/2020
PP have now corrected the values of for all the electricity production, consumption and resultant ER calculation values in the section 5.1 of the revised MR. The same have been checked and found consistent with the provided ER calculation sheet. Thus, this part of CL is closed.				

CL ID	05	Section no.	4.1	Date: 06/11/2020
Description of CL				
1. Under section 4.1 of the submitted VCS MR, for the ex-ante parameters “FC_{i,y}”, “NCV_{i,y}”, “EF_{CO2,i,y}”, “EG_y” and “EG_{m,y}”, PP has mentioned “Please see Annex 2”, however no such Annexure could be found in the submitted VCS MR. 2. Under section 4.1 of the submitted VCS MR, for the ex-ante parameters “FC_{i,y}”, “NCV_{i,y}” and “EG_y”, the source link provided is not functional.				
Project participant response				Date: 25/11/2020

1. It is corrected by giving the right reference. 2. Source links are corrected.	
Documentation provided by project participant	
<i>Please see Version 1.02 of Koyulhisar HPP.</i>	
DOE assessment	Date: 30/11/2020
1. PP have now revised the reference for the ex- ante parameters “FC_{i,y}”, “NCV_{i,y}”, “EF_{CO2,i,y}”, “EG_y” and “EG_{m,y}” under section 4.1 of revised MR. The same have been checked and found consistent with the VEERA registry project page. Thus, this part of CL is closed. 2. Now, PP has incorporated revised web links for source of data for “FC_{i,y}”, “NCV_{i,y}” and “EG_y” ex- ante parameters. The mentioned web links have been checked and found appropriate. Thus, this part of CL is closed.	

Table 3.CAR from this verification

CAR ID	01	Section no.	4.1	Date: 06/11/2020
Description of CAR				
1. The font size needs to be consistent throughout the submitted VCS MR. 2. Under section 1.1 of the submitted VCS MR, PP shall mention the following as per the VCS template instructions: • The relevant implementation dates (e.g., dates of construction, commissioning, and continued operation periods. • The total GHG emission reductions or removals generated in this monitoring period. 3. Under section 1.1 of the submitted VCS MR, the figure 1 showing flowchart is not clear. 4. Under section 2.1 of the submitted VCS MR, PP has stated that “The project description also summarizes the rules and regulations that the project has to comply with. These are also presented as Annex-1, to this document”, however no such Annexure could be found in the submitted VCS MR.				
Project participant response				Date: 25/11/2020
1. The font size of the document is corrected. 2. Section 1.1 is corrected. 3. New version of the flowchart is added. 4. It is corrected by giving the right reference.				
Documentation provided by project participant				
<i>Revised MR</i>				
DOE assessment				Date: 30/11/2020

1. PP have now corrected the font size throughout the MR in line with the template requirement. **Thus, this part of CAR is closed.**
2. PP have now mentioned the required information on project implementation dates and total GHG emission reductions achieved during this monitoring period under section 1.1 in the revised monitoring report. The same have been checked and found appropriate. **Thus, this part of CAR is closed.**
3. PP have now incorporated legible flow chart of the project operational principle under the section 1.1 of revised MR. **Thus, this part of CAR is closed.**

CAR ID	02	Section no.	4.4	Date: 06/11/2020
Description of CAR				
In ER sheet, PP shall remove the electricity generation data for 2020 since it is not covering the monitoring period.				
Project participant response				Date: 25/11/2020
Electricity generation data of 2020 is removed from the ER sheet.				
Documentation provided by project participant				
<i>Revised ER sheet</i>				
DOE assessment				Date: 30/11/2020
The correction has been done in the revised ER sheet. Hence, the CAR is closed.				

Table 3. FAR from this verification

No FAR raised during this verification.

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

APPENDIX 3: COMPETENCE OF TEAM MEMBERS

Personnel Name:		Tushar Eknath Chaudhari	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy Industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources		
Energy demand	TA 3.1. Energy Demand		
Waste Handling and Disposal	TA 13.1 Waste Handling and Disposal		
Approved by	Manager Competency & Training		
Approval date:	02/09/2020		

Personnel Name:		Ms. Deboshmita Dey	
Qualified to work as:			
Team Leader (Trainee)	☒	Technical Expert	☐
Validator/Verifier	☒	Financial Expert	☐
Technical Reviewer	☐	Local Expert	☐
Area(s) of Technical Expertise			

Sectoral Scope	Technical Area
-	-
Approved by (Manager C & T)	Sanjay Kandari
Approval date:	03/11/2020

Personnel Name:		Sanjay Kandari	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy Industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources		
Energy demand	TA 3.1. Energy Demand		
Waste Handling and Disposal	TA 13.1 Waste Handling and Disposal TA 13.2 Manure		
Approved by (Manager C & T)	Akhilesh Joshi		
Approval date:	11/12/2015		