



**Verified Carbon
Standard**

AKBAS HYDROELECTRIC POWER PLANT FIRST VERIFICATION REPORT



Report Prepared By: Re Carbon Gözetim Denetim ve Belgelendirme Ltd. Şti.

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Summary:

The project is a run-of-river, and the total installed capacity of the project is 13.047 MWm / 12.502 Mwe, consisting of 3 horizontal axis Francis turbines whereby two of them are with 5.455 MWm / 5.227 Mwe capacity and the other one is 2.137 MWm / 2.048 Mwe in capacity. The purpose of the project activity is to generate electricity and supply it into the public grid. The project activity reduces greenhouse gas (GHG) emissions that would have otherwise occurred in the absence of the project activity by avoiding electricity generation from fossil fuel sources.

The scope of the verification is the independent and objective review of the monitored GHG reductions. The verification activity is based on the validated and registered PD version 02 and dated 01/02/2013.

The project activity and the monitoring report are assessed against the requirements of the Article 12 of the Kyoto Protocol, CDM Modalities and Procedures as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, approved consolidated baseline and monitoring Methodology "AMS-I.D "Grid connected renewable electricity generation." Version 17.0., subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other related rules, according to the guidance given in the CDM Validation and Verification Standard version 03.0, CDM Project Standard version 03.0, CDM Project Cycle Procedure version 03.0 and VCS version 3.2.

The only purpose of the verification and certification is its usage during the issuance process as part of the VCS project cycle.

During this verification 8 Corrective Action Requests (CARs) and 13 Clarification Request (CL)

were raised all of which were resolved by either revising the Monitoring Report or by sending objective evidence to the verification team. There hasn't been any Forward Action Request (FAR) issued during the verification.

Re Carbon Ltd. Hereby confirms that the level of assurance of this verification report is reasonable, with respect to material errors, omissions and misrepresentations. To guarantee this level of assurance all data that is used in the GHG emission reduction calculations have been reviewed without any sampling.

Re Carbon Ltd. Also confirms the following based on the results of document review for the period between 12 December 2013 – 30 November 2019:

Year	Baseline emissions or removals (tCO _{2e})	Project emissions or removals (tCO _{2e})	Leakage emissions (tCO _{2e})	Net GHG emission reductions or removals (tCO _{2e})
2013	288	0	0	288
2014	5,859	0	0	5,859
2015	25,788	0	0	25,788
2016	4,229	0	0	4,229
2017	6,083	0	0	6,083
2018	7,012	0	0	7,012
2019	8,007	0	0	8,007
Total	57,264	0	0	57,264

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1 INTRODUCTION

1.1

Objective

Re Carbon Ltd. Has been appointed by “Arı Su Enerji Üretim A.Ş.” to perform the first verification of the “Akbas Hydroelectric Power Plant” with the service agreement dated 12/01/2022. The objective of this verification activity is to assess, with objective evidence:

- if the monitoring report version 05 dated 25/07/2022 conforms with the requirements of the monitoring plan of the registered Project Description (PD) and the approved methodology
- if the project activity conforms with the monitoring report and the registered PD, and
- if the data reported in the monitoring report are complete and transparent.

1.2

Scope and Criteria

The scope of the verification is the independent and objective review of the monitored GHG reductions. The verification activity is based on the validated and registered PD version 02 and dated 01/02/2013.

The project activity and the monitoring report are assessed against the requirements of the Article 12 of the Kyoto Protocol, CDM Modalities and Procedures as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, AMS-I.D “Grid connected renewable electricity generation.” Version 17.0., subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other related rules, according to the guidance given in the according to the guidance given in the CDM Validation and Verification Standard version 03.0, CDM Project Standard version 03.0, CDM Project Cycle Procedure version 03.0 and VCS version 3.2.

The only purpose of the verification and certification is its usage during the issuance process as part of the VCS project cycle. Therefore, Re Carbon Ltd. Can't be held liable by any party for decisions made or not made based on the verification and certification opinion, which will go beyond that purpose.

1.3

Level of Assurance

Re Carbon Ltd. Hereby confirms that the level of assurance of this verification report is reasonable, with respect to material errors, omissions and misrepresentations. To guarantee this level of 6available all data that is used in the GHG emission reduction calculations have been reviewed without any sampling.

1.4

Summary Description

of the Project

Akbas Hydroelectric Power Plant has been located on the Büyük Menderes River, within the Aegean District of Turkey, in the borders of Çal Town in Denizli Province and developed by Arı Su Enerji Üretim A.Ş. The project is a run-of-river, and the total installed capacity of the project is 13.047 MWm / 12.502 Mwe, consisting of 3 horizontal axis Francis turbines whereby two of them are with 5.455 MWm / 5.227 Mwe capacity and the

other one is 2.137 MWm / 2.048 Mwe in capacity, in line with the electricity generation license and the project also supports the sustainable economic development in the region.

The key parameters about the technical design of the project are listed below in Table-1:

Table 1: Technical specifications of the project

	Turbine 1 – 2	Turbine 3
Turbine brand	Andritz Hydro	Andritz Hydro
Serial numbers	11H017	11H018
Turbine type	Horizontal Axis Francis	Horizontal Axis Francis
Turbine Power	5,455 kW	2,137 kW
Net-head	72.92 m	74.09
Max. flow	8.21 m ³ /s	3.18 m ³ /s

The start date of the project activity is 12/12/2013 which is the date when the project is commissioned and the electricity was first supplied to the grid as verified through the provisional acceptance protocol and the first crediting period is from 12/12/2013 – 11/12/2023 with two times renewable crediting period of 10 years.

2 VERIFICATION PROCESS

The relevant details with regards to the verification process are available in the following sub sections.

2.1

Method and Criteria

Re Carbon Ltd. Has been appointed by “Arı Su Enerji Üretim A.Ş.” to perform the first verification of the “Akbas Hydroelectric Power Plant” with the service agreement dated 12/01/2022. The objective of this verification activity is to assess, with objective evidence:

- if the monitoring report version 05 dated 25/07/2022 conforms with the requirements of the monitoring plan of the registered PD and the approved methodology
- if the project activity conforms with the monitoring report and the registered PD, and
- if the data reported in the monitoring report are complete and transparent.

The scope of the verification is the independent and objective review of the monitored GHG reductions. The verification activity is based on the validated and registered PD version 02 and dated 01/02/2013.

The project activity and the monitoring report are assessed against the requirements of the Article 12 of the Kyoto Protocol, CDM Modalities and Procedures as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, AMS-I.D “Grid connected renewable electricity generation.” Version 17.0., subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other related rules, according to the guidance given in the according to the guidance given in the CDM Validation and Verification Standard version 03.0, CDM Project Standard version 03.0, CDM Project Cycle Procedure version 03.0 and VCS version 3.2.

There hasn't been any sampling approach applied during the verification and all monitored data/parameters have been checked by the verification team.

The only purpose of the verification and certification is its usage during the issuance process as part of the VCS project cycle. Therefore, Re Carbon Ltd. Can't be held liable by any party for decisions made or not made based on the verification and certification opinion, which will go beyond that purpose.

2.2

Document Review

The basis for the verification activity is the monitoring report version 01 dated 06/02/2022 which was submitted to the verification team on the same date. This monitoring report was revised due to the issued CARs and CLs, version 05 dated 25/07/2022 being the final version. The monitoring report and the monitoring activities were assessed against the registered PD version 02 and dated 01/02/2013, AMS-I.D “Grid connected renewable electricity generation.” Version 17.0., the relevant CDM and VCS rules and regulations including CDM Validation and Verification Standard version 03.0, CDM Project Standard

version 03.0, CDM Project Cycle Procedure version 03.0 and VCS version 3.2, the final validation report version 01 dated 13/02/2013.

The following actions were involved in the desk review:

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 the documents which were reviewed during the validation period is given in the Table 2-1 below:

Table 2-1: List of documents reviewed

Document Number	Document Name	Version	Date (dd/mm/yyyy)
D01	Registered PD	02	01/02/2013
D02	Final Validation Report	01	13/02/2013
D03	AMS-ID	17	-
D04	Verification Service Agreement	-	12/01/2022
D05	Monitoring Report	01	06/02/2022
D06	Monitoring Report	02	17/02/2022
D07	ER Calculation Excel Sheet	01	06/02/2022
D08	ER Calculation Excel Sheet	02	17/02/2022
D09	CDM Validation and Verification Standard For Project Activities	3.0	
D10	CDM Project Standard For Project Activities	3.0	07/10/2021
D11	CDM Project Cycle Procedure For Project Activities	3.0	07/10/2021
D12	VCS Standard	3.2	
D13	Electricity Generation Licence (Last Amendment)	-	03/08/2010
D14	TEIAS Monthly Reading Protocols	-	2013-2019
D15	EPIAS Screenshoots		2013-2019

Document Number	Document Name	Version	Date (dd/mm/yyyy)
D16	Meters Test Reports	-	12/12/2013
D17	Fish passage photos	-	-
D18	Waste Water and Solid Waste Transfer and Disposal Records	-	-
D19	Minimum water flow evidences	-	-
D20	Provisional Acceptance Protocols	-	12/12/2013
D21	EIA Decision		01/07/2011
D22	Social Security Records for PP Site Employees	-	-
D23	Google Earth view	-	-
D24	Reservoir area	-	-
D25	Training Records	-	2013-2019
D26	Monitoring Report	03	26/02/2022
D27	Monitoring Report	04	22/06/2022
D28	ER Calculation Excel Sheet	03	22/06/2022
D29	Monitoring Report	05	25/07/2022

2.3

Interviews

During the verification period follow-up interviews were realized by the verification team to further analyze the correctness and accurateness of the information provided.

The list of people who were interviewed during the online (remote) verification site visit handled on 08/02/2022 and through Zoom program is given in the Table 2-2 below:

Table 2-2: List of persons interviewed

Reference Number	Means of Interview ¹	Full Name	Title	Organization
I01	SV	Lütfullah Döşer	Plant	Arı Su Enerji

¹ SV: Site visit; T: Telephone; E: E-mail

Reference Number	Means of Interview ¹	Full Name	Title	Organization
			Manager	Üretim A.Ş.
I02	SV	Mustafa Sağlık	Muhtar	Çalkuyucak Village
I03	SV	Sıla Kılıç	Consultant	Sekans
I04	SV	Oyku Yakupoğlu	Trainee Verifier	Re-carbon

2.4

Site Inspections

As a part of the verification activities, an online (remote) site visit was performed to the project activity site on 08/02/2022 and through Zoom program, details of which can be seen in the Table 2-3 below:

Table 3-1: Online site visit details

Date	08/02/2022	
Location	Remote audit	
Participant	Company Name	Role in the Organization / Role in the Site Visit
Lütfullah Döşer	Plant Manager	Arı Su Enerji Üretim A.Ş.
Mustafa Sağlık	Muhtar	Çalkuyucak Village
Sıla Kılıç	Consultant	Sekans
Oyku Yakupoğlu	Trainee Verifier	Re-carbon
Points Verified	Source of Information	
Implementation and operation of the proposed VCS project activity as per the registered PD	Document review, site visit and interviews with the PP representatives and local stakeholders from Çalkuyucak Village	
Review of information flows for generating, aggregating and reporting the monitoring parameters	Document review, site visit and interviews with the PP representatives and local stakeholders from Çalkuyucak Village	
Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the PD	Interviews with the PP representatives and local stakeholders from Çalkuyucak Village	

Cross-check between information provided in the monitoring report and data from other sources such as plant log books, inventories, purchase records or similar data sources	Document review and site visit
Check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PD and the selected methodology	Document review, site visit and interviews with the PP representatives and local stakeholders from Çalkuyucak Village
Review of calculations and assumptions made in determining the GHG data and emission reductions	Document review
Identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters	Document review and interviews with the PP representatives and local stakeholders from Çalkuyucak Village

The project owner representatives and local stakeholders had been interviewed as in above during the online (remote) site visit using Zoom program and some photographic evidences like electricity meters, waste storage areas etc. have been taken along with the document review process to achieve the reasonable level of assurance during the verification as detailed in other sections of the report. Online site visit is appropriate even though there is increase in capacity because the number of turbines did not increase.

2.5

Resolution of

Findings

The verification of this VCS project activity includes the following steps:

- Assessment of the conformity of the actual project activity and its operation with the registered PD version 02 and dated 01/02/2013
- Assessment of the compliance of the monitoring plan with the relevant methodology AMS-I.D “Grid connected renewable electricity generation.” Version 17.0
- Assessment of the compliance of monitoring with the monitoring plan
- Assessment of data and calculation of greenhouse gas emission reduction
- Issuance of the verification report
- Independent technical review
- Approval of the verification report and request of issuance

The Verification Protocol is used for the assessment of each requirement during the execution of verification activities and is given in Annex-1 of this verification report.

The Verification Protocol consists of two tables:

Table 1 (Monitoring Report and VCS verification requirements) and

Table 2 (Resolution of Corrective Action, Forward Action and Clarification Requests)

The usage description of Table-1 in Verification Protocol is explained in Table 2-4 below:

Table 3-2: Explanation about Table-1 in Verification Protocol

Question	Reference	MoV*	Findings, comments, references and document sources	Draft & Final Conclusion
The requirements related with the monitoring report and verification	Gives reference to the legislation or documents where the relevant requirement is found	Explains how conformance with question is investigated. Examples of means of verification are Document Review (DR), Interview (I) and Not Applicable (NA)	Is used to elaborate and discuss the question and/or conformance to the question by giving related references and document sources based on which the finding is issued or evidence is checked	Either acceptable based on the evidence provided (OK), non-compliance with the requirement (CAR), further clarification (CL) due to insufficient, unclear or not transparent information, forward action request (FAR) that needs to be solved during the next periodic verification

The usage description of Table-2 in Verification Protocol is explained in Table 3-2 below:

Table 3-3: Explanation about Table-2 in Verification Protocol

Draft Report Clarifications, Forward Action and Corrective Action Requests by Verification Team	Ref. to Questions in Table-1	Summary of Project Participants' Response	Verification Team Conclusion
The all CL, FAR and CARs determined during the draft verification report should be listed here	Gives reference to the checklist questions in Table-1 of Verification Protocol	Is used to summarize the responses by project participants regarding the non-conformities	Is used to summarize the responses by verification and their conclusions

The Verification Protocol is fulfilled by the verification team in line with the descriptions above and all the CARs, CLs and FARs are listed in a transparent and clear manner.

During the verification period, a Verification Protocol which is attached in Annex 1 to this verification report was used to submit the findings to the project participants.

In line with Re Carbon Ltd. Internal terminology and VCS version 3.2, the team reports the non-conformities in the forms of Corrective Action Requests (CARs), Clarification Requests (CLs) and Forward Action Requests (FARs). When and for which type of non-conformities CARs, CLs and FARs are issued are explained below:

The verification team raises a CAR if one of the following occurs:

- Non-conformities with the monitoring plan or methodology are found in the monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions;
- Issues identified in a FAR during validation to be verified during verification have not been resolved by the project participants.

The verification team raises a CL if information is insufficient or not transparent not clear enough to determine whether the applicable CDM and/or VCS requirements have been met.

The verification team raises a FAR during verification for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

According to these principles total of 8 CARs and 013 CL were issued all of which are listed in the Verification Protocol. There hasn't been any FAR issued during the verification.

The appointment process of the verification team takes into account the technical area(s), sectoral scope(s), and relevant host country experience required amongst team members for the verification of the emission reductions achieved by the project activity in the relevant

monitoring period for this verification. The relevant VCS verification and previous ITR experiences are also assessed during the selection of the team members and Independent Technical Reviewer (ITR), respectively. The verification team and ITR are assigned to this verification activity on 11/01/2022 taking all the above factors into consideration and as a result of the contract review process.

The verification team and ITR details are given in Table 3-3 below:

Table 3-4: Verification team and ITR details

Name	Role	Host Country Experience	Scope Coverage	Technical Expertise	Involvement*
Fikriye SEDA ATABEK	Team Leader	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Öykü YAKUPOĞLU	Trainee Verifier	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rohit BADAYA	ITR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

* Explanations for the abbreviations used for involvement types are as follows:

- A : Administrative
- DR : Desk Review
- SV : Site Visit
- R : Reporting
- ITR : Independent Technical Review

As a final step of verification, the final documentation including the verification report and its annexes have to undergo an internal quality control by Re Carbon Ltd.. This quality control is also referred to as Independent Technical Review process.

The Independent Technical Review is performed by another Team Leader who hasn't involved in the verification activities of this project activity. When the Team Leader finalizes the Verification Report, the report is sent to Independent Technical Reviewer, at this stage not only the report but all the supporting documents like emission factor calculations, additionality justifications, relevant excel sheets etc. are reviewed.

Further CLs and CARs can be issued by the Independent Technical Reviewer during this review, to cover all the points that may need further clarification.

After all the CLs and CARs are closed, the verification report is reviewed and approved by the Team Leader, ITR and the Certification Manager/General Manager, and the request of issuance is submitted to the VCS Organization in line with the positive verification opinion and along with the all relevant documents.

2.5.1 Forward Action Requests

The verification team raises a FAR during verification for actions if the monitoring and reporting require attention and/or adjustment for the next verification period as explained in Section 2.5.

According to these principles total of 00 FARs were issued all of which are listed in the Verification Protocol and the details of these FARs are explained in below.

2.6

Eligibility for

Validation Activities

Re Carbon Ltd. Holds accreditation for the validation and verification activities in scope 1: “Energy Industry – Renewable/Non-renewable Sources” in which the project activity falls into.

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) and this is also confirmed by the PP through the signed and sealed letter by PP dated as 18/02/2022.

3.2

Methodology

Deviations

N/A (There haven't been any methodology deviations applied).

3.3

Project Description

Deviations

The project's installed capacity is 12.768 MWm / 12.257 Mwe but it has been changed on 03/08/2014 as 13.047 MWm / 12.502 Mwe. This change was realized due to technical requirements, however there wasn't any change for expected annual generation as it may be seen through the generation license. There is not any impact on the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

Regarding, EGPP-self consumption, y and EGPP-gross, y the primary source was two TEIAS meter readings recorded at the monthly reading protocols and the secondary source was EPIAS web site screenshots in the PD. Since EPIAS web site screenshots show the exact invoiced generation and consumption values, the primary source has been determined as EPIAS web site screenshots for this monitoring period. This is an improvement in Turkish monitoring system and gives more accurate results for the sake of ER monitoring.

Other entity involved in the project was Ekobil Environmental Services and Consultancy in the project description. However, it has been changed as Sekans Enerji Ltd. Şti. During the 1st Monitoring Period.

Since the emissions (PEFC_{j,y}) by the auxiliary diesel generators are negligible for hydropower plants, PEFC_{j,y}, FC_{j,y}, NCV_{i,y} and EFCO_{2,i,y} have been removed from the monitored parameters. They were put for the monitoring of diesel consumption. This deviation does not have any impact since the project activity is a hydro power plant and it exists only for emergency cases.

Re Carbon Ltd. Hereby confirms that these changes have no impact on the applicability of the methodology, additionality, monitoring plan and the appropriateness of the baseline scenario. The scale of the project did not change. As the installed capacity only increased by %2, estimated annual electricity generation and estimated annual emission reductions would not change to deviate to affect additionality of the project. This change was realized due to technical requirements, however there wasn't any change for expected annual generation as it may be seen through the generation license. Also, the project activity has generated %61 lower than the expected generation during the monitoring periods. This decrease occurred due due lower than expected rainfall.

3.4

Grouped Project

The project is not a grouped project.

4 VERIFICATION FINDINGS

The verification findings have been detailed as in below.

4.1

Project

Implementation Status

Compliance of the Project Implementation with the Registered PD: As a result of the reviewed documents, Re Carbon Ltd. Hereby confirms that the project is fully implemented according to the description given in the registered PD.

It can also be confirmed through the reviewed documents that all physical features of the project activity including data collecting systems and storage have been implemented in accordance with the registered PD. The project activity is completely operational and the same has been confirmed through the provided evidences including EPIAS records, TEIAS meter reading protocols, electricity meter test protocols and the photos of electricity meters.

According to the registered PD, the estimated annual emission reduction is 24,573 tCO₂e and corresponding total estimated amount for the monitoring period is 146,697 tCO₂e. The actual values achieved for the current monitoring period is 57,264 tCO₂e. The actual amount of emission reduction for the current monitoring period is about 61% less than the estimated emission reduction amount. However, the difference is due to the annual changes and deviations in the precipitation regime and so as in the water flow. Besides that, the difference in the values does not lead to a substantial increment of the ER in this period in relation to the estimates in the registered PD.

The project also contributes to SDG 7 (Affordable and Clean Energy with 106,083.70 MWh net electricity generation), SDG 8 (Decent Work and Economic Growth with 8 employed staff during the recent year of operation period) and SDG-13 (Climate Action with achieved emission reduction of 57,264 tCO₂e) during the monitoring period.

The project was commissioned on 12/12/2013 which was verified by the provisional acceptance protocol. The project activity does not consist of more than one site and does not have any phased implementation.

The GHG emission reductions generated by the project are not included in an emission trading program or any other mechanism that includes GHG allowance trading, because of the position of the host country.

The project activity has not received any other form of environmental credits, as there are no such crediting schemes in the host country as declared by the PP.

The only other eligible GHG program in the host country is Gold Standard and the certification program is Renewable Energy Certification (REC), and the project hasn't been listed in any of them, hence Re Carbon Ltd. Confirms that the project has not participated or been rejected under any other GHG programs since the validation.

Remaining Issues from Previous Validation or Verifications: There hasn't been any issued Forward Action Requests (FARs) from validation stage in line with the provided initial validation report version 1 dated as 13/02/2013.

Compliance of the Monitoring Plan with the Monitoring Methodology: The monitoring plan is in accordance with the approved methodology, AMS-ID v17, applied by the project activity. The increase in capacity addition does not change the monitoring plan and the accuracy of the plan.

In line with the methodology and the registered PD, the monitored parameters are quantity of electricity imported by the power plant from the grid for self-consumption, in year y (EG PP-self consumption, y), quantity of electricity produced by the power plant, in y (EG PP-gross, y), installed capacity of the hydro power plant after the implementation of the project activity (CAPPJ) and area of the reservoir (APJ) as in below:

- quantity of electricity imported by the power plant from the grid for self-consumption, in year y (EG PP-self consumption, y), quantity of electricity produced by the power plant, in y (EG PP-gross, y): The quantity of net electricity delivered to the grid has been calculated with the EPIAS (the financial settlement centre of TEIAS) records provided to the PP by TEIAS. The net electricity is measured continuously by two main electricity meters at the grid interface and recorded monthly. There are also two back up electricity meters. That means, the electricity generation and consumption values have been determined through the summation of the measured values of two main meters and checked through two back up meters. All readings and billings are done via EPIAS system which is the legal database of the Ministry. During this verification, all EPIAS and TEIAS meter reading records have been reviewed by the verification team. The project mainly uses its own electricity however during the times when there is no generation, the project imports electricity from the grid. There are also internal reviews of the metered data which is checked by different parties. SCADA system is also available from which daily reports are taken and the data collected daily is saved in plant manager computer and backed up.
- CAPPJ: According to the monitoring plan in the registered PD, the installed capacity of the power plant is monitored supplier information on the equipment and the number of turbines. The project has total capacity of 13.047 MWm / 12.502 Mwe in line with the electricity generation license. Re Carbon Ltd. Hereby confirms that there hasn't been any change regarding the total installed capacity of the project.
- APJ: According to the monitoring plan in the registered PD, the area of the reservoir is monitored via topographical surveys, maps and satellite pictures. The reservoir area has been checked through the reservoir layout drawing of the project as in the initial verification process and the reservoir area is taken as 6,980 m² accordingly.

According to the monitoring plan in the registered PD, below parameters would be monitored for diesel consumption of generator.

- PEFC_{j,y}: CO₂ emissions from fossil fuel combustion will be monitored.
- FC_{j,y}: Quantity of fuel type I combusted
- NCV_{i,y}: Weighted average net calorific value of fuel type
- EFCO_{2,i,y}: weighted average CO₂ emission factor of fuel type

Since the emissions (PEFC_{j,y}) by the auxiliary diesel generators are negligible for hydropower plants, PEFC_{j,y}, FC_{j,y}, NCV_{i,y} and EFCO_{2,i,y} have been removed from the monitored parameters.

All data collected as part of monitoring will be archived electronically by the project owner and be kept at least for 2 years after the end of the last crediting period.

Compliance of the Monitoring Plan with the Monitoring Methodology: The net electricity is measured continuously by one main electricity meter at the grid interface and recorded monthly. There is also one back up electricity meter.

The calibrated electricity meters were installed as per the regulations. Although, re-calibration is required after ten years, nevertheless, in case of irregular difference between main and cross-check spare meters, TEIAS (grid company) responsible are informed for the intervention. That means, TEIAS is responsible for the calibration and maintenance of the meters. The initial calibration tests for the meters were performed on 12/12/2013 and those test reports were provided to VVB.

The serial numbers of the main meter is 480819 (it is ELSTER model and accuracy class is 0.5s) and spare meter is 480820 (it is ELSTER model and accuracy class is 0.5s) and these have been verified through the electricity meters' photos and meter test protocols. All these meters are bi-directional (meter the energy in two directions – generation and consumption).

Operation of the project activity went on as expected during this monitoring period and no event that may impact the GHG emission reductions or removals and monitoring occurred.

Completeness of Monitoring: Monitoring is complete in line with the latest version of "Monitoring Report" template and the monitoring plan in the registered PD.

Compliance with the Calibration Frequency Requirements for Measuring Instruments: VVB approves that meters are calibrated by government agency and PP has no interference with meters.

4.2

Safeguards

4.2.1 No Net Harm

There hadn't been any observed significant environmental impact of the project activity as indicated in the registered PD and this was also confirmed through the reviewed documents. The project has been exempt from environmental impact assessment procedure as confirmed during the validation process.

The construction followed strict noise and dust standards to prevent any inconvenience to communities. Same standards are followed during the operation of the plant. The construction followed various strict standards for labour health and site safety. No pollution from any source is released into the river from the operation of the plant. Hazardous wastes are handled appropriately in closed containers and transported by licensed transporters to the licensed processing and disposal facilities. Wastewater is collected through within the septic tank and is transferred through the sewage truck. Since the Project Activity is outside the municipal boundaries, the domestic wastes are taken by the vehicles of provincial special administration and taken to recycling site of Denizli Municipality. Regarding the monitoring of "Water quality and quantity", "Biodiversity and

aquatic life”, streamgauge gauging station is built for the measurement of flow to assess the environmental flow. General directorate for state hydraulic works executes the monitoring and the Project complies with the regulations. All mentioned evidences provided to VVB.

4.2.2 Local Stakeholder Consultation

There hadn't been any complaint raised by the interviewed local stakeholders during the online verification site visit as detailed in Section 2.3.

The local stakeholders as stated in the Table 2-2 above were interviewed about the following issues and there hadn't been any complaint by the interviewed local stakeholders during the online site visit:

- Noise due to the project activity
- Increase in capacity
- Impact on the aquatic life where the project had been constructed
- Sufficiency of local employment (The interviewed local stakeholders were pleased about the provided local employment opportunities by the PP)
- Waste management practices implemented by PP

It was also concluded that the grievance mechanism is in place and this was also confirmed by the interviewed local stakeholders during the online site visit.

4.3

Accuracy of GHG

Emission Reduction and Removal Calculations

EPIAŞ records are presented for all months of the monitoring period. All data in emission reductions table are checked with EPIAŞ records as the main source and crosschecked with TEIAS meter readings. The net electricity generated during the current monitoring period was as follows in Table 4-1 below:

Table 4-1: Net electricity generation

Period	Amount	Compliance Check
2013 Vintage 12.12.2013-31.12.2013)	Export to Grid: 537.40 MWh Import from Grid: 4.71 MWh Net electricity supplied to grid: 532.69 MWh	Monthly TEIAS meter reading protocol records, PMUM screenshots
2014 Vintage (01.01.2014-31.12.2014)	Export to Grid: 10,863.95 MWh Import from Grid: 10.81 MWh Net electricity supplied to grid: 10,853.13 MWh	Monthly TEIAS meter reading protocol records, PMUM screenshots

Period	Amount	Compliance Check
2015 Vintage (01.01.2015-31.12.2015)	Export to Grid: 47,780.32 MWh Import from Grid: 7.63 MWh Net electricity supplied to grid: 47,772.69 MWh	Monthly TEIAS meter reading protocol records, PMUM screenshots
2016 Vintage (01.01.2016-31.12.2016)	Export to Grid: 7,842.01 MWh Import from Grid: 7.92 MWh Net electricity supplied to grid: 7,834.09 MWh	Monthly TEIAS meter reading protocol records, PMUM screenshots
2017 Vintage (01.01.2017-31.12.2017)	Export to Grid: 11,288.37 MWh Import from Grid: 20.16 MWh Net electricity supplied to grid: 11,268.22 MWh	Monthly TEIAS meter reading protocol records, PMUM screenshots
2018 Vintage (01.01.2018-31.12.2018)	Export to Grid: 12,998.56 MWh Import from Grid: 9.06 MWh Net electricity supplied to grid: 12,989.50 MWh	Monthly TEIAS meter reading protocol records, PMUM screenshots
2019 Vintage (01.01.2019-30.11.2019)	Export to Grid: 14,844.46 MWh Import from Grid: 11.07 MWh Net electricity supplied to grid: 14,833.39 MWh	Monthly TEIAS meter reading protocol records, PMUM screenshots
Total	Export to Grid: 106,155.07 MWh Import from Grid: 71.37 MWh Net electricity supplied to grid: 106,083.70 MWh	Monthly TEIAS meter reading protocol records, PMUM screenshots

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

According to the applied methodology AMS-ID v17 and the registered PD, the GHG emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y$$

Where:

ER_y = Emission reductions in year y (tCO₂e/yr)

BE_y = Baseline emissions in year y (tCO₂e/yr)

PE_y = Project emissions in year y (tCO₂e/yr)

According to the applied methodology, for hydropower plants if the power density of the reservoir is higher than 10 W/m², then $P_{ey} = 0$. The power density of the project is calculated as follows:

$$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}}$$

Where;

PD = Power density of the project activity (W/m²)

Cap_{PJ} = Installed capacity of the hydro power plant after the implementation of the project activity (W)

Cap_{BL} = Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero

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

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

The project activity is a greenfield run-of-river hydropower project, so Cap_{BL} and A_{BL} are equal to zero.

$A_{PJ} = 2,662.69 \text{ m}^2$ (according to the provided PD of the project since there is no reservoir in the project)

$Cap_{PJ} = 12,502.000 \text{ W}$

The power density is calculated as follows:

$$PD = 4695.25 \text{ W/m}^2$$

Therefore, the emission reductions generated during the monitoring period are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

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

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

Where;

BE_y = Baseline emissions in year y (t CO₂/y)

$EG_{PJ,y}$ = 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/y)

$EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO₂ / MWh)

Since the project is a greenfield renewable power plant:

$EG_{PJ,y} = EG_{facility,y}$ = The amount of net electricity produced and fed into the grid by the project in year y.

The energy generating equipment is not transferred from or to another activity. Therefore, leakage (LE_y) is also considered as “0” in line with the relevant applied methodology.

Combined margin CO_2 emission factor ($EF_{grid,CM,y}$) is calculated once during the validation of the project activity and is valid throughout the first crediting period of 10 years.

It has been confirmed that the data used for emission reductions are correct. The grid emission factor taken is 0.5398 tCO₂ / MWh and the value is same as fixed ex-ante in the registered PD.

It is also confirmed that the methods and formulae used for calculating baseline emissions and project emissions are in line with the relevant methodology and the registered PD. The net electricity generation is multiplied with the grid emission factor to arrive at the emission reductions value.

According to the registered PD, the estimated emission reduction for this monitoring period would be 146,697 tCO₂e corresponding to the monitoring period. However, the project in operation totally reached 57,264 tCO₂e in this period.

The project activity has generated %61 lower than the expected generation during the monitoring periods. This decrease occurred due due lower than expected rainfall.

The vintage break-up of the emission reductions during the current monitoring period was as follows in Table 4-2 below:

Table 4-2: Emission reductions

Period	Emission reductions (tCO ₂ e)
12.12.2013-31.12.2013	288
01.01.2014-31.12.2014	5,859
01.01.2015-31.12.2015	25,788
01.01.2016-31.12.2016	4,229
01.01.2017-31.12.2017	6,083
01.01.2018-28.02.2018	7,012
01.01.2019-30.11.2019	8,007

Calculations have been reproduced by DOE and the source data (monthly TEIAS meter reading protocol records) are presented by PP as explained above.

Therefore, Re Carbon Ltd. 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 AMS-ID v17 and the monitoring plan given in the registered PD.

4.4

Quality of Evidence to

Determine GHG Emission Reductions and Removals

The GHG emission reductions are a function of the net electricity generated and fed into the grid by the project activity and the combined margin emission factor which is determined during validation for the whole crediting period. According to the validation report version 01 dated 13/02/2013, the combined margin emission factor had been validated and will remain the same for the first crediting period of 10 years as 0.5398 tCO₂/MWh.

The only parameter that needs to be closely verified is the net electricity generation and this value is taken from the TEIAS and EPIAS records which are the basis for billing and these records for each month has been submitted to and reviewed. They are recorded and saved automatically by the relevant government authority and there is no base for any option of material information.

Level of materiality is ensured by application of “Guideline on the Application of Materiality in Verifications” version 02. To guarantee this level of assurance, all data that is used in the GHG emission reduction calculations have been reviewed without any sampling.

As a cross check means, meter reading records which include the monthly generation and consumption figures of the plant for every month have been reviewed by the verification team.

Therefore, Re Carbon Ltd. Hereby confirms that the evidence used to determine the GHG emission reductions are sufficient in quantity and appropriate in quality.

4.5

Non-Permanence

Risk Analysis

N/A. (The project isn't an AFOLU project).

5 VERIFICATION CONCLUSION

Re Carbon Ltd. Has performed the first verification of “Akbas Hydroelectric Power Plant” which is a project with the VCS registry reference number “2096” for the period between 12 December 2013 – 30 November 2019. The scope of the activities cover the verification and certification of GHG emissions reductions reported in monitoring report version 05 dated 25/07/2022.

Sekans Danışmanlık is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project monitoring plan indicated in the registered PD. The development and maintenance of the records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of both Sekans Danışmanlık and the management of the project. The development and maintenance of the records and the related monitoring procedures are in accordance with the monitoring report version 04.

The verification has been performed by a verification team consisting of “Fikriye Seda Atabek as team leader, Öykü Yakupoğlu as Trainee Verifier and Rohit Badaya as ITR” and the project activity was checked against the applicable rules and regulations of CDM including Section I of CDM Modalities and Procedures, the relevant guidance and decisions of the COP/MOP, CDM EB and VCS Organization, CDM Validation and Verification Standard version 03.0, CDM Project Standard version 03.0, CDM Project Cycle Procedure version 03.0 and VCS version 3.2.


Re Carbon Ltd. Hereby confirms that the project activity “Akbas Hydroelectric Power Plant” in Turkey is implemented in accordance with the validated and registered PD version 02 and dated 01/02/2013. The monitoring system is in place and the emission reductions are calculated without material misstatements as per the applied approved methodology, which is AMS-ID v17. It is also confirmed that the level of assurance of this verification report is reasonable.

Re Carbon Ltd. Confirms the following based on the results of document review for the period between 12 December 2013 – 30 November 2019:

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)
2013	288	0	0	288
2014	5,859	0	0	5,859
2015	25,788	0	0	25,788
2016	4,229	0	0	4,229
2017	6,083	0	0	6,083
2018	7,012	0	0	7,012
2019	8,007	0	0	8,007
Total	57,264	0	0	57,264



Fikriye Seda ATABEK
Team Leader
25/07/2022



Rohit BADAYA
ITR
25/07/2022



Esin TUNALI
Certification Manager
25/07/2022

ANNEX 1: VERIFICATION PROTOCOL

Table 1 – VCS Monitoring Report (MR) Form Requirements

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
Cover Page and General Requirements					
1. Are all items in the box at the bottom of the cover page completed using Arial or Century Gothic 10.5pt, black, regular (non-italic) font?	VCS Std. Version 4.0	DR	Yes	OK	OK
2. Are the followings provided at the cover page in a tabular format?	VCS Std. Version 4.0	DR	Yes	OK	OK
2.1. Name of the project?	VCS Std. Version 4.0	DR	Please revise project name as “Akbas Hydroelectric Power Plant” in MR	CAR-1	OK
2.2. Version number of the VCS MR?	VCS Std. Version 4.0	DR	Yes	OK	OK
2.3. Report ID of the document	VCS Std. Version 4.0	DR	Yes	OK	OK
2.4. The issuance date of the document in DD-Month-YYYY format?	VCS Std. Version 4.0	DR	Yes	OK	OK
2.5. VCS project database ID, if registered	VCS Std. Version 4.0	DR	Yes	OK	OK
2.6. Monitoring period in DD-Month-YYYY to DD-Month-YYYY format	VCS Std. Version 4.0	DR	Please revise acceptance date as 12 December 2013 in MR	CAR-2	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
2.7. Individual or entity that prepared the document?	VCS Std. Version 4.0	DR	Yes	OK	OK
2.8. Physical address, telephone, email, website?	VCS Std. Version 4.0	DR	Yes	OK	OK
3. Is this box available on the title page of the final document?	VCS Std. Version 4.0	DR	Yes	OK	OK
4. Is there "Table of Contents" in the VCS MR?	VCS Std. Version 4.0	DR	Yes	OK	OK
5. Is the VCS MR used as a basis for verification prepared in accordance with the latest template and guidance from the VCS?	VCS Std. Version 4.0	DR	MR template v4.1 is available, please revise	CAR-3	OK
6. Are the VCS MR and other documents required under the VCS Program in English?	VCS Std. Version 4.0	DR	Yes	OK	OK
1. PROJECT DETAILS					
1.1. Summary Description of the Implementation Status of Project					
1.1.1. Has a brief summary of the project description provided under Section 1.1 of the MR?	VCS Std. Version 4.0 CDM-MR-FORM Version 7.0	DR	Yes	OK	OK
1.1.2. Has the purpose of the project activity and the measures taken to reduce greenhouse gas emissions been provided under section 1.1 of	VCS Std. Version 4.0 CDM-MR-	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
the MR?	FORM Version 7.0				
1.1.3. Has a brief description of the installed technology and equipment been provided under Section 1.1 of the MR?	VCS Std. Version 4.0 CDM-MR-FORM Version 7.0	DR	Yes	OK	OK
1.1.4. Has the relevant dates for the project activity (e.g. construction, commissioning, continued operation periods, etc.) been provided under Section 1.1 of the MR?	VCS Std. Version 4.0 CDM-MR-FORM Version 7.0	DR	a) Please provide more relevant dates in MR Table 2 (CP date, licence etc) b) In section 1.6 of MR, CP date stated as 03/08/2014 – 02/08/2024, MP date is an earlier date, please explain.	CAR-4	OK
1.1.5. Has the total emissions reductions achieved in this monitoring period been provided under Section 1.1 of the MR?	VCS Std. Version 4.0 CDM-MR-FORM Version 7.0	DR	Yes	OK	OK
1.2. Sectoral Scope and Project Type					
1.2.1. Is it indicated whether this a grouped project under Section 1.2 of the MR?	VCS Std. Version 4.0	DR	N/A	OK	OK
1.2.2. Is the sectoral scope(s) applicable to the project indicated?	VCS Std. Version 4.0	DR	Yes	OK	OK
1.2.3. Is the category of the project activity specified?	VCS Std. Version 4.0	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
1.3. Project Proponent					
1.3.1. Are the contact information for the project proponent(s) provided in the tabular format?	VCS Std. Version 4.0	DR	Yes	OK	OK
1.4. Other Entities Involved in the Project					
1.4.1. Are the contact information and roles/responsibilities for any other entities involved in the development of the project provided?	VCS Std. Version 4.0	DR	Yes	OK	OK
1.5. Project Start Date					
1.5.1. Is the project start date (the date on which the project began reducing or removing GHG emissions) indicated in day, month and year format?	VCS Std. Version 4.0	DR	Generation started on 12 December 2013, excel states as it is but MR states 13 December 2013, please clarify	CL-1	OK
1.6. Project Crediting Period					
1.6.1. Is the total crediting period including the day, month and year for the start and end dates and the total number of years indicated?	VCS Std. Version 4.0	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
1.7. Project Location					
1.7.1. Has complete information on the location of the project activity, including town, city, country and GPS coordinates been provided under Section 1.7 of the MR?	VCS Std. Version 4.0	DR	Please provide reference for coordinates (FSR and EIA report)	CL-2	OK
1.8. Title and Reference of Methodology					
1.8.1. Is the following information provided regarding the methodology(s) applied to the project?	VCS Std. Version 4.0	DR	Yes	OK	OK
1.8.1.1. The title of the methodology(ies)	VCS Std. Version 4.0	DR	Yes	OK	OK
1.8.1.2. The reference of the methodology(ies)	VCS Std. Version 4.0	DR	Yes	OK	OK
1.8.1.3. The version number of the methodology(ies)	VCS Std. Version 4.0	DR	Yes	OK	OK
1.8.2. Is the following information provided regarding the tool(s) applied to the project?	VCS Std. Version 4.0	DR	Yes	OK	OK
1.8.2.1. The title of the methodology(ies)	VCS Std. Version 4.0	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
1.8.2.2. The version number of the methodology(ies)	VCS Std. Version 4.0	DR	Yes	OK	OK
1.9. Participation under Other Programs					
1.9.1. Has it been indicated whether the project has been registered or seeking registration under any other GHG programs?	VCS Std. Version 4.0	DR	N/A	OK	OK
1.9.2. If the project has been registered under any other GHG programs, have the PPs provided the registration number and details?	VCS Std. Version 4.0	DR	N/A	OK	OK
1.9.3. If the project has been registered under any other GHG programs, have the details of any GHG credits claimed under such programs been provided in the Section 1.9 of the MR?	VCS Std. Version 4.0	DR	N/A	OK	OK
1.10. Other Forms of Credit					
1.10.1. Does the project reduce GHG emissions from activities that are included in an emissions trading program; or any other mechanism that includes GHG allowance trading?	VCS Std. Version 4.0	DR	N/A	OK	OK
1.10.2. If the project reduces GHG emissions from activities that are	VCS Std. Version 4.0	DR	N/A	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
included in an emissions trading program; or any other mechanism that includes GHG allowance trading, have the PPs provided evidence on the following?					
1.10.2.1. the reductions or removals generated by the project have or will not be used for compliance under such program(s) or mechanism(s)	VCS Std. Version 4.0	DR	N/A	OK	OK
1.10.3. Have the project(s) created other forms of environmental credit (for example renewable energy certificates)?	VCS Std. Version 4.0	DR	N/A	OK	OK
1.10.4. If the project(s) created other forms of environmental credit (for example renewable energy certificates), has the PPs provided all relevant information about the GHG-related environmental credits and the related program?	VCS Std. Version 4.0	DR	N/A	OK	OK
1.10.5. Have all other programs under which the project is eligible to participate (to create another form of GHG-related environmental credit) been listed?	VCS Std. Version 4.0	DR	N/A	OK	OK
1.11. Sustainable Development					
1.11.1. Has it been described how the project contributes to achieving any	VCS Std. Version 4.0	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
nationally stated sustainable development priorities, including any provisions for monitoring and reporting same?					
2. SAFEGUARDS					
2.1. No Net Harm					
2.1.1. Has it been summarized by PPs any potential negative environmental and socio-economic impacts of the project activity and the steps taken to mitigate them?	VCS Std. Version 4.0	DR	Yes	OK	OK
2.2. Local Stakeholder Consultation					
2.2.1. Has the process regarding the local stakeholder consultation been described by PPs including the following?	VCS Std. Version 4.0	DR	Yes	OK	OK
2.2.1.1. The procedures or methods used for engaging local stakeholders (e.g. dates of announcements or meetings, periods during which input was sought)	VCS Std. Version 4.0	DR	Yes	OK	OK
2.2.1.2. The procedures or methods used for documenting the outcomes of the local	VCS Std. Version 4.0	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
stakeholder communication					
2.2.1.3. The mechanism for on-going communication with local stakeholders conducted prior to verification	VCS Std. Version 4.0	DR	Yes	OK	OK
2.2.1.4. How due account of all and any input received during ongoing communication has been taken	VCS Std. Version 4.0	DR	Yes	OK	OK
2.2.1.5. The details on any updates to the project design or justifying why updates are not appropriate.	VCS Std. Version 4.0	DR	Yes	OK	OK
3. IMPLEMENTATION STATUS					
3.1. Implementation Status of The Project Activity					
3.1.1. Has a description of the implementation and operational status of the project as of this monitoring period been provided under section 3.1 of the MR?	CDM-MR-FORM Version 7.0	DR	Yes	OK	OK
3.1.2. Has the installed technology(ies), technical process and equipment, including the diagrams, where appropriate, been included in section 3.1 of the MR?	CDM-MR-FORM Version 7.0	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
3.1.3. Has the starting date of operation of the project activity been provided under Section 3.1 of the MR?	EB93 Report Annex 4 §257b	DR	Yes	OK	OK
3.1.4. If the project activity consists of more than one site, has the status of implementation and starting date of operation for each site been clearly described under Section 3.1 of the MR?	EB93 Report Annex 4 §257b	DR	N/A	OK	OK
3.1.5. If the implementation of the project activity planned to be realized in different phases, has the progress of the proposed VCS project activity achieved in each phase been indicated under Section 3.1 of the MR?	EB93 Report Annex 4 §257b	DR	N/A	OK	OK
3.1.6. Do the actual project activity and its operation comply with the registered PD and/or an approved revised PD??	EB93 Report Annex 5 §357a	DR	Yes	OK	OK
3.1.7. Have the PPs implemented and operated the VCS project activity as per the descriptions contained in the registered PD?	EB93 Report Annex 5 §357a	DR	Yes	OK	OK
3.1.8. Has the installed technology(ies), technical process and equipment, including the diagrams, where appropriate, been included in Section 3.1 of the MR?	CDM-MR-FORM Version 7.0	DR	Yes	OK	OK
3.1.9. Are there any other changes (e.g. to project proponent or other entities)	VCS Std. Version 4.0	DR	No	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
with respect to the registered project?					
3.2. Deviations					
3.2.1. Methodology Deviations					
3.2.1.1. Are there any deviations from the methodology?	VCS Std. Version 4.0	DR	No	OK	OK
3.2.1.2. If there are any deviations from the methodology, are these deviations described properly?	VCS Std. Version 4.0	DR	No	OK	OK
3.2.1.3. If there are any deviations from the methodology, are these deviations justified properly and clearly?	VCS Std. Version 4.0	DR	No	OK	OK
3.2.2. Project Description Deviations					
3.2.2.1. Are there any deviations from the registered project description?		DR	Yes	OK	OK
3.2.2.2. If there are any deviations from the project description, are these deviations	VCS Std. Version 4.0	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
described properly?					
3.2.2.3. If there are any deviations from the project description, are these deviations justified properly and clearly?	VCS Std. Version 4.0	DR	<p>The project's installed capacity is 12,768 MWm / 12,257 Mwe but it has been changed on 03/08/2014 as 13,047 MWm / 12,502 Mwe.²</p> <p>Regarding, EGPP-self consumption, y and EGPP-gross, y the primary source was two TEIAS meter readings recorded at the monthly reading protocols and the secondary source was EPIAS web site screenshots in the PD. Since EPIAS web site screenshots show the exact invoiced generation and consumption values, the primary source has been determined as EPIAS web site screenshots for this monitoring period.</p> <p>Other entity involved in the project was Ekobil Environmental Services and Consultancy in the project description. However, it has been changed as Sekans Enerji Ltd. Şti. During the 1st Monitoring Period.</p>	OK	OK
3.2.2.4. Is the outcome of the deviation from the project description provided?	VCS Std. Version 4.0	DR	Yes	OK	OK
3.2.2.5. Has it been described and reported on any project description deviations applied in previous monitoring reports?	VCS Std. Version 4.0	DR	Yes	OK	OK

² Generation License is available to the VVB.

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
3.3. Grouped Projects					
3.3.1. Is this a grouped project?	VCS Std. Version 4.0	DR	No	OK	OK
3.3.2. If it is a grouped project, is the relevant information about new instances of the project activity(ies) provided?	VCS Std. Version 4.0	DR	N/A	OK	OK
3.3.3. If it is a grouped project, is it demonstrated clearly and transparently that each new instance of the project activity(s) meets the eligibility criteria set out in the project description?	VCS Std. Version 4.0	DR	N/A	OK	OK
4. DATA AND PARAMETERS					
4.1. Data and Parameters Available at Validation					
4.1.1. Has all the data that is determined only once for the crediting period but are used after registration of the project, been listed under Section 4.1 using the tabular format?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.1.2. If all the data that is determined only once for the crediting period but are used after registration of the project, does the listed data include all the parameters used to calculate baseline, project and leakage emissions as well as other relevant	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
parameters required by the approved methodology and the monitoring plan?					
4.1.3. In the data/parameter tables provided under Section 4.1 of the MR, for each data has the name of the data/parameters given in accordance with the registered VCS PD and the applied approved methodology?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.1.4. In the data/parameter tables provided under Section 4.1 of the MR, for each data has the unit of the data/parameters given in accordance with the registered VCS PD and the applied approved methodology?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.1.5. In the data/parameter tables provided under Section 4.1 of the MR, for each data has the description of the data/parameters given in accordance with the registered VCS PD and the applied approved methodology?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.1.6. In the data/parameter tables provided under Section 4.1 of the MR, for each data has the source of the data/parameters given in accordance with the registered VCS PD and the applied approved methodology?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.1.7. In the data/parameter tables provided under Section 4.1 of the MR, for each data has the values applied of the data/parameters	CDM-MR-FORM Version 7.0	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
given in accordance with the registered VCS PD and the applied approved methodology?	VCS Std. Version 4.0				
4.1.8. In the data/parameter tables provided under Section 4.1 of the MR, for each data has the justification of choice of data or description of measurement methods and procedures applied been provided?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.1.9. In the data/parameter tables provided under Section 4.1 of the MR, for each data has it been indicated what the data/parameters are used for (baseline/project /leakage emission calculations)?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.2. Data and Parameters Monitored					
4.2.1. Has all the data that are monitored been listed under Section 4.2 using the tabular format?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.2. In the data/parameter tables provided under section 4.2 of the MR, for each data has the name of the data/parameters given in accordance with the registered VCS PD and the applied approved methodology?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.3. In the data/parameter tables provided under section 4.2 of the MR, for each data has the unit of the data/parameters given in	CDM-MR-FORM Version 7.0	DR	Please refer in 1.8 of MR about " Tool to determine the remaining lifetime of equipment ".	CL-3	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
accordance with the registered VCS PD and the applied approved methodology?	VCS Std. Version 4.0				
4.2.4. In the data/parameter tables provided under section 4.2 of the MR, for each data has it been described how the data is monitored?	CDM-MR-FORM Version 7.0 VCS Version 4.0	DR	Yes	OK	OK
4.2.5. In the data/parameter tables provided under section 4.2 of the MR, for each data has the source of data been indicated (like logbooks, daily records, surveys, etc.)?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.6. In the data/parameter tables provided under section 4.2 of the MR, for each data has the estimated values of the monitoring parameter been indicated?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	a)MR states as “39,890 MWh”, please revise. b)In site visit, 7 employees were stated, MR states 8, please revise, please state exactly how many employees are in this plants payroll and provide names with signature of PP. c)Section 4.2 of MR describes “EGPP-self consumption, y” in line with VR and not in line with deviation described. Please resolve inconsistency. d)Please revise “12,257,000” in MR. e) MR states “summing the two units” however there are 3 turbines	CAR-5	OK
4.2.7. In the data/parameter tables provided under section 4.2 of the MR, for each data has the QA/QC procedures being applied been given?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	a)Please provide any test reports for meters after initial calibration and if any, list them in MR. b)VR states “by 2 main and 2 back up electricity	CAR-6	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
			meters Elster A 1500 and recorded on monthly basis” but MR represents 2 meters only, please clarify.		
4.2.8. In the data/parameter tables provided under section 4.2 of the MR, for each data has the purpose of data been given?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.9. If applicable, has the calculation method, including any equations, used to establish the data/parameter been given?	VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.10. In the data/parameter tables provided under section 4.2 of the MR, for each data has it been indicated what types of equipment are used to monitor each parameter, including following, if applicable as per the monitoring plan?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.10.1. Details on accuracy class	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Please revise accuracy classes of meters as 0.2 S	CL-4	OK
4.2.10.2. The person/entity responsible for the measurement	VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.10.3. Any standards or protocols to be followed	VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.10.4. Calibration frequency	CDM-MR-FORM	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
	Version 7.0 VCS Std. Version 4.0				
4.2.10.5. Serial number	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.10.6. Calibration date	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.10.7. Validity of the calibration	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.11. In the data/parameter tables provided under section 4.2 of the MR, for each data has the measurement and recording frequency been indicated?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.12. Is the calibration frequency for measuring equipment specified in the monitoring methodology, in the applied standardized baselines or in the monitoring plan??	EB93 Report Annex 5 §368 VCS Std. Version 4.0	DR	Yes	OK	OK
4.2.13. If the calibration frequency for measuring equipment isn't specified in the monitoring methodology, guidance provided by the Board or the monitoring plan, are the equipment calibrated either in	EB93 Report Annex 5 §373	DR	N/A	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
accordance with the specifications of the local/national standards, or as per the manufacturer's specification?	VCS Std. Version 4.0				
4.2.14. If neither local/national standards nor the manufacturer's specification are available, have the international standards been used?	EB93 Report Annex 5 §373 VCS Std. Version 4.0	DR	N/A	OK	OK
4.2.15. Is the calibration of the measuring equipment that have an impact on the claimed emission reductions conducted by the PPs at a frequency specified in the applied monitoring methodology and/or the monitoring plan?	EB93 Report Annex 5 §374 VCS Std. Version 4.0	DR	N/A	OK	OK
4.2.16. Has the calibration been delayed and has the calibration been implemented after the monitoring period in consideration (i.e. the results of delayed calibration are available) for the certain monitoring period?	EB93 Report Annex 5 §369 VCS Std. Version 4.0	DR	No	OK	OK
4.2.17. If the calibration is delayed and if the calibration is implemented after the monitoring period in consideration (i.e. the results of delayed calibration are available) for the certain monitoring period, are one of the following approaches adopted by the PPs for the calculation of emission reductions?	EB93 Report Annex 5 §369 VCS Std. Version 4.0	DR	N/A	OK	OK
4.2.17.1. Applying the maximum permissible error of the instrument to the measured	EB93 Report Annex 5	DR	N/A	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
values taken during the period between the scheduled date of calibration and the actual date of calibration, if the results of the delayed calibration do not show any errors in the measuring equipment, or if the error is smaller than the maximum permissible error; or	§369a VCS Std. Version 4.0				
4.2.17.2. Applying the error identified in the delayed calibration test, if the error is beyond the maximum permissible error of the measuring equipment.	EB93 Report Annex 5 §369b VCS Std. Version 4.0	DR	N/A	OK	OK
4.2.18. If calibration is delayed and if the calibration is implemented after the monitoring period in consideration (i.e. the results of delayed calibration are available) for the certain monitoring period, has the error been applied in following ways?	EB93 Report Annex 5 §370 VCS Std. Version 4.0	DR	N/A	OK	OK
4.2.18.1. The adjusted measured values of the delayed calibration result in fewer claimed emission reductions?	EB93 Report Annex 5 §370a VCS Std. Version 4.0	DR	N/A	OK	OK
4.2.18.2. For all measured values taken during the period between the scheduled date of calibration and the actual date of calibration?	EB93 Report Annex 5 §370b VCS Std. Version 4.0	DR	N/A	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
4.2.19. If the results of the delayed calibration aren't available, have Pss calculated the emission reductions conservatively?	EB93 Report Annex 5 §371	DR	N/A	OK	OK
4.2.20. If the results of the delayed calibration aren't available, have post registration requirements been followed by the PPs?	EB93 Report Annex 5 §372	DR	N/A	OK	OK
4.2.21. Have any information about appropriate emission factors, IPCC default values and any other reference values that have been used in the calculation of emission reductions been given in detail in the MR?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	As per AMSId v17 item 4, power density has to be greater than 4W/m2, please check section 5.2	CL-5	OK
4.2.22. If the data that are monitored been listed under section 4.2 using the tabular format, does the listed data include all the parameters used to calculate baseline, project and leakage emissions as well as other relevant parameters required by the approved methodology and the monitoring plan?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0 EB93 Report Annex 4 §260	DR	Yes	OK	OK
4.2.23. Is a complete set of data available for the specified monitoring period?	EB93 Report Annex 5 §376 VCS Std. Version 4.0	DR	<p>In ER calculation:</p> <p>Please revise below generation values' decimals to be exactly in line PMUM records :</p> <p>(CL) Electricity supplied to the grid [MWh]: February and September 2015, June 2016, June 2018,</p> <p>(B) Electricity consumption from the grid [MWh] :</p>	CAR-7	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
			October 2018		
4.3. Monitoring Plan					
4.3.1. Has a description of the monitoring system been provided under Section 4.3 of the MR?	CDM-MR-FORM Version 7.0 EB93 Report Annex 4 §259 VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.2. Has information about the data collection procedures, including following been provided under Section 4.3 of the MR?	CDM-MR-FORM Version 7.0 EB93 Report Annex 4 §259 VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.2.1. Information flow including data generation	CDM-MR-FORM Version 7.0 EB93 Report Annex 4 §259 VCS Std. Version 4.0	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
4.3.2.2. Data aggregation	CDM-MR-FORM Version 7.0 EB93 Report Annex 4 §259 VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.2.3. Data recording	CDM-MR-FORM Version 7.0 EB93 Report Annex 4 §259 VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.2.4. Data calculation	CDM-MR-FORM Version 7.0 EB93 Report Annex 4 §259 VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.2.5. Data reporting	CDM-MR-FORM Version 7.0 EB93 Report Annex 4 §259	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
	VCS Std. Version 4.0				
4.3.3. Has organizational structure, roles and responsibilities of personnel, and emergency procedures for the monitoring system been provided under section 4.3 of the MR?	CDM-MR-FORM Version 7.0 EB93 Report Annex 4 §259 VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.4. Regarding to the management and operational system, are the responsibilities and authorities for monitoring and reporting in accordance with the responsibilities and authorities stated in the monitoring plan?	EB93 Report Annex 5 §364b-(iv) VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.5. Have quality assurance and quality control procedures been applied in accordance with the monitoring plan?	EB93 Report Annex 5 §364e VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.6. Are the procedures for handling internal auditing and non-conformities described?	VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.7. Where appropriate, are the line diagrams to display the GHG data collection and management system included?	VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.8. If the sampling approaches used in the monitoring plan, has the	VCS Std. Version 4.0	DR	N/A	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
following been included?					
4.3.8.1. target precision levels	VCS Std. Version 4.0	DR	N/A	OK	OK
4.3.8.2. sample sizes	VCS Std. Version 4.0	DR	N/A	OK	OK
4.3.8.3. sample site locations	VCS Std. Version 4.0	DR	N/A	OK	OK
4.3.8.4. stratification	VCS Std. Version 4.0	DR	N/A	OK	OK
4.3.8.5. frequency of measurement and	VCS Std. Version 4.0	DR	N/A	OK	OK
4.3.8.6. QA/QC procedures	VCS Std. Version 4.0	DR	N/A	OK	OK
4.3.8.7. Demonstration on whether the required confidence/precision has been met.	CDM-MR-FORM Version 7.0	DR	N/A	OK	OK
4.3.9. Have the monitoring plan and the applied methodology been properly implemented and followed by the PPs?	EB93 Report Annex 5 §364a VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.10. Has the monitoring of parameters (baseline / project / leakage / emission reduction) in the project activity been implemented in accordance with the monitoring plan contained in the registered PD or any accepted revised monitoring plan?	EB93 Report Annex 5 §364b-(i)-(ii)-(iii) VCS Std. Version 4.0	DR	Yes	OK	OK
4.3.11. Have all parameters stated in the monitoring plan, the applied	EB93 Report	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
methodology and relevant VCS requirements been sufficiently monitored and updated as applicable?	Annex 5 §364b VCS Std. Version 4.0				
4.3.12. Are monitoring results consistently recorded and stored as per the approved frequency?	EB93 Report Annex 5 §364d VCS Std. Version 4.0	DR	Yes	OK	OK
5. QUANTIFICATION of GHG EMISSION REDUCTIONS and REMOVALS					
5.1. Baseline Emissions					
5.1.1. Has all the formulae used to calculate the baseline emissions been provided under section 5.1 of the MR?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
5.1.2. Has sample calculations for all formulae used and calculation of baseline emissions or baseline net GHG removals by sinks, applying actual values been provided under section 5.1 of the MR?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
5.1.3. Has all electronic spread sheets to present full calculations in the monitoring report been attached?	CDM-MR-FORM Version 7.0	DR	Yes	OK	OK
5.1.4. Have any assumptions used in baseline emission calculations been	EB93 Report Annex 5	DR	Yes	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
justified?	§376d VCS Std. Version 4.0				
5.1.5. If applicable, are the appropriate emission factors used for the baseline emission calculations in line with the good guidance practices? (e.g. IPCC default values and other reference values)	EB93 Report Annex 5 §376e VCS Std. Version 4.0	DR	Yes	OK	OK
5.2. Project Emissions					
5.2.1. Has all the formulae used to calculate the project emissions been provided under section 5.2 of the MR?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	N/A	OK	OK
5.2.2. Has sample calculations for all formulae used and calculation of project emissions or or actual net GHG removals by sinks, applying actual values been provided under section 5.2 of the MR?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	N/A	OK	OK
5.2.3. Has all electronic spreadsheets to present full calculations in the monitoring report been attached?	CDM-MR-FORM Version 7.0	DR	N/A	OK	OK
5.2.4. Have any assumptions used in project emission calculations been justified?	EB93 Report Annex 5 §376d VCS Std. Version 4.0	DR	N/A	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
5.2.5. If applicable, are the appropriate emission factors used for the project emission calculations in line with the good guidance practices? (e.g. IPCC default values and other reference values)	EB93 Report Annex 5 §376e VCS Std. Version 4.0	DR	N/A	OK	OK
5.3. Leakage					
5.3.1. Has all the formulae used to calculate the leakage emissions been provided under section 5.3 of the MR?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	N/A	OK	OK
5.3.2. Has sample calculations for all formulae used and calculation of leakage emissions, applying actual values been provided under section 5.3 of the MR?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	N/A	OK	OK
5.3.3. Has all electronic spread sheets to present full calculations in the monitoring report been attached?	CDM-MR-FORM Version 7.0	DR	N/A	OK	OK
5.3.4. Have any assumptions used in leakage emission calculations been justified?	EB93 Report Annex 5 §376d VCS Std. Version 4.0	DR	N/A	OK	OK
5.3.5. If applicable, are the appropriate emission factors used for the leakage emission calculations in line with the good guidance practices? (e.g. IPCC default values and other	EB93 Report Annex 5 §376e	DR	N/A	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
reference values)	VCS Std. Version 4.0				
5.4. Net GHG Emission Reductions and Removals					
5.4.1. Have the total baseline emissions or baseline net GHG removals by sinks during the monitoring period been given under section 5.4 of the MR?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	a) Annual ERS stated as 24574 and 24573 in Validation report, please justify. b) In Comparison of Baseline Emissions calculation please revise values after correction	CAR-8	OK
5.4.2. Has the total project emissions or actual net GHG removals by sinks during the monitoring period been given under section 5.4 of the MR?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
5.4.3. Has the total leakage emissions during the monitoring period been given under section 5.4 of the MR?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	N/A	OK	OK
5.4.4. Have the total emission reductions or net anthropogenic GHG removals by sinks during the monitoring period been given under section 5.4 of the MR?	CDM-MR-FORM Version 7.0 VCS Std. Version 4.0	DR	Yes	OK	OK
5.4.5. If there is material information that can cause overestimation of emission reductions or removals of the project activity, is this equal to	EB93 Report Annex 5	DR	N/A	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
higher than one of the following?	§329				
5.4.5.1. 0.5 per cent of the emission reductions or removals for project activities achieving a total emission reduction or removal of equal to or more than 500,000 tons of carbon dioxide equivalent per year?	EB93 Report Annex 5 §329a	DR	N/A	OK	OK
5.4.5.2. 1 per cent of the emission reductions or removals for project activities achieving a total emission reduction or removal between 300,000 and 500,000 tons of carbon dioxide equivalent per year?	EB93 Report Annex 5 §329b	DR	N/A	OK	OK
5.4.5.3. 2 per cent of the emission reductions or removals for large-scale project activities achieving a total emission reduction or removal of 300,000 tons of carbon dioxide equivalent per year or less?	EB93 Report Annex 5 §329c	DR	N/A	OK	OK
5.4.5.4. 10 per cent of the emission reductions or removals for the microscale project activities?	EB93 Report Annex 5 §329d	DR	N/A	OK	OK
5.4.5.5. 5 per cent of the emission reductions or removals for small-scale project activities other than project activities covered under 5.4.5.4 above?	EB93 Report Annex 5 §329e	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
6. APPENDICES					
6.1. If any further background information regarding any raw data from monitoring is provided, is this information correct and supported by the appropriate evidence?	VCS Std. Version 4.0	DR	N/A	OK	OK
6.2. If any further background information regarding additional information used in the monitoring plan is provided, is this information correct and supported by the appropriate evidence?	VCS Std. Version 4.0	DR	N/A	OK	OK
6.3. If any further background information regarding documentation of activities conducted from the monitoring plan and diagrams are provided, is this information correct and supported by the appropriate evidence?	VCS Std. Version 4.0	DR	N/A	OK	OK
7. OTHER REQUIREMENTS					
7.1. Forward Action Requests (FARs) Identified During Validation and/or Previous Verification					
7.1.1. Is there any remaining FARs from the validation and/or previous verification activities?	EB93 Report Annex 5 §38 §349	DR	No	OK	OK
7.1.2. If there any remaining FARs from the validation and/or previous verification activities, have the PPs addressed these FARs in the MR?	EB93 Report Annex 5 §38 §349	DR	No	OK	OK
7.1.3. Has the FARs been resolved?	EB93 Report Annex 5 §38 §349	DR	N/A	OK	OK

*DR= Document Review, I= Interview, SV=Site Visit

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
	§347d				

*DR= Document Review, I= Interview, SV=Site Visit

Table 2 – Resolution of Corrective Action, Forward Action and Clarification Requests

Draft Report Clarifications, Forward Action and Corrective Action Requests By Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Participants' Response	Verification Team Conclusion
CAR-1 Please revise project name as "Akbas Hydroelectric Power Plant" in MR	2.1	The project name has been revised throughout the MR.	Review-1: Ok Closed (All corrected).
CAR-2 Please revise acceptance date as 12 December 2013 in MR	2.6	Acceptance date has been corrected.	Review-1: Ok Closed (All corrected).
CAR-3 MR template v4.1 is available, please revise	5	During the development of the project, MR template v4.0 was the latest version. Since MR template v4.0 has the validity till the July 2022, it is preferable to use this version at the moment.	Review-1: Ok Closed (Version can be used).
CAR-4 a) Please provide more relevant dates in MR Table 2 (CP date, licence etc) b) In section 1.6 of MR, CP date stated as 03/08/2014 – 02/08/2024, MP date is an earlier date, please explain.	1.1.4	a) MR Table 2 has been revised accordingly. b) Section 1.6 has been revised. As it is stated in PD, the project start date was going to be either the commissioning date or 03/08/2014. Since the project started its operation on 12/12/2013, the crediting period start date is 12/12/2013.	Review-1: a) Ok Closed (Timeline expanded). b) Ok Closed (Since the project started its operation on 12/12/2013, the crediting period start date is 12/12/2013).
CAR-5	4.2.6	a) It's been revised. b) 1 plant manager, 5 electrical technicians,	Review-1:

* CAR= Corrective Action Request, FAR= Forward Action Request, CL= Clarification Request

Draft Report Clarifications, Forward Action and Corrective Action Requests By Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Participants' Response	Verification Team Conclusion
<p>a)MR states as "39,890 MWh", please revise.</p> <p>b)In site visit, 7 employees were stated, MR states 8, please revise, please state exactly how many employees are in this plants payroll and provide names with signature of PP.</p> <p>c)Section 4.2 of MR describes "EGPP-self consumption, y" in line with VR and not in line with deviation described. Please resolve inconsistency.</p> <p>d)Please revise "12,257,000" in MR.</p> <p>e) MR states "summing the two units" however there are 3 turbines</p>		<p>1 computer technician and 1 mechanical maintenance personnel are working for the project activity, in total there are 8 employees. Social security records are available to the VVB.</p> <p>c) Section 4.2 of the MR has been revised.</p> <p>d) It's been revised.</p> <p>e) It's been corrected.</p>	<p>a)Ok Closed (Corrected).</p> <p>b) Ok Closed (Explained).</p> <p>c) Ok Closed (Corrected).</p> <p>d)Ok Closed (Corrected).</p> <p>e) Ok Closed (Corrected).</p>
<p>CAR-6</p> <p>a)Please provide any test reports for meters after initial calibration and if any, list them in MR.</p> <p>b)VR states "by 2 main and 2 back up electricity meters Elster A 1500 and recorded on monthly basis" but MR represents 2 meters only, please clarify.</p>	4.2.7	<p>a) Initial meter test reports have been included in MR.</p> <p>b) There are 1 main and 1 spare meter in operation for Akbas HPP. The photographic evidence of the meters are available to the VVB.</p>	<p>Review-1:</p> <p>a) Ok Closed (Provided).</p> <p>b)Ok Closed (Explained).</p>
<p>CAR-7</p> <p>In ER calculation:</p>	4.2.23	<p>a) Values have been revised.</p> <p>b) Values have been revised.</p>	<p>Review-1:</p> <p>a-b)Ok Closed (All corrected).</p>

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Draft Report Clarifications, Forward Action and Corrective Action Requests By Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Participants' Response	Verification Team Conclusion
<p>Please revise below generation values' decimals to be exactly in line PMUM records :</p> <p>(CL) Electricity supplied to the grid [MWh]: February and September 2015, June 2016, June 2018,</p> <p>(B) Electricity consumption from the grid [MWh] : October 2018</p>			
<p>CAR-8</p> <p>a) Annual ERS stated as 24574 and 24573 in Validation report, please justify.</p> <p>b) In Comparison of Baseline Emissions calculation please revise values after correction</p>	5.4.1	<p>a) Annual emission reduction values have been corrected in both MR and ER.</p> <p>b) Values have been revised in "Comparison of Baseline Emissions" calculation accordingly.</p>	<p>Review-1:</p> <p>a-b) Ok Closed (All corrected).</p>
<p>CL-1</p> <p>Generation started on 12 December 2013, excel states as it is but MR states 13 December 2013, please clarify</p>	1.5	It's been clarified.	<p>Review-1:</p> <p>Ok Closed (All corrected).</p>
CL-2	1.7.1	Google Earth file (.kmz file) is 61vailable to	Review-1:

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Draft Report Clarifications, Forward Action and Corrective Action Requests By Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Participants' Response	Verification Team Conclusion
Please provide reference for coordinates (FSR and EIA report)		the VVB.	Ok Closed (Explained).
CL-3 Please refer in 1.8 of MR about "Tool to determine the remaining lifetime of equipment".	4.2.3	Section 1.8 of the MR has been revised.	Review-1: Ok Closed (Referred).
CL-4 Please revise accuracy classes of meters as 0.2 S	4.2.10	Accuracy classes of the meters are 0.5 S. The photographic evidence of the meters are available to the VVB.	Review-1: Ok Closed (Explained).
CL-5 As per AMSId v17 item 4, power density has to be greater than 4W/m2, please check section 5.2	4.2.21	Maximum value is 6,980 m2 as it is in line with PD. But there is no reservoir area in the project activity since it can be seen on the Google Earth file (.kmz file). However, the forebay has a 2,662.69 m2 area of surface.	Review-1: Ok Closed (Explained).
CL-6 Section 2.2: As per the MR filling guidelines, the following information shall be included in the section 2.2 of MR: "The procedures or methods used for engaging local stakeholders (e.g., dates of announcements or meetings, periods during which input was sought). The procedures or methods used for		Section 2.2. has been revised accordingly.	Review-1: Ok Closed (Revised).

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Draft Report Clarifications, Forward Action and Corrective Action Requests By Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Participants' Response	Verification Team Conclusion
documenting the outcomes of the local stakeholder communication”.			
<p>CL-7</p> <p>As there is a change in the project design, hence the summary of impact of the proposed design change on the additionality of the project activity shall be presented in the MR.</p>		<p>Section 3.3. has been revised accordingly. The change was realized due to technical requirements, however there wasn't any change for expected annual generation as it may be seen through the generation license. As equity IRR was executed for the investment analysis, and loan agreement details were already validated during the registration process. On the contrary, the project activity has generated %61 lower than the expected generation during the monitoring period. And additionally, sharp decrease has been experienced during this period, no expected VER revenue could be realized.</p>	<p>Review-1: Ok Closed (Explained).</p>
<p>CL-8</p> <p>Please clarify on the reasons for such design change to the project activity.</p>		<p>Section 3.3. has been revised accordingly.</p>	<p>Review-1: Ok Closed (Explained).</p>
<p>CL-9</p> <p>Please explain in MR how the applicability of methodology is not affected by the project design change.</p>		<p>Section 3.2.1 has been revised accordingly</p>	<p>Review-1: Ok Closed (Explained).</p>
<p>CL-10</p> <p>The installed capacity has been mentioned as “12,502 Mwe” in the Section 1.1 of MR. The PD shall use the SI format (internationally recognized format) for the decimal (.) and comma (,) places for all the values in MR.</p>		<p>The MR has been revised accordingly.</p>	<p>Review-1: Ok Closed (Corrected).</p>

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Draft Report Clarifications, Forward Action and Corrective Action Requests By Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Participants' Response	Verification Team Conclusion
<p>CL-11</p> <p>As per the VPA-DD, for the parameters (EGPP-self consumption,_y, EGPP-gross,_y), “the monthly reported meter readings by the main meters, will be cross-checked against the back-up meters, if the reading difference is less than +/-0.2% than the meter readings are considered to be ok, if not than the meters will be checked”. However no such details have been provided in the MR as whether such reading differences were checked during the monitoring period. Check and Clarify.</p>		<p>This procedure is executed by the transmission company and if there is any problem, they solve problem or change the meters. This procedure has been stated before to give more details. The project owners do not have access to this data.</p> <p>As we did for all previous projects, we crosscheck EPIAS records with the meter readings (OSF forms).</p>	<p>Review-1: Ok Closed (Explained).</p>
<p>CL-12</p> <p>Section 4.2: The following parameters are the monitoring parameters as per the registered PDD:</p> <ul style="list-style-type: none"> - Pefci_{,y} (CO2 emissions from fossil fuel combustion in process j during the year y) - Fci,_y (Quantity of fuel type i combusted in process j during the year y) - NCVi,_y (Weighted average net calorific value of fuel type i in year y) - Efco2,_{i,y} (Weighted average CO2 emission factor of fuel type i in year y) <p>However the same not considered in the</p>		<p>Since the emissions (PEFC_{j,y}) by the auxiliary diesel generators are negligible for hydropower plants, PEFC_{,j,y}, FC_{,j,y}, NCV_{i,y} and EFCO_{2,i,y} have been removed from the monitored parameters. They were put for the monitoring of diesel consumption.</p>	<p>Review-1: Ok Closed (Corrected).</p>

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Draft Report Clarifications, Forward Action and Corrective Action Requests By Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Participants' Response	Verification Team Conclusion
submitted MR. Check and Clarify.			
CL-13 The meter serial number reported in the MR shall be the same as that available in the submitted screenshot of the electricity meters. For example, the meter serial number as per the screenshot is "00480819" and "00480820", while the same has been mentioned as "480819" and "480820" in the MR. Check and Clarify.		The meter serial numbers have been checked and clarified in MR.	Review-1: Ok Closed (Corrected).
CL-14 a) Please provide a comparison of ex-ante and ex-post values for this MP in Section 5.4 of the monitoring report b) Please provide an explanation as to why the project activity generated 61% lower than the expected generation during the monitoring period.		a) Table 1 has been removed to section 5.4. b) The rainfall was lower than expected.	Review-1: Ok Closed (Corrected).

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ANNEX 2: VERIFICATION TEAM AND ITR COMPETENCE

Mrs. Fikriye Seda ATABEK holds B.Sc. degree in “Chemical Engineering” and a M.Sc. degree in “Energy Science and Technology”. She is a lead auditor and trainer for ISO 50001 and since 2004 has been working in the fields of “Management systems”, “ISO 14064” and “Energy Management in Industry”. She has been involved in many GS and VCS projects as ITR, Team Leader, Validator or Verifier since 2010. With re-carbon, Seda is a free-lance Team Leader and ITR.

Ms. Öykü YAKUPOĞLU holds a B.Sc. degree in “Environmental Engineering” from Middle East Technical University/Ankara and currently undergoes a M.Sc. program in Chemical Engineering. She is experienced in ISO 14001: 2015 - Environment Management System, ISO 50001: 2018- Energy Management System , ISO 45001: 2018 - Occupational Health and Safety, Management System, ISO 9001: 2015 - Quality Management System Internal Auditor, ISO 14001: 2015 - Environment Management System Internal, Auditor, ISO 50001: 2018- Energy Management System Internal Auditor. With re-carbon, Öykü is a Validator/Verifier Trainee.

Mr. Rohit BADAYA holds Masters degree (M. Tech) in Nanotechnology and a Bachelors degree (B.Tech) in Pulp and Paper Engineering from the Indian Institute of Technology Roorkee (IITRoorkee). He is also an Energy Auditor, certified by the Bureau of Energy Efficiency, Ministry of Power, Govt. of India. Rohit has more than 13 years of work experience in the area of Climate Change (CDM, GS, VCS) and has worked for various DOEs/VVBs in the past, including “TÜV Nord”, “PJRCE Inc.” and “KBS Certification Services Private Limited”, where he worked as a Team Leader, Validator/Verifier, Technical Expert, ITR, Manager (Technical & Certification) and Quality Manager. Within the context of CDM/GS/VCS, Rohit is a Technical Expert for Technical Areas TA 1.1 (Thermal energy generation from fossil fuels and biomass including thermal electricity from solar), TA 1.2 (Energy generation from renewable energy sources), TA 2.1 (Energy Distribution), TA 3.1 (Energy Demand), TA 13.1 (Waste Handling and Disposal), TA 13.2 (Manure). Rohit has a track record of more than 200 projects as Team Leader, Validator, Verifier, Technical Expert and Technical Reviewer. He is well versed with various local regulations related to CDM/GS/VCS projects, located in countries in Africa, Asia as well as in Turkey. With re-carbon, Rohit is a free-lance Team Leader and ITR.

Annex 2-1: Appointment Certificates

Re Carbon Gözetim Denetim ve Belgelendirme Ltd. Şti. Prof. Dr. Aziz Sancar Cad. 27/6 TR / 06990 Çankaya-Ankara Tel.: 0090-312-287 5122 Fax: 0090-312-287 3373	Certificate of Appointment	
	Carbon Division	

This Certificate of Appointment is given to **Mrs. Fikriye Seda ATABEK** as a confirmation of compliance with internal qualification requirements as follows:

Clean Development Mechanism				
Validator	Verifier	Team leader	Technical reviewer	Technical Expert
08-02-2021	08-02-2021	N/A	N/A	08-02-2021

Verified Carbon Standard, Gold Standard, World Commission on Dams, Social Carbon				
Validator	Verifier	Team leader	Technical reviewer	Technical Expert
08-02-2021	08-02-2021	08-02-2021	08-02-2021	08-02-2021

Speciality	Regional (Country) expertise	Financial expertise	Technical area
N/A	Turkey	N/A	1.2, 2.1 and 3.1

Within the scope and in strict accordance to the appointment indicated above, the bearer can:


1. Participate in the assessments conducted by Re Carbon Ltd.
2. Take the roles within and outside of the assessment team
3. Bring specific expertise to the assessments

This Certificate of Appointment is valid unless there are changes in the related requirements for the qualification and appointment and/or the personnel's work agreement is terminated and there is no defined validity period for this Certificate.

However, The Certificate may be updated, suspended or canceled at any time, as a result of the performance assessments and/or other reasons as defined above.

APPOINTMENT IS GRANTED BY			
Mr. Anil SÖYLER	Certification Manager	08-02-2021	
Name	Position	Date	



Re Carbon Gözetim Denetim ve Belgelendirme Ltd. Şti. Prof. Dr. Aziz Sancar Cad. 27/6 TR / 06690 Çankaya-Ankara Tel.: 0090-312-287 5122 Fax: 0090-312-287 3373	Certificate of Appointment	
	Carbon Division	Page: 1/1

This Certificate of Appointment is given to **Mr. Rohit BADAYA** as a confirmation of compliance with internal qualification requirements as follows:

Clean Development Mechanism				
Validator	Verifier	Team leader	Technical reviewer	Technical Expert
25-10-2021	25-10-2021	25-10-2021	25-10-2021	25-10-2021

Verified Carbon Standard, Gold Standard, World Commission on Dams, Social Carbon				
Validator	Verifier	Team leader	Technical reviewer	Technical Expert
25-10-2021	25-10-2021	25-10-2021	25-10-2021	25-10-2021

Speciality	Regional (Country) expertise	Financial expertise	Technical area
N/A	India and Turkey	N/A	1.1, 1.2, 2.1, 3.1, 13.1 & 13.2

Within the scope and in strict accordance to the appointment indicated above, the bearer can:

1. Participate in the assessments conducted by Re Carbon Ltd.
2. Take the roles within and outside of the assessment team
3. Bring specific expertise to the assessments

This Certificate of Appointment is valid unless there are changes in the related requirements for the qualification and appointment and/or the personnel's work agreement is terminated and there is no defined validity period for this Certificate.

However, The Certificate may be updated, suspended or cancelled at any time, as a result of the performance assessments and/or other reasons as defined above.

APPOINTMENT IS GRANTED BY			
Mr. Anil SÖYLER	Certification Manager	25-10-2021	
Name	Position	Date	Signature