



VERIFICATION REPORT FOR “TOROS HYDROELECTRIC POWER PLANT”.



Document Prepared By (Carbon Check (India) Private Ltd)

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Summary:

Verification: Aydem Yenilenebilir Enerji A.Ş has appointed Carbon Check (India) Private Ltd., to carry out the second periodic verification (01/10/2020 to 31/12/2021) of the registered VCS project "Toros Hydroelectric Power Plant" (VCS ID: 1499), with regards to the relevant requirements of VCS Standard Version 4.2 (dated 20/01/2022).

Project: The project "Toros Hydroelectric Power Plant", is a large-scale project activity that employs approved CDM methodology ACM0002 version 16.0.0, "Grid connected energy generation from renewable source /B02/. The purpose of the project is electricity production using the potential energy of the Çakıt Stream, in Adana province as a renewable resource. The installed capacity of the project is mentioned in the (EPDK) Electricity Production license dated 18/01/2007. (License no. EU/1062-2/782)/11/, is 49MWe connecting to TNP grid via one transformer substations by 15km long 154KV Karaisali transmission line. The potential energy of the Çakıt Stream is converted into electricity using 2 turbines, each with a 24,995 MWe/26,025MWmcapacity. The commissioning date of 17/05/2013 is the operational date of project activity. According to the first verification report /B04-b/, during the first monitoring period i.e., from 17/05/2013 to 30/09/2020 and has generated 1,329,377.62 MWh net electricity, thereby resulting in an emission reduction of 708,702 tCO₂e as per the registered verification report/B04b/ whereas,

during the second monitoring period (current) 1/10/2020 to 31/12/2021 the net electricity generated 108,062 MWh thereby resulting in an emission reduction of 57,622tCO₂e.

Purpose: The purpose of the verification is to review the monitoring results and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data, used to confirm the reductions in anthropogenic emissions by sources is sufficient, definitive, and presented in a concise and transparent manner. The monitoring plan, monitoring report, and the project's compliance with relevant VCS, UNFCCC, and host Party criteria are verified to confirm that the project has been implemented in accordance with the previously registered design and conservative assumptions, as documented.

Scope: The verification scope is defined as an independent and objective review of the monitoring report (MR) against the relevant criteria and guidance documents provided by VCS which include the following: VCS Program Guide (v4.1, dated 20/01/2022), VCS Standard (v4.2, dated 20/01/2022), Program Definitions (v4.1, dated 20/01/2022), Registration & Issuance Process (v4.1, dated 20/01/2022) VCS Validation and Verification Manual (v3.2, dated 19/10/2016) applicable at the time in order to confirm the emission reductions produced during the monitoring period are in accordance with the project activity as provided in the registered VCS PD/B03a/. The CDM-approved methodology ACM0002, Version 16.0.0/B02/ has been applied for the project activity.

The method and criteria used for verification

The verification consists of the following four phases:

I. A desk review of the project description documents

- A review of data and information.

Cross checks between information provided in the monitoring report and information from sources with all necessary means without limitations to the information provided by the project proponent.

II. Remote Audit/ Remote Interviews.

- Interviews with relevant stakeholders in the host country with personnel having knowledge of the project development via telephone, email, or direct on-site visits.

- Cross-checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent.

III. Reference to available information relating to projects or technologies like project under verification and review based on the approved methodology being applied for the appropriateness of formulae and accuracy of calculations.

The resolution of outstanding issues and the issuance of the final

verification report and opinion. In the course of the verification process, 02 CARs and 04 CLs were raised, all have been successfully closed. The list of Clarification and Corrective Actions Requests (CL and CAR) is presented in this report.

There are no uncertainties associated with the verification of the project activity. The verification has been done with a reasonable level of assurance.

Summary of the verification conclusion

Carbon Check (India) Private Ltd. concludes the verification with a positive opinion that the VCS large scale project activity "Toros Hydroelectric Power Plant" as described in the monitoring report (version 7.04, dated 24/01/2023)/01b/ and registered PD (version 2.02, dated 20/04/2015) /B03a/, meets all applicable VCS requirements, including those specified in the VCS Standard (v4.2, dated 20/01/2022), relevant methodology, tools, and guidelines.

The project activity and its emission reduction calculation were correctly implemented and met all requirements for the VCS standard and guidelines and correctly applies the baseline and monitoring methodology ACM0002 version 16.0.0, "Grid connected energy generation from renewable sources/B02/. The monitoring system is in place and the emission reductions are calculated without material misstatement Carbon Check (India) Private Ltd., therefore, requests the issuance of the project as a VCS project activity, with a reasonable level of assurance.

Therefore, CCIPL is able to certify that the emissions reductions from the "Toros Hydroelectric Power Plant, Turkey" project during the period from 01/10/2020 to 31/12/2022 amount to 57,622 tCO₂e. The year-wise break up of verified emission reduction is as below:

Year	Baseline Emissions (tCO ₂ e)	Project Emissions (tCO ₂ e)	Leakage Emissions (tCO ₂ e)	Net GHG Emission Reductions or Removals (tCO ₂ e)
2020 (01/10/2020-31/12/2020)	7,481	0	0	7,481
2021 (01/01/2021 – 31/12/2021)	50,141	0	0	50,141

	Total	57,622	0	0	57,622	
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2. CONTENTS

1.	INTRODUCTION	8
1.1	Objective	8
1.2	Scope and Criteria	8
1.3	Level of Assurance.....	10
1.4	Summary Description of the Project	10
2.	Verification Process	11
2.1	Method and Criteria.....	11
2.2	Document Review	12
2.3	Interviews.....	13
2.4	Site Inspections.....	15
2.5	Resolution of Findings	17
2.5.1	Forward Action Requests	17
2.6	Eligibility for Validation Activities	18
3.	Validation Findings	18
3.1	Participation under Other GHG Programs	18
3.2	Methodology Deviations.....	18
3.3	Project Description Deviations.....	18
3.4	Grouped Project	18
4.	4 Verification Findings	19
4.1	Project Implementation Status	19
4.2	Safeguards	23
4.2.1	No Net Harm	23
4.2.2	Local Stakeholder Consultation	24
4.3	AFOLU-Specific Safeguards	24
4.4	Accuracy of GHG Emission Reduction and Removal Calculations	24
4.5	Quality of Evidence to Determine GHG Emission Reductions and Removals	27
4.6	Non-Permanence Risk Analysis.....	28
5.	Verification conclusion	28
6.	APPENDIX 01: Abbreviations	31

7.	APPENDIX 02: Reference Documents	32
8.	APPENDIX 03: Competency Certificates	34
9.	APPENDIX 04: CIARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS	36

1. INTRODUCTION

1.1 Objective

Aydem Yenilenebilir Enerji A.Ş have appointed the VVB, CCIPL for verification service for the VCS registered project activity “Toros Hydroelectric Power Plant” Adana Province, Turkey.

Verification is the periodic independent review and ex post determination of both quantitative and qualitative information by a Validation and Verification Body (VVB) of the monitored reductions in GHG emissions that have occurred because of the VCS project activity during a defined monitoring period.

The purpose of verification is to review the monitoring results and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data and used to confirm the reductions in emissions is sufficient, definitive, and presented in a concise and transparent manner. Carbon Check’s objective is to perform a thorough, independent assessment of the registered projects activities. In particular monitoring plan, monitoring report and the project’s compliance are verified against the relevant criteria and guidance documents provided by VCS. This allows for the confirmation that the project has been implemented in accordance with the VCS registered VCS PD/B03a/ and conservative assumptions, as documented. And, also to confirm if the monitoring plan is in compliance with the VCS PD/B03a/ and approved monitoring methodology/B02/, The baseline is established using the approved methodology ACM0002 (version 16.0.0), "Grid connected energy generation from renewable sources." /B02/This methodology refers to the latest. The objective of this verification was to verify and certify emission reductions reported for the “Toros Hydroelectric power Plant Project” for the period (01/10/2020 to 31/12/2021).

1.2 Scope and Criteria

The verification of this project is based on the registered VCS Project Description/B03a/, the Monitoring Report of this monitoring period /01b/, emission reduction calculation spread sheet /02/, supporting documents made available to the verifier and information collected through performing interviews and during the on-site assessment. Furthermore, publicly available information was considered as far as available and required.

Carbon Check has employed a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

The verification is carried out on the basis of the following requirements (latest available on VCS website at the time of verification), applicable for this project activity:

- VCS Program Guide (v4.1, dated 20/01/2022)/B01 b/

- VCS Standard (v4.2, dated 20/01/2022)/B01 a/
- Program Definitions (v4.1, dated 20/01/2022) /B01 e/
- Registration & Issuance Process (v4.1, dated 20/01/2022) /B01 d/
- VCS Validation and Verification Manual (v 3.2, dated 19/10/2016)/B01 c/
- CDM Methodology: ACM0002: Grid-connected electricity generation from renewable sources (Version 16.0.0) /B02/
- Other relevant rules, including the host country legislation

The scope of this verification, by independent checking of objective evidence, is as follows:

- To verify that the project is implemented as described in the project description/B03a/
- To assess the project's compliance with other relevant rules including the host country legislation.
- To assess the implementation of the monitoring plan content as mentioned in the VCS-PD/B03a/.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions (VERs/VCUs) without any double counting.
- 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 /02/.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.
- The verification shall ensure that the reported emission reductions are complete and accurate to be certified.

The method and criteria used for verification consisted of the following phases:

- 1) Completeness check and desk review:
- 2) Remote Audit

- 3) Resolution of outstanding issues and issuance of final verification report and applicable VCS Validation and Verification Deeds of Representation.

Carbon Check (India) Private Ltd. conducts all its work under strict rules to safeguard impartiality and ensure the independence of the verification team. The verification does not provide any consulting or recommendations for the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

1.3 Level of Assurance

☒ Reasonable level of assurance

☐ Limited level of assurance

VVB achieved a reasonable level of assurance even after not conducting the site visit for the project which is based on the review of the monitoring report/01/ registered VCS PD/B03/ all the relevant supporting document has been cross checked by the verification team by interview with the PP during the remote audit through the video calls as well as local expert Muhammet Ali Erduran interviewed project proponent and local stakeholders.

1.4 Summary Description of the Project

The Toros Hydroelectric Power Plant with a total capacity of 49 MW is located near Çakıt Stream, within the jurisdiction of Pozantı Town of Adana Province, Turkey. The hydroelectric power plant is designed to convert the potential energy of the Çakıt Stream into electricity by means of 2 turbines of 24.5 MW capacity each. The electricity generated is sold to the Turkish National Power Grid.

The start date of Project Activity 17 May 2013 be the date when the project started to supply electricity to the Turkish grid as substantiated by the partial acceptance letter sent to the Governance of Adana Province, Turkey as per registered VCS PD (version 2.02 dated 20/04/2015) /B03a/ and the first verification report/B04b/. The project crediting period is 10 years (17/05/2013 to 16/05/2023 both days inclusive) falls under renewable twice category. And for second Monitoring period (01/10/2020 to 31/12/2021) total emission reduction of 57,622tCO₂e.

Table.01: General Technical characteristics of the Toros HPP as per VCS registered PD /B03a/.

Place of the Weir	The Weir is located on the Çakıt Stream, at the proximity of the Belemedik village, in Pozantı Town of Adana Province, Turkey
Purpose of the Weir	According to flow direction, diverting the Çakıt Stream's water to water intake structure.

Height of the regulator from the riverbed	4.00m
Total Installed Capacity (Turbine)	49 MW a. Unit Number-02 (24.995 MWe/26.025MWm) Serial no: TUR-01 and TUR-02, TRYPE; CJA75-L-200/4*19.3 b. Unit Flow Rate- 8m ³ /s
Generator	1. Regulator Diesel Generator-Phase 03P, serial no: YM12043726 2. Powerhouse Diesel Generator-Phase 03P, serial no:87672776 3. Loading Pool Generation-Phase 03P, serial no:11017507
Transformer Number	01 piece
Emergency Diesel Generator	01 piece of rated capacity 100kVA

2. VERIFICATION PROCESS

2.1 Method and Criteria

The method and criteria used for verification are in following three phases:

- 1) Completeness check and desk review of the validation report, monitoring plan, monitoring report, monitoring methodology, VCS PD, /B03a/ applicable tools in particular attention to the frequency of measurements, quality of metering equipment's including calibration requirements, QA/QC procedures and other relevant documents.
- 2) Remote Audit (including follow-up interviews with project stakeholders, when deemed necessary). The Remote audit assignment includes the following: /16/.
 - An assignment of implementation and operation of project activity with respect to validated VCS PD;/B03a/ and MR /01/.
 - Review of information flows for generating, aggregating, and reporting the monitoring

parameters.

- Interview with relevant personals to determine whether the operational and data collection procedures are implemented and in accordance with monitoring plan of the validated VCS PD /B03a/.
 - Cross check of information and data provided in the monitoring report with plant logbooks, inventories, purchase records or similar data sources.
 - Check of monitoring equipment's, calibration frequency and monitoring practice in-line with methodology and validated VCS PD/B03a/.
 - Review of assumptions made in calculating the emission reduction.
 - Implementation of QA/QC procedure in-line with the validated VCS PD and methodology requirement.
- 3) Resolution of outstanding issues and the issuance of the final Verification report and if applicable, the VCS Validation and Verification Deeds of Representation.

2.2 Document Review

The registered VCS PD, /B03a/, MR /01/ emission reduction calculation spread sheet/02/ and supporting documents related to the project implementation, project design, monitoring and baseline were reviewed as per VCS standard (version 4.1) standard requirements. The desk review included:

A review of the data and information presented to verify completeness and consistency in accordance with VCS standard (version 4.1) requirements/B01/.

A review of the approved monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, quality of monitoring equipment (including calibration requirements) and the quality assurance and quality control (QA/QC) procedures.

An evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of emission reductions.

Data input values were also checked from the records maintained by the project proponents. Results of calculations reported in the monitoring report were checked against data values as available from the project proponent in ER calculation sheet /02/.

These data values and other information related to project performance are available in the form of data records duly archived and maintained as per the quality assurance/quality control procedure specified as a part of monitoring plan in the registered /VCS-PD/B03a/.

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.

The Monitoring report version 7.04 dated 28/01/2022/01a/ was initially reviewed and CCIPL requested the PP to present the supporting information and documents. The documents reviewed by CCIPL are listed below in Appendix 02. Through the process of the verification, the revised monitoring report and the supporting documents were evaluated

The table in Appendix 02 outlines the documentation reviewed during the verification.

2.3 Interviews

The table below describes a remote audit to the project activity was undertaken on 03/03/2022 to assess the implementation and operation of the project activity and to review evidence, and interview key personnel to confirm evidence associated with the data generation, aggregation, and calculation and reporting of the monitoring parameters through video calls. The remote audit addressed:

- An assessment of the project implementation and operation as per the VCS PD/B01/ (including physical inspection to confirm physical existence and operation of project components);
- Review of information flows for generating, aggregating and reporting the monitoring parameters.
- Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the monitoring report /01/.

The key personnel interviewed, and the main topics of the interviews are summarized in the table below:

	Date	Name	Organisation	Topic
		Mesut Pehlivan	AYEAS/Toros HEPP Operation Chief	• Project Design • Project Implementation status • Project start date and Project Location • Roles and responsibility,

/a/	03/03/2022 Remotely	Job Ayhan Isik	AYEAS/Toros HEPP Administrative Works Professional	Project Implementation and Operation status, Qualification and Training, Roles and responsibility. - Involved in Emissions Trading Programs and Other Binding Limits or Other Forms of Environmental Credit. - Impact of the capacity change on the applicability of the methodology, additionality, or the appropriateness of the baseline scenario.
		Sultan Tuncbilek	AYEAŞ / Environment Relationships professional	
		Durmus Gorkem Kurt	AYEAŞ / HEPP Operations Coordination manager	
		Irmak Subasi	Project Manager	
/b/	03/03/2022 Remotely	Durmus Gorkem Kurt	AYEAŞ / HEPP Operations Coordination manager	- Project design - Turbine details - Monitoring plan - Monitoring procedures and monitoring equipment - Maintenance and operation plan - Data and information flow, Data input device, Roles and responsibility,
		Mehmet Kelekcio	AYEAS/HEPP Operations Coordination manager	
		Marve Aygenc	Project Manager	

		Irmak Subasi	Project Manager	Project implementation , operation, monitoring procedure.
/c/	03/03/2022 Remotely	Durmus Gorkem Kurt	AYEAŞ / HEPP Operations Coordination manager	- VCU calculation and completeness of monitoring report, - Project implementation and operation, Project design, monitoring procedure, data and information flow, compliance of monitoring plan with monitoring methodology and VCS-PD. - Project Implementation status - Monitoring and operating system - Quantification of emission reductions - Monitoring parameters - Emission factor for the grid - Roles and responsibility.
		Mehmet Kelekcio	AYEAS/HEPP Operations Coordination manager	
		Marve Aygenc	Project Manager	
		Irmak Subasi	Project Manager	
/d/	03/03/2022 Remotely	Ali Gülen	Local Stakeholders	Ongoing communication, impact of the project activity on stakeholders, grievances resolution.
		Sami Dinçer		
		Ahmet Akkaş-Caner Akkaş		
		Metehan Odabaşı		

2.4 Site Inspections

Carbon Check has not conducted an on-site inspection due to the recent pandemic COVID19 and due to its related policy measures created restrictions all over the world impacting travel activities on an international level and even for in-country travel. Moreover, the site visit cannot be

postponed due to verification timeline agreed between the Project Participant and the DOE as per the verification contract./22/

A reasonable level of assurance has been maintained through the alternative means used for the purpose of verification as follows:

An assessment of the implementation and operation of the proposed project through remote interviews with the representatives of project proponent.

Assessment of the project design, turbines details, monitoring plan, monitoring procedures and monitoring equipment.

Assessment of the design change impacts on the applicability of the methodology, additionality, or the appropriateness of the baseline scenario

Confirmation of the applicability of the methodology, monitoring, controlling instruments and operational arrangements.

A remote audit was carried out to verify that the project is implemented in accordance with the applicable criteria. Remote audit assessment is necessary to check the monitoring data with respect to accuracy to ensure the calculation of emission reductions. The remote audit assessment included an investigation of whether all relevant equipment is installed and works as anticipated:

Local Stakeholders were interviewed where they were asked about the ongoing communication, grievance resolutions and impact of the project activity on them. A positive response was noted from local stakeholders towards the project activity and project proponent.

The operating staff was interviewed and observed in order to check the risks of inappropriate operation and data collection procedures.

Information processes for generating, aggregating, and reporting the selected monitored parameters were reviewed.

The duly calibration/testing of all metering equipment was checked.

The monitoring processes, routines and documentations were audited to check their proper application.

The monitoring data were checked completely.

During the remote audit all monitoring data with respect to accuracy to ensure the calculation of emission reductions was checked. All the procedures and records were found authenticated and properly maintained as per the requirements of the project.

The verification team has carried out interviews in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for the VCS.

A remote audit inspection was carried out to check the project implementation and operation for the gap validation and verification for the VCS registered project activity, and to confirm that the project is developed as described in the VCS-PD/B01/. The project remote audit was inspected from 03/03/2022. On 03/03/2022, verification team was introduced to the project design, project implementation and operation and other description related to the project. The meeting was conducted at the project proponent's office in Turkey. The project site located in Adana province, along the Çakıt Stream, Turkey was also inspected remotely on 03/03/2022.

2.5 Resolution of Findings

This section summarizes the findings from the validation and verification of the project activity. In this section, the findings from the document review, assessments, and remote interviews are provided.

Material discrepancies identified in the course of the verification are addressed either as CARs, CLs, or FARs.

Corrective action requests (CAR) are issued, where;

- i. Mistakes have been made with a direct influence on project results requiring adjustments of the VERs/VCU monitoring report.
- ii. Applicable methodological specific requirements have not been met.

A Clarification request (CL) may be used where additional information is needed to fully clarify an issue or where the information is not transparent enough to establish whether a requirement is met.

Four(04)CL, and two (02)CAR findings had been raised and successfully closed by the verification team. Please refer to Appendix 04 below for the details of the CARs/CLs and their closure.

2.5.1 Forward Action Requests

No Forward action request has been raised during the validation of the project activity.

A forward action request (FAR) should be issued, where:

- i. The actual project monitoring and reporting practices requires attention and /or adjustment for the consecutive verification period, or
- ii. An adjustment of the MP is recommended.

In the context of FARs, risks have been identified, which may endanger the delivery of high-quality emissions reductions in the future, i.e., by deviations from standard procedures as defined by the MP. Consequently, such aspects should receive a special focus during the consecutive verification. A FAR may originate from lack of data sustaining claimed emission reductions.

According to these principles, no FARs were issued during the verification.

2.6 Eligibility for Validation Activities

Validation/Verification body (VVB), Carbon Check (India) Private Ltd. holds accreditation for verification for the relevant sectoral scope 01 and is eligible for validation/verification for the project activity.

Please refer: <https://verra.org/project/carbon-check-india-private-ltd/>

3. VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project does not participate under any emission trading program and other GHG Programs including renewable energy certificates (RECs).

3.2 Methodology Deviations

Not Applicable

3.3 Project Description Deviations

As per the MR/01b/ the verification team finds there is one deviation in the project. This is confirmed by the verification team that current project proponent is Aydem Yenilenebilir Enerji A.Ş. As per the review of document “Change of Project Owner document by Adana Governorship Çevre urban management provincial directorate 31/01/2020, Petition dated 28/01/2020, registration no 3425”/18/ provided by the PP and VCS registered verification report for 1st monitoring period /B04b/ is consistent with the MR/01b/ and properly described and justified in the MR for 2nd verification. Whereas, In the registered VCS PD/B03a/, the PP is Bereket Enerji Üretim Anonim Şirketi /B03a/. Hence the verification team confirms as per the paragraph 3.19.2, of procedures 2 of VCS standard v4.2, there is no impact of deviation on the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in compliance with the applied methodology.

3.4 Grouped Project

Not Applicable.

4. 4 VERIFICATION FINDINGS

The verification findings have been detailed as in below.

4.1 Project Implementation Status

The project activity is in operation stage as evidenced by the remote inspection of the site. All the physical components and project boundary are in conformity with the description in registered VCS PD /B03a/. The capacity of project equipment's has been confirmed during the remote inspection, also through the technical specifications /03/ and found in compliance with the registered VCS PD/B03a/. The project activity was commissioned on 17/05/2013 as per commissioning certificate/12/. Based on the remote inspection and the reviewed project documentation like the technical specification/03/, photographs of meters, turbines/16/, single line diagram/09/, electricity production license/11/, commissioning certificate/12/, area of reservoir map/15/and/17/, calibration certificates of energy meters/04/, and invoices/08/ etc. the verification team confirms that the project was implemented and operated as described in the registered VCS PD/B03a/. Further, the verification team confirms that- There is not any material discrepancy between project implementation and the project description in the registered VCS PD. /B03a/. The monitoring plan is completely implemented and is suitable for the actual monitoring system (i.e., process and schedule for obtaining, recording, compiling, and analyzing 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 installed generation capacity of the power plant is 49 MWe (2*24.995 MW) , which was verified during the remote audit and from the electricity production license/11/. Further, it was noticed that during the monitoring period the project activity operated under normal conditions, and no significant event that may have an impact on the monitoring of GHG emission reductions was observed. The 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 /B03a/. 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 or nor does it have any binding limits. PP will not claim the carbon credits under any other GHG emission reduction scheme for the crediting period under VCS and PP has provided a declaration on the same during the validation. Hence, there is no possibility of double counting.

Management and operational system:

Verification team was able to verify that authorities and responsibilities /16/ for monitoring and reporting of all data related to the emission reductions were clearly defined for the monitoring period from 01/10/2020 to 31/12/2021. The allocation of the responsibilities is documented in a written form and is followed as described in the registered VCS PD/B03a/. Routines for the archiving of data are defined and documented. The monitoring plan described in section 4.3 of the MR/01/ is confirmed to be correct. All the parameters of the monitoring plan are monitored using appropriate metering system. The verification team has interviewed personally /16/ who are 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 /16/ that the Toros Hydroelectric power 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 /16/ and from the document review as confirmed above/06/, /07/, /08/, /09/, /12/, /13/, /14/ that the actual monitoring system complies with the monitoring plan mentioned in the registered VCS PD /B03a/ and there is no deviation in monitoring plan and procedures, equipment. During the verification, all relevant monitoring parameters of the registered monitoring plan have been verified about 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/B03a/:

Data - Parameter	EGy
Data unit	MWh
Description	Electricity
Source of data	Net Amount of Electricity supplied to the "Turkish National Grid" by the proposed project
Description of measurement methods and procedures to be applied	Data is measured directly from the electric meter and remotely recorded on TEIAS (grid owner) computerized ~~system~~
Frequency of monitoring-recording	Annually
Value monitored	108,062 MWh

Monitoring equipment	Data is monitored continuously by redundant metering devices. The recording meter is in compliance with the communiqué for Metering Devices to be used in the Electricity Market. By regulation, the accuracy class is 0.2% Main Electricity Meter: Actaris, Serial Number: 1017237 Back-up Electricity Meter: Actaris -Serial Number: 10172378 Both meters are in compliance with the communiqué for Metering Devices to be used in the Electricity Market⁸. They have an accuracy class of Class 002 indicating an accuracy range of 0,2%.																																	
QA-QC procedures to be applied	There are two meters that backup each other. Generated electricity is also monitored via the operator by the help of PMUM trading software for internal monitoring. The Calibration dates of the meters and their validity is as follows: <table><tr><td></td><td>Main Meter</td><td>Spare Meter</td></tr><tr><td>Serial no.</td><td>10172377</td><td>10172378</td></tr><tr><td>Brand</td><td>ITRON</td><td>ITRON</td></tr><tr><td>First Index Date</td><td>2011</td><td>2011</td></tr><tr><td>Second Calibration date</td><td>20/06/2021</td><td>20/06/2021</td></tr><tr><td>Calibration Frequency</td><td>10 years¹</td><td>10 years</td></tr><tr><td>Second Calibration due</td><td>20/06/2031</td><td>20/06/2031</td></tr><tr><td>Test date</td><td>14/07/2020</td><td>14/07/2020</td></tr><tr><td>Test Due</td><td>14/07/2022</td><td>14/07/2022</td></tr><tr><td>Test Frequency</td><td>2 years²</td><td>2 years</td></tr><tr><td>Class</td><td>0.2S</td><td>0.2S</td></tr></table>		Main Meter	Spare Meter	Serial no.	10172377	10172378	Brand	ITRON	ITRON	First Index Date	2011	2011	Second Calibration date	20/06/2021	20/06/2021	Calibration Frequency	10 years ¹	10 years	Second Calibration due	20/06/2031	20/06/2031	Test date	14/07/2020	14/07/2020	Test Due	14/07/2022	14/07/2022	Test Frequency	2 years ²	2 years	Class	0.2S	0.2S
	Main Meter	Spare Meter																																
Serial no.	10172377	10172378																																
Brand	ITRON	ITRON																																
First Index Date	2011	2011																																
Second Calibration date	20/06/2021	20/06/2021																																
Calibration Frequency	10 years ¹	10 years																																
Second Calibration due	20/06/2031	20/06/2031																																
Test date	14/07/2020	14/07/2020																																
Test Due	14/07/2022	14/07/2022																																
Test Frequency	2 years ²	2 years																																
Class	0.2S	0.2S																																

¹ <https://www.resmigazete.gov.tr/eskiler/2019/12/20191215-10.htm>

² System Use Agreement

	The law for energy meters that are subjected to electricity generation companies is Article 9. As the article 9 states, the periodic calibration should be performed for every 10 years by TEİAŞ authorities. The test of the meters on the other hand, is realized by TEİAŞ authorities every two years as System use agreement states.
Purpose of the data	Data to be used for the calculation of Baseline Emissions.
Calculation method	Direct Continuous Measurement
Comments	The collected data is kept by Aydem Yenilenebilir Enerji A.Ş. During the crediting period and until two years after the last issuance of VERs for the “Toros Hydroelectricity Power Plant” project activity for that crediting period.

Data - Parameter	Cap _{PJ}
Data unit	W
Description	Installed capacity of the hydro power plant after the implementation of the project activity
Source of data	Project site computers with SCADA system and the turbine name plates.
Description of measurement methods and procedures to be applied	Observed via the SCADA system of the project activity.
Frequency of monitoring-recording	Once for each monitoring period
Value monitored	49,000,000
Monitoring equipment	SCADA System of the Project activity
QA-QC procedures to be applied	Turbine labels checked with SCADA System reading.
Purpose of the data	To monitor capacity of the project
Calculation method	N/A

Comments	-
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Data / Parameter:	AP _j
Data unit:	m ²
Description:	Area of the reservoir measured in the surface of the water, after the implementation of the Project Activity, when the reservoir is at its maximum fullness.
Measured /Calculated/Default:	Indirectly measured based on the reservoir area map provided in Appendix V in the validated PDD (version 2.02).
Source of data:	Surface area determined using the lake surface area map provided in Appendix-V in the validated PDD (version 2.02).
Description of measurement methods and procedures to be applied	The reservoir area corresponding to maximum operational level has been determined via the topographic map showing the lake area, presented in Appendix-V.
Frequency of monitoring-recording	Once during each monitoring period
Value monitored	42,835 m ²
Monitoring equipment	-
QA-QC procedures to be applied	Can be checked and compared to satellite imagery available by Google Earth.
Purpose of the data	Data to be used for the calculation of Baseline Emissions.
Calculation method	N/A
Comments	-

4.2 Safeguards

4.2.1 No Net Harm

Verification Team has observed that there is no significant environmental impact as indicated in the registered PD/B03a/ and this was also confirmed through Project Design Document and EIA exemption certificate provided by the Project Owner.

The Adana Provincial Directorate of Environment and Forestry gave the certificate of Exemption/18a/ for the EIA process. Because the Toros Hydro Power Plants that had installed capacity lower than 50MW was out of scope according to EIA regulation that was active during the period of application as per the /18b/.

The PP took mitigation measures to avoid the basics effect like watering roads during excavation to minimize dust formation as per the interview/16/. Verification team checked the wastewater management through the septic tank through the documents as evidence which are provided by the Project owner/20 b/, /20c/, /20d/, /20e/, /20f/, /20g/, /20h/.

The oil waste results during the construction and operational period are collected in impermeable containers and transferred to recycling centres /20h/ in accordance with Hazardous Waste Control Regulations and Waste Oil Control Regulations is checked by the document provided by the Project owner/20h/.

Solid waste is collected, and recyclables are separated to be sent to recycling centers. The rest is disposed to the nearest landfill site in coordination with Municipality is verified/20i/, /20j/, /20k/.

4.2.2 Local Stakeholder Consultation

The relationship with the local stakeholders deemed to be very important and before the project was implemented a stakeholder's consultation meeting was held at the project site. In addition to this there is a "grievance box" in the mukhtars' office in the vicinity of the project (Gülüslü Village) for a continuous grievance policy that is implemented by the project owner. Every month the PP consults with local stakeholders at the box locations and discuss their grievances as well as positive comments. During the monitoring period there were no complaints about or demands from the project..

All the supporting documents, training certificates, were submitted to the DOE, and they have found to be in line with the monitoring period. No comments were received from local stakeholders during ongoing communication. Names of Local stakeholders who were interviewed during the remote audits are mentioned in section 2.3 of this report.

4.3 AFOLU-Specific Safeguards

Not applicable because the project is not an AFOLU project.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

EPIAŞ records are presented for 01/10/2020 to 31/12/02021 of the monitoring period. All data in emission reductions table are checked with EPIAŞ records/06-c/as the main source and crosschecked with TEAIS meter reading protocol records/06-b/. The net electricity generated during the current monitoring period was as follows in Table 4.1. below:

Table 4.1.

Period	Amount	Compliance Check
2020 (01/10/2020 - 31/12/2020)	Gross Generation: 14,056.71 MWh Internal Consumption: 27.40 MWh Net Generation: 14,029 MWh	Metering record and EPIAS records

2021 (01/01/2021 to 31/12/2021)	Gross Generation: 94,171.39 MWh Internal Consumption: 138.58 MWh Net Generation: 94, 032 MWh	Metering record and EPIAS records
Total	Gross Generation: 1,08,228.10 MWh Internal Consumption: 165.98 MWh Net Generation: 1,08,062 MWh	Metering record and EPIAS records

Emission factor and data and parameters available before validation are also applied in line with the registered PD/B03a/ and baseline ER excel sheet for validation/02/.

According to the applied methodology ACM0002 version 16.0/B02/ and the registered PD/B03a/, the GHG emission reductions are calculated as follows:

$ER_y = BE_y - PE_y - LE_y$	Eqn. (01)
-----------------------------	-----------

Where,

ER_y	=	Emission reductions in year(y)	(tCO ₂ e/year)
BE_y	=	Baseline Emission reduction in year(y)	(tCO ₂ e/year)
PE_y	=	Project Emission reduction in year(y)	(tCO ₂ e/year)
LE_y	=	Leakage Emission reduction in year (y)	(tCO ₂ e/year)

Leakage emissions reduction is zero (0) because the energy generating equipment is not transferred from or to another activity/MR01/.

According to the applied methodology/B02/, for hydropower plants if the power density of the reservoir is higher than 10 W/m² as per review of VCS registered PD/B03a/ and MR/01/, then $PE_y = 0$.

So, $ER_y = BE_y$

The total emissions reduction for the current monitoring period is 57,622tCO₂e.

The power density of the project is calculated as follows:

$PD = Cap_{PJ} - Cap_{BL} / A_{PJ} - A_{BL}$	Eqn. (02)
--	-----------

PD	=	Power density of the project activity	W/m ²
----	---	---------------------------------------	------------------

Cap_{pj}	=	Installed capacity of the hydro power plant after the implementation of the project activity	W
Cap_{BL}	=	Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero	W
A_{pj}	=	Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full	m ²
A_{BL}	=	Area of the single or multiple reservoirs measured in the surface of the water, before the implementation of the project activity, when the reservoir is full. For new reservoirs, this value is zero	m ²

For proposed project HEPP,

$$Cap_{PJ} = 49,990,000 \text{ We}$$

$$Cap_{BL} = 0.0 \text{ W}$$

$$A_{PJ} = 42,835 \text{ (m}^2\text{)} \text{ consistent with the documents /15/ and /17/ provided by the PP.}$$

$$A_{BL} = 0.0 \text{ (m}^2\text{)}$$

Therefore, PD is calculated as.

$$PD = 49,990,000 - 0 / 42,835 - 0$$

$$PD = 1167.04 \text{ Wm}^2$$

As the power density is higher than 10W/m², the project emissions of the project are equal to zero. Therefore, the emission reductions generated during the monitoring period are equal to baseline emissions.

The baseline emissions in the monitoring period are calculated using the following formula:

$BE_y = EG_y \times EF_y$			Eqn. (3)
BE_y	=	Baseline emissions in year y (tCO ₂ /year)	
EG_y	=	Net electricity delivered to the grid by the project activity in year y excluding transmission losses of the grid.	
EF_y	=	Emission factor calculated according to selected methodology ¹²	
y	=	A given period (year)	

The Emission Factor 0.53323 tCO₂-MWh is fixed ex-ante Combined margin as per the VCS registered section 3.4 of PD/B03a/.

It has been confirmed that the data used for emission reductions are correct. It is also confirmed that the methods and formulae used for calculating baseline emissions are in line with the relevant methodology/B02/ and the registered PD/B03a/. The net electricity generation is multiplied by the grid emission factor to arrive at the emission reduction value.

According to the registered PD/B03a/, the estimated emission reduction for this monitoring period would be 159,569 tCO_{2e} corresponding to the monitoring period (01/10/2020 to 31/12/2021), also mentioned in MR/01b /. However, the project in operation totally of emission reduction reached 57,622 tCO_{2e} in this monitoring period.

Verification Team hereby, confirms that the above-mentioned electricity generation figures and GHG emission reduction calculations are presented and quantified correctly and are in accordance with the monitoring methodology ACM0002 version 16.0 and the monitoring plan given in the registered PD/B03a/

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

CCIPL was able to confirm that the calculations are based on authentic data and the Emission reduction spreadsheets /02/used to calculate the VCUs calculations and all figures were tracked, checked, and found to be consistent.

The quality of supporting evidence submitted to the VVB for verification is adequate and found to be verifiable. The transfer of carbon rights and other supporting documents related to quality and maintenance were checked by the verification team during the remote audit to confirm the authenticity of the documents and to check the correctness of the calculation.

When verifying the reported emission reductions, CCIPL ensured that there was a clear audit trail that contained the evidence and records that validate the stated figures. All source documents that form the basis for assumptions and other information underlying the GHG data were checked by the verification team.

When assessing the audit trails, CCIPL also examined:

1. Whether sufficient evidence was available, both in terms of frequency and in covering the full monitoring period
2. The source and nature of the evidence.
3. If comparable information was available from sources other than that used in the monitoring report, CCIPL cross-checked the monitoring report against the other sources to confirm that the stated figures were correct.

CCIPL also assessed that the data collection system met the requirements of the monitoring plan as per the applied methodology /B02/.

Proper data management inclusive of data acquisition and aggregation, data management system is being followed for the project activity.

The monitoring personnel at the site are well trained and follow reproducible routines. Thus, they are competent to carry out the relevant tasks with sufficient accuracy.

As a cross-check means, TEIAS meter reading protocol records which include the monthly generation and consumption figures of the plant for every month have been reviewed by the verification team. Therefore, the Verification Team of CCIPL, hereby confirms that the evidence used to determine the GHG emission reductions are sufficient in quantity and appropriate in quality.

4.6 Non-Permanence Risk Analysis

Not Applicable (N/A)

5. VERIFICATION CONCLUSION

Carbon Check (India) Private Ltd., (the VVB) has performed the second (2nd) emission reduction verification of the registered VCS project activity “Toros Hydroelectric Power Plant Project, Turkey” having (VCS ID.: 1499). The scope of the activities covers the verification and certification of GHG emissions reductions reported in monitoring report version 7.04, dated 24/01/2023/01b/.

The Project Activity involves installation and operation of a new grid connected 49 MWe hydropower plant consisting of two turbines. The two turbines are housed within the Hydro Electricity Power Plant Building.

The project generates electricity from a renewable source of energy (water) and generated electricity is supplied to the Turkish National grid. This will reduce and replace the equivalent amount of electricity generated from the carbon-intensive power plants in the Turkish national grid thus helping in reducing GHG emissions.

The project owner is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emission reductions. It is VVB's responsibility to express an independent emission reduction verification opinion and certification statement on the reported GHG emission reductions from the project activity.

The VVB does not express any opinion on the selected baseline scenario or on the validated and registered PD /B03a/. The emission reduction verification is carried out in-line with the requirements of VCS Standard (v4.2) /B01-a/ and VCS Validation and Verification Manual (v3.2) /B01-c/.

The project verification was performed to identify the compliance with implementation and monitoring requirements, and to verify the actual amount of achieved emission reductions, through obtaining evidence and information on-site that included:

- (i) checking whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and
- (ii) the collection of evidence supporting the reported data.

The emission reduction verification is based on:

- Registered PD (version 2.02; dated 20/04/2015) /B03a/
- Registered validation report (version 1.0 Aa, dated 11/05/2015)/B03b/.
- ACM0002 “Grid-connected electricity generation from renewable sources” (version 16.0.0) /B02/
- Monitoring Report (version 7.04; dated 24/01/2023) /01b/.
- Previous Monitoring Report (version 1.04; dated 04/12/2020) /B04-a/.
- Previous Verification Report (version 3.0; dated 10/12/2020)/B04-b/.

This statement covers emission reduction verification period from 01/10/2020 to 31/12/2021 (including both dates).

The VVB had raised (04) four Clarifications (CLs), (02) two Corrective Action Request (CARs) during the current emission reduction verification, and zero (00) Forward Action Request (FAR)) have been raised during this emission reduction verification and have been satisfactorily resolved by the project proponent hence, all findings are successfully closed.

The VVB considers it necessary to give reasonable assurance that the reported GHG emission reductions were calculated correctly based on the approved baseline and monitoring methodology and the monitoring plan contained in the registered VCS PD /B03 a/is fairly stated.

The conclusions can be summarised as follows:

- The project is implemented and installed as planned and described in the registered VCS PD /B03a/ and project activity confirms with the verification criteria for project and their GHG emission reductions or removals set out in the VCS rules.
- The monitoring plan is in accordance with the applied approved methodology, i.e., ACM0002, version 16.0.0/B02/, and the monitoring plan as sought out in the registered VCS-PD/B03a/.
- The monitoring system is in place and functional. The project has generated verifiable GHG emission reductions.

As the result of the verification of the project activity, the verification team confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. Carbon Check (India) Private Ltd. herewith confirms that the project has achieved emission reductions in the below-mentioned reporting period as follows.

The project complies with the verification criteria for projects and their GHG emissions reductions or removals set out in VCS rules.

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)
------	---	--	--	--

Year2020 (1/10/2020 to 31/12/2020)	7481	0	0	7481
Year 2021 (01/01/2021 to 31/12/2021)	50141	0	0	50141
Total	57622			57622

It was observed by the verification team that actual emission reduction is less than the estimated emission reduction, as the Toros HPP is a run-of-river HPP, the electricity amount supplied to the grid depends on seasonal variations in the amount of precipitation and temperature, which affect the monthly generation rates and may create deviations from the estimated values. According to the values revealed by the General Directorate of Meteorology, Turkey, in Adana province, the maximum temperature and lowest precipitation are reached in July, August and September. This³ fact reflects on the electricity generation obtained in August and September by TOROS HEPP. Moreover, in the Mediterranean region where the power plant is located, it was recorded that the precipitation decreases between October 2020- September 2021, according to the report named “Evaluation of Areal Precipitation in 2021” published by Directorate General of Meteorology of Turkey. These natural effects cause a significant decrease in electricity generation by the plant.⁴ On the other hand, the electricity generation is dependent on water flow estimation, which is a natural phenomenon and cannot be estimated with 100% accuracy.

This was confirmed by the assessment of ““Evaluation of Areal Precipitation in 2021” published by Directorate General of Meteorology of Turkey that due to external physical conditions, actual electricity generation is lower than the estimated electricity generation which results in lower actual emission reduction.

³ <https://www.mgm.gov.tr/veridegerlendirme/il-ve-ilceler-istatistik.aspx?m=ADANA>

⁴ <https://www.mgm.gov.tr/FILES/arastirma/yagis-degerlendirme/2021AlansalYagisDegerlendirmesi.pdf>

6. APPENDIX 01: ABBREVIATIONS

BAU	Business As Usual
CA	Corrective Action / Clarification Action
CER	Certified Emission Reduction
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO₂	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalent
DOE	Designated Operational Entities
DVR	Draft Validation Report
EB	CDM Executive Board
EF	Emission Factor
FA	Final Approval
FAR	Forward Action Request
FVR	Final validation Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
IPCC	Intergovernmental Panel on Climate Change
MW	Megawatts
MWh	Mega Watt Hour
OSV	On Site Visit
QC/QA	Quality control/ Quality assurance
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VB	Validation / Verification Body

7. APPENDIX 02: REFERENCE DOCUMENTS

Ref. No.	Document
/01/	a. Monitoring report version 7.0, dated 28/01/2022 b. Monitoring report version 7.04 dated 21/12/2022.
/02/	ER estimated spread sheet correspond to /01 /
/03/	Technical specifications of the following including their nameplates: a) Turbines b) Energy Meters c) Generators
/04/	Calibration certificates of all electricity meters installed (covering the monitoring period), including initial calibration certificates)
/05/	Map of project location showing exact position of HPP with grid connectivity.
/06/	a. Records of replacement of broken/faulty electricity meter(s), if applicable b. TEASIA meters reading Protocol records c. EPIAS Records
/07/	Daily electricity generation log and Monthly electricity generation records of electricity prepared by power plant technicians.
/08/	Electricity sales invoices issued to the TEIAS Ltd. by PP
/09/	Single line diagram showing the electricity generation, transmission, evacuation, and metering system
/10/	Training records of workers and site employees.
/11/	Electricity Production license dated 18/01/2007. (License no. EU/1062-2/782)
/12/	Evidence of commissioning/ start date of the project. (17/05/2013)
/13/	The monthly settlement notification of PMUM used for monitoring.
/14/	Power purchase agreement between TEIAS and Arik Energy.
/15/	Topographical surveys/maps, satellite pictures used for measurement of Apj.
/16/	Remote/Desktop Interview records
/17/	Supporting document for the area of reservoir submitted by PP
/18/	a. Certificate of Exemption for EIA process by the Adana Provincial Directorate of Environment and Forestry b. EIA not required document dated 18/12/2003 no;25318 c. Change of Project Owner document by Adana Governorship Çevre ve urban management provincial directorate 31/01/2020, Petition dated 28/01/2020,

	registration no 3425.
/19/	Photographs of meters and Turbines.
/20/	a. Waste Transportation Document, Waybill date 10/03/2021, Customization No. TRI21 b. Adana Metropolitan Municipality Aski General Directorate Sewage Department, Channel Fault result notification Form, dated 26/12/2021 c. Adana Metropolitan Municipality Aski General Directorate Sewage Department, Channel Fault result notification Form, dated 14/10/2021 d. Adana Metropolitan Municipality Aski General Directorate Sewage Department, Channel Fault result notification Form, dated 21/06/2022 e. Adana Metropolitan Municipality Aski General Directorate Sewage Department, Channel Fault result notification Form, dated 11/02/2021 f. pOH Scale Receipt 03/12/2021 g. Weighbridge Report, 22/11/2021 h. Toros HEPP waste oil shipment 11/11/2021. i. Toros HEPP Waste Delivery Waybill (23/09/2021) j. Toros HEPP waste Delivery Report 11/11/2021.
/21/	a. Stakeholder Request/Complaint Form Minutes document no; KLFRM.0000 Effective Date;20/08/2020 b. Picture of Toros Grievance Box.
/22/	Contract signed between PP and the DOE dated
/B01/	VCS Requirements a. VCS Standard (v4.2, updated on 20/01/2022) b. VCS Program Guide (v4.1, updated on 20/01/2022) c. VCS Validation and Verification Manual version (v3.2, dated 19/10/2016) d. Registration & Issuance Process (v4.1, updated 20/01/2022) e. VCS Programme Definitions version (v4.1, updated 20/01/2022) f. VCS PD template version 4.1, updated 20/01/2022
/B02/	Applied baseline and monitoring methodology: ACM0002: Large-scale Consolidated Methodology: Grid-connected electricity generation from renewable sources, Version 16.0.0
/B03/	a. Registered VCS PD (version 2.02 dated 20/04/2015). b. Registered VCS Validation Report (version 1.0Aa, dated 11/05/2015).
/B04/	a. Previous Monitoring report version 1.04 dated 04/12/2020 b. Previous Verification report version 3.0 dated 10/12/2020
/B05/	1. VCS MR Template (Version 4.1) 2. Verification report Template (Version 4.1)

8. APPENDIX 03: COMPETENCY CERTIFICATES


Carbon
CHECK

Carbon Check (India) Private Ltd.

Ms. Aparna Chaudhary

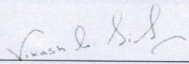
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

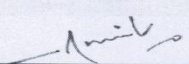
For following functions:

Validator	☒	Team Leader	☒	Technical reviewer	☐
Verifier	☒	Technical Expert	☒	Local Assessor ¹	☒

In the following Technical Areas:

TA 1.1	☐	TA 3.1	☒	TA 9.1	☐	TA 13.1	☐
TA 1.2	☒	TA 4.1	☐	TA 9.2	☐	TA 13.2	☐
TA 2.1	☐	TA 5.1	☐	TA 10.1	☐	TA 14.1	☐


Mr. Vikash Kumar Singh
 Compliance Officer


Mr. Amit Anand
 CEO

Date of Approval
 29/11/2021

Valid Till
 28/11/2022

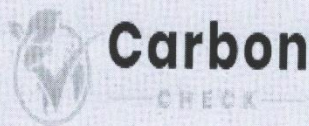
Revision History of the Document

01/03/2020 ² 01/09/2020 24/12/2020 29/11/2021	Interim Revision for office address change Interim Revision for CCIPL logo change Annual Revision Revision in response to qualification as Team Leader and Technical Expert
---	--

¹ India

² Please refer to previous version of competency certificates for the revision history.

CARBON CHECK (INDIA) PRIVATE LIMITED
CIN: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: Unit No. 1701, Logix City Centre Office Tower, Plot No. BW-58, Sector-32 Noida, Uttar Pradesh
Tel: +91 120 4373114 | URL: www.carboncheck.co.in | e-mail: info@carboncheck.co.in



Carbon Check (India) Private Ltd.

Ms. Indumathi. C

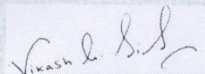
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

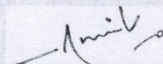
Validator	☐	Team Leader	☒	Technical reviewer	☒
Verifier	☐	Technical Expert	☒	Local Assessor ¹	☒

In the following Technical Areas:

TA 1.1	☒	TA 4.1	☐	TA 9.1	☐	TA 13.1	☒
TA 1.2	☒	TA 5.1	☐	TA 9.2	☐	TA 13.2	☒
TA 3.1	☒	TA 5.2	☐	TA 10.1	☐	TA 14.1	☐



Mr. Vikash Kumar Singh
Compliance Officer



Mr. Amit Anand
CEO

Date of Approval
24/12/2021

Valid Till
23/12/2022

Revision History of the Document

01/03/2020 ²	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision
24/12/2021	Annual Revision

¹ India.

² Please refer to previous version of competency certificates for the revision history.

CARBON CHECK (INDIA) PRIVATE LIMITED
CIN: U74930DL2012PTC232495

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9. APPENDIX 04: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS

Table 01. Remaining FAR from validation and/or previous verification

FAR ID		Section no.		Date:
Description of FAR				
Project participant response				Date:
Documentation provided by project participant				
DOE assessment				Date:

Table 02. CL from this verification

CL ID	01	Section no.	1.5	Date: 15/04/2022
Description of CL				
PP is requested to specify that which milestone is considered as the project start date (17/05/2013) in MR version 7.0 dated 29/01/2022 under the section 1.5.				
Project participant response				Date:25/04/2022
Project start date is 17/05/2013 which is the commissioning date for both Unit I and Unit II of TOROS HEPP.				
Documentation provided by project participant				
VCS-Monitoring-Report-Template-v4.1_TOROS_25.04.2022_round 1_cc				
DOE assessment				Date: 29/04/2022

The consideration of start date in the revised MR v7.1 dated 25/04/2022 has been added by the PP.
Hence, the finding is CL01 is successfully closed.

CL ID	02	Section no.	1.4	Date: 15/04/2022
Description of CL				
PP is requested to clarify, why the row of “ Role in the Project ” is left blank under section 1.4. of MR version 7.0 dated 29/01/2022.				
Project participant response				Date: 25/04/2022
The row of “Role in the Project” was removed from the section 1.4				
Documentation provided by project participant				
VCS-Monitoring-Report-Template-v4.1_TOROS_25.04.2022_round 1_cc				
DOE assessment				Date: 29/04/2022
PP removed the blank row of “Role in the Projects” under the section 1.4 from the revised MR version 7.1 dated 25/04/2022 Hence, the Finding CL02 is successfully closed.				

CL ID	03	Section no.	2.3	Date: 15/04/2022
Description of CL				
PP is requested to clarify that why “Table 01. Milestones of the project” is presented under section 2.3. of MR version 7.0 dated 29/01/2022.				
Project participant response				Date: 25/04/2022
“Table 02. Milestones of the project” were removed from section 2.3, as it was mistakenly put.				
The documentation provided by project participant				
VCS-Monitoring-Report-Template-v4.1_TOROS_25.04.2022_round 1_cc				
DOE assessment				Date: 29/04/2022

Table has been removed from the revised MR version 7.1, dated 25/04/2022 under section 2.3.

Hence, finding CL03 is successfully closed.

CL ID	04	Section no.	5.4	Date: 15/04/2022
Description of CL				
PP is requested for the evidential justification as the calculated percent difference in the estimated and actual difference is very high (-63%) which is mentioned in the section 5.4 of MR version 7.0 dated 29/01/2022.				
Project participant response				Date: 25/04/2022
Since the project is a HEPP, seasonal variations in the amount of precipitation and temperature affect the monthly generation rates and may create deviations from the estimated values. According to the values revealed by the General Directorate of Meteorology, Turkey, in Adana province, the maximum temperature and lowest precipitation are reached in July, August, and September ⁵ . This fact reflects on the electricity generation obtained in August and September by TOROS HEPP. Moreover, in the Mediterranean region where the power plant is located in, it was recorded that the precipitation decreases between October 2020- and September 2021, according to the report named "Evaluation of Areal Precipitation in 2021" published by the Directorate General of Meteorology of Turkey. These natural effects cause a significant decrease in electricity generation by the plant ⁶ ."				
Documentation provided by project participant				
VCS-Monitoring-Report-Template-v4.1_TOROS_25.04.2022_round 1_cc				
https://www.mgm.gov.tr/veridegerlendirme/il-ve-ilceler-istatistik.aspx?m=ADANA				
https://www.mgm.gov.tr/FILES/arastirma/yagis-degerlendirme/2021AlansalYagisDegerlendirmesi.pdf				
DOE assessment				Date: 29/04/2022
The verification team confirms that the provided reason in the revised MR version 7.1 dated 25/04/2022 is deemed to be correct and consistent with the provided link.				
Hence, the Finding CL04 is successfully closed.				

⁵ <https://www.mgm.gov.tr/veridegerlendirme/il-ve-ilceler-istatistik.aspx?m=ADANA>

Table 03. CAR from This Verification

CAR ID	01	Section no.		Date: 15/04/2022
Description of CAR				
PP is requested to provide the evidence for all the precautions taken during the monitoring period under the section 2.1.				
Project participant response				Date:25/04/2022
The details related to waste management and precautions were added in the section 2.1. The necessary evidence related to the actions were provided in the Project File.				
Documentation provided by project participant				
VCS-Monitoring-Report-Template-v4.1_TOROS_25.04.2022_round 1_cc				
DOE assessment				Date: 29/04/2022
The verification team confirms that PP provided the required documents for the assessment related to the waste management and precautions measures to the verification team. And also confirms that the added details in MR version 7.0 dated 25/04/2022 is consistent with the documents. Hence, the finding CAR01 is successfully closed.				

CAR ID	02	Section no.	3.1	Date: 15/04/2022
Description of CAR				
PP is requested to write all the required data under the sub-section 3.1 of monitoring report version 7.0 dated 29/01/2022 as per the filling guidelines of the Monitoring Report template version 4.1.				
Moreover,				
PP is also requested to provide the version number of the methodology under the subsection 3.2.1 of the MR version 7.0 dated 29/01/2022.				
Project participant response				Date:25/04/2022
*A milestone table was added under the section 3.1 of MR.				

*The UNFCCC methodology of ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 20.0 and its related tools are applied as they are without any deviation from methodology.

Documentation provided by project participant

VCS-Monitoring-Report-Template-v4.1_TOROS_25.04.2022_round 1_cc

DOE assessment

Date: 29/04/2022

PP added all the required data under sub-section 3.1 of revised monitoring report version 7.1 dated 25/04/2022 as per the filling guidelines of the Monitoring Report template version 4.1.

And,

PP also mentioned the version number of the methodology in subsection 3.2.1 of the revised MR version 7.1, dated 25/04/2022.

Hence, the finding CAR02 is successfully closed.