



**Verified Carbon
Standard**

TOROS HYDROELECTRIC POWER PLANT



Report ID	1116
Project title	TOROS HYDROELECTRIC POWER PLANT
Project ID	1499
Crediting period	17-May-2023 to 16-May-2033
Original date of issue	09-July-2024
Most recent date of issue	14-October-2024
Version	03
VCS Standard Version	4.7
Client	Aydem Yenilenebilir Enerji A.Ş

Prepared by	Re Carbon Gözetim Denetim ve Belgelendirme Ltd. Şti.	
Approved by	Mr. Rohit BADAYA	Mrs. Havva OZTURK
		
Work carried out by	Selen Cilasun - Validation Team Leader	Helin Tüzer (Trainee validator) - Validation Team Members

Summary:

Provide a brief summary of the following:

The project includes the installation of a hydroelectric power plant (HEPP) with an installed capacity of 49.99 MW and annual net electricity generation is estimated to be 208,570 MWh and is located Çakıt Stream, within the jurisdiction of Belededik Village, Pozantı District of Adana Province in Turkey. The purpose of the project activity is to generate electricity and supply it into the national 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 and it includes two turbines, each having a capacity of 24.995 MWe (26.025 MWm) MWe, amounting a total installed power of 52.05Mwm/ 49.99 MWe. The electricity is transmitted to the nearest substation Karaisalı TM on 154 KV bara via approximately 15 km transmission line.

The scope of the validation is the independent and objective review of the monitored GHG reductions. The validation activity is based on the validated and registered PD version 2.02 dated 20/04/2015.

The project activity and the monitoring report are assessed against the requirements of the approved consolidated baseline and monitoring Methodology “ACM0002 Large-scale Consolidated Methodology Grid-connected electricity generation from renewable sources Version 21.0. and VCS standard version 4.7.

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

During this validation 42 Corrective Action Requests (CARs) and 06 CLs were raised all of which were resolved by either revising the Monitoring Report or by sending objective evidence to the validation team. There hasn't been any FARs issued during the validation process.

Re Carbon Ltd. hereby confirms that the level of assurance of this validation 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 crediting period between 17/05/2023 – 16/05/2033:

Year	Estimated GHG emission reductions or removals (tCO _{2e})
17/05/2023 - 31/12/2023	60,402
2024	96,275
2025	96,275
2026	96,275
2027	96,275
2028	96,275
2029	96,275
2030	96,275
2031	96,275
2032	96,275
01/01/2033 - 16/05/2033	35,872
Total estimated ERs	962,749
Total number of crediting years	10
Average annual ERs	96,275

CONTENTS

1	INTRODUCTION	5
1.1	Objective	5
1.2	Scope and Criteria	5
1.3	Reasonableness of Assumptions	6
1.4	Summary Description of the Project	6
2	VALIDATION PROCESS	7
2.1	Method and Criteria	7
2.2	Document Review	7
2.3	Interviews	10
2.4	Site Visits	11
2.5	Resolution of Findings	13
3	VALIDATION FINDINGS	16
3.1	Project Details	16
3.2	Safeguards and Stakeholder Engagement	20
3.3	Application of Methodology	27
3.4	Non-Permanence Risk Analysis	52
4	VALIDATION OPINION	53
4.1	Validation Summary	53
4.2	Validation Conclusion	53
	APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION	59

1 INTRODUCTION

1.1 Objective

Re Carbon Ltd. was appointed by “Aydem Yenilenebilir Enerji A.Ş.” to perform the validation of the “TOROS HYDROELECTRIC POWER PLANT” in “Turkey” through a service agreement, dated 26/05/2023. The objective of this validation activity is to have an independent third party for the assessment of the project design, and to ensure a thorough assessment of the proposed project activity against the applicable VCS and CDM requirements. In particular;

- the project's baseline was assessed against “ACM0002 Large-scale Consolidated Methodology Grid-connected electricity generation from renewable sources Version 21.0”
- the project's monitoring plan was assessed against “ACM0002 Large-scale Consolidated Methodology Grid-connected electricity generation from renewable sources Version 21.0”
- the project's additionality justification was assessed against “Tool for the Demonstration and Assessment of Additionality Version 7.0.0”
 - Tool 01: Tool for the demonstration and assessment of additionality, Version 07.0.0
 - Tool 07: Tool to calculate the emission factor for an electricity system, Version 07.0
 - Tool 10: Tool to determine the remaining lifetime of equipment, Version 01.0
 - Tool 11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period, Version 3.0.1.
- the project's compliance with the requirements of Article 12 of the Kyoto Protocol, the CDM Modalities and Procedures, as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other relevant rules, including the Host Country's legislation and sustainability criteria
 - CDM Validation and Verification Standard for project activities version 3.0
 - CDM Project Standard for Project Activities version 3.0
 - VCS Standard Version 4.7

CP Renewal Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of verified carbon units (VCUs).

Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

1.2 Scope and Criteria

The scope of the validation is the independent and objective review of the VCS Project Description (PD). The PD is reviewed against the relevant criteria (see section 1.1) and decisions by the VCS Organization, including the approved baseline and monitoring methodology. The validation was based on the guidance given in the CDM Validation and Verification Standard for project activities version 3.0, CDM Project Standard for project activities version 3, and VCS Standard version 4.7.

The validation team has employed a risk-based approach to assess the completeness and accuracy of the claims and conservativeness of the assumptions in the PD. The focus of the validation team is to identify significant risks for the project implementation and the generation of VCU. The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

The only purpose of the validation is its usage during the registration process as part of the VCS project cycle. Therefore, Re Carbon Ltd. cannot be held liable by any party for decisions made or not made based on the validation opinion that go beyond that purpose.

1.3 Reasonableness of Assumptions

Re Carbon Ltd. hereby confirms that the level of assurance of this validation 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.

1.4 Summary Description of the Project

Toros Hydro Electricity Power Plant is operated by Aydem Yenilenebilir Enerji A.Ş. The project activity capacity is 49.99 MWe and annual net electricity generation is estimated to be 962,749 MWh and is located in Çakıt Stream, within the jurisdiction of Belededik Village, Pozantı District of Adana province in Turkey line with the electricity generation license and provisional acceptance protocols and the project also supports the sustainable economic development in the region. The technical description of the project activity is as follows:

Table 1: Turbine and generator specifications

Turbine		
Type: 3 Phased synchronized	Number of units: 2	Unit Flow Rate: 16 m ³ /s
	Rated Net Fall: 354,68 m	
Total Energy: 239.40 GWh/year	Primer Energy: 53.31 GWh/year	Secondary Energy: 186.09 GWh/year
Project flow rate: 16 m ³ /s		
The Weir		

Type: Free Flow Spillway and Concrete Body		
Elevation of the river bed: 696.00 m	Elevation of the foundation: 486.00 m	Height of the regulator from the River Bed: 4.00 m

The start date of the project activity is 17/05/2013 which is the date when the project is the Commissioning Date for Unit 1 and unit 2, and which is validated through the provisional acceptance protocol. The first crediting period is from 17/05/2013 to – 16/05/2023, the second crediting period is from 17/05/2023 to 16/05/2033 with two times renewable crediting period of 10 years. The first monitoring period is from 17/05/2013 –30/09/2020. The second monitoring period is from 01/10/2020 to 31/12/2021. The third monitoring period is from 01/01/2022 to 16/05/2023.

2 VALIDATION PROCESS

2.1 Method and Criteria

The Validation TL conducts a review of the responsible party's GHG information in developing a validation plan to conform to the requirements of ISO 14064-3:2019 and considering the requirements specified by the VCS Standard as described below.

Assignment of competent personnel to carry out the activities, is performed by the Sales Manager using the Contract Review Form in pre-engagement stage.

Determination of the validation activities is performed using the Re Carbon planning forms such as Strategic Analysis Form, Assessment Planning Form-VCS and Evidence Gathering Planning Form as appropriate, based on the GHG project's characteristics and the client needs,

Assessment of the risk of material error concerning the information is evaluated by the team leader using the Re Carbon Validation Risk Assessment Form,

To confirm the times and logistics required to carry out the validation activities, “Assessment Planning Form” is prepared by the Team Leader is submitted to the Client for approval.

The Client assesses the prepared “Assessment Planning Form” and approves the form or request changes in case team members have not been allocated sufficient time for some of the tasks. If more time is required during the site visit for any particular task due to the project specific and unforeseeable reasons, the revised “Assessment Planning Form” is submitted by the Team Leader to the Client by providing detailed justification. In this case, Client shall consider the provided justification and approve the form or reject the request within 2 working days as soon as possible depending on the urgency of the situation (e.g. being validation team on the site in a remote location is a situation requiring urgent action in a short time), but not later than 2 working days.

The “Assessment Planning Form” is sent to the Client(s) by a team member for comments and further arrangements following its approval process.

Validation schedule and duration of the validation activities

Activity	Timeline		Total Days
	From	To	
Desk Review	01/08/2023	16/07/2024	351
Review of the PD version 01	04/08/2023	15/10/2023	73
Site Visit	04/08/2023	04/08/2023	1
Issuance of the Validation Protocol version 01	26/08/2023	15/10/2023	51
Review of PPs Initial Set of Responses	17/01/2024	24/05/2024	129
Issuance of the Validation Protocol version 02	24/05/2024	24/05/2024	1
Review of PPs Second Loop Responses	24/05/2024	24/06/2024	32
Closing of all the CARs and CLs	08/07/2024	11/07/2024	4
Issuance of the Validation Report version 01	11/07/2024	16/07/2024	6
ITR Process	16/07/2024	11/10/2024	88
Issuance of the Validation Report version 02	11/10/2024	14/10/2024	4
Submission for Final Approval	14/10/2024	14/10/2024	1
Submission to the PP	14/10/2024	14/10/2024	1

2.2 Document Review

The basis for the validation activity is the PD version 01, dated 26/06/2023, which was submitted to the validation team on 01/08/2023. This PD was revised several times due to the raised CARs and CLs, with version 04 dated 08/10/2024 being the final version. The PD was assessed against:

- ACM0002 “Grid-connected electricity generation from renewable sources.” Version 21.0
- Tool 01/ Tool for the demonstration and assessment of additionality” version 07.0.0”,
- Tool 07/ Tool to calculate the emission factor for an electricity system version 07.0,
- Tool 10/ Tool to determine the remaining lifetime of equipment version 01.0,
- Tool 11/ Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period version 03.0.1
- the Host Country criteria
- CDM Validation and Verification Standard for project activities version 3.0
- CDM Project Standard for Project Activities version 3.0

- VCS Standard Version 4.7
- other relevant documents, rules and regulations listed in section 1.1 of this report

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

Table 2-2: List of documents reviewed

Document Number	Document Name	Version	Date (dd/mm/yyyy)
D01	Toros HEPP PD	V01	26/06/2023
D02	Toros HEPP PD	V02	17/01/2024
D03	Toros HEPP PD	V03	24/05/2024
D04	ACM0002	V21.0	30/05/2024
D05	Emission Reduction Excel Sheet	V01	17/01/2023
D06	Emission Reduction Excel Sheet	V02	19/07/2023
D07	Emission Reduction Excel Sheet	V03	24/05/2024
D08	Generation License	-	18/01/2007
D09	Declaration from Project Owner	-	27/10/2023
D10	EIA Not Required Decisions	-	23/06/2008
D11	Power Purchase agreement	-	13/03/2020
D12	System usage agreement	-	11/01/2013 16/03/2020
D13	Water usage Permission	-	08/01/2007 07/03/2013 12/01/2021
D14	Logbook	-	15/09/2021 01/10/2021
D15	KMZ Document	-	-
D16	First Index Protocol	-	20/06/2021
D17	Calibration Certificate	-	27/08/2020
D18	Meter Control Test	-	04/06/2021
D19	Provisional Acceptance Protocols	-	05/2013

Document Number	Document Name	Version	Date (dd/mm/yyyy)
D20	Single Line Diagram	-	17/02/2022 14/03/2022
D21	Social Security Records	-	2018 - 2021
D22	Waste Water Records	-	2021
D23	VCS Standard	4.7	16/04/2024
D24	VCS Program Guide	4.4	29/08/2023
D25	Registered PD	2.02	20/05/2015
D26	EPIAS records	-	2018 - 2021
D27	Technical specifications	-	25/04/2022
D28	Official Gazette	-	27/12/2019
D29	Connection Agreement	-	13/03/2020
D30	Declaration Letter	-	27/10/2023
D31	Toros HEPP PD	V04	10/09/2024
D32	Emission Reduction Excel Sheet	V04	10/09/2024
D33	Toros HEPP PD	V04	03/10/2024

2.3 Interviews

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

The list of individuals who were interviewed during the physical validation site visit, executed on 04/08/2023 is given in Table 2-3 below:

Table 2-3: List of individuals interviewed

Reference Number	Means of Interview ¹	Full Name	Title	Organization
I01	SV	Özgün Gül KOPARAN	Environmental Manager	Aydem Energy
I02	SV	Bera AYDIN	Assistant of Environmental Manager	Aydem Energy
I03	SV	Sultan TUNÇBİLEK	Environmental Expert	Aydem Energy
I04	SV	Osman KARAKOÇ	Administrative Staff	Aydem Energy
I05	SV	Eyüp Ayhan IŞIK	Administrative Affairs Manager	Aydem Energy
I06	SV	Mesut PEHLİVAN	Business Chief	Aydem Energy
I07	SV	Ahmet GÖÇER	Male Resident	Gülüşlü Village
I08	SV	Metehan ODABAŞ	Male Resident	Gülüşlü Village
I09	SV	Kağan KANACA	Male Resident	Gülüşlü Village

2.4 Site Visits

As a part of the validation activities a physical site visit was executed to the project activity's location, details of which can be seen in Table 2-4 below:

Table 2-4: Site visit details

Date	04/08/2023
Location	Adana

¹ SV: Site visit; T: Telephone; E: E-mail; RA: Remote Assessment

Participant	Company Name	Role in the Organization / Role in the Site Visit
Özgün Gül KOPARAN	Aydem Energy	Environmental Manager
Bera AYDIN	Aydem Energy	Assistant of Environmental Manager
Sultan TUNÇBİLEK	Aydem Energy	Environmental Expert
Osman KARAKOÇ	Aydem Energy	Administrative Staff
Eyüp Ayhan IŞIK	Aydem Energy	Administrative Affairs Manager
Mesut PEHLİVAN	Aydem Energy	Business Chief
Ahmet GÖÇER	Gülüşlü Village	Male Resident
Metehan ODABAŞ	Gülüşlü Village	Male Resident
Kağan KANACA	Gülüşlü Village	Male Resident
Mert ŞANLI	GTE Carbon	Project Manager
Selen CİLASUN	Re-Carbon	Validator
Points Verified	Source of Information	
Implementation and operation of the proposed VCS project activity as per the registered PD	Document review, on-site visit	
Review of information flows for generating, aggregating, and reporting the monitoring parameters	Document review, on-site visit and interviews with the local stakeholders	
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 local stakeholders	
Cross-check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources	Document review and on-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, on-site visit and interviews with the local stakeholders	

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 local stakeholders

2.5 Resolution of Findings

The CP Renewal validation of the proposed VCS project activity includes the following phases:

- Assessment whether the project design of the proposed VCS project activity meets the relevant VCS requirements, via a desk review of the PD between 26/07/2023 and 09/10/2024.
- Assessment whether the applied methodology “ACM0002 “Grid-connected electricity generation from renewable sources.” Version 21.0.”, had been applied correctly, including the baseline selection and monitoring plan.
- Assessment of the additionality argument of the project activity against the rules and guidance given in “TOOL01, Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.”.
- A physical site visit was executed on 04/08/2023 in order to assess the implementation process of the project activity and to confirm stakeholders’ comments.
- Assessment of data and calculation of greenhouse gas emission reductions.
- Issuance of the validation report
- Independent technical review (ITR)
- Approval of the validation report and request of registration

The Validation Protocol is used for the assessment of each requirement during the execution of validation activities and is given in Appendix-1 of this validation report.

The Validation Protocol consists of one table:

- Table 1 (Resolution of Corrective Action, Forward Action and Clarification Requests)

The usage description of Table-1 in the Validation Protocol is explained in Table 2-5 below:

Table 2-5: Explanation about Table-1 in the Validation Protocol

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

The Validation Protocol is written by the validation team in line with the descriptions above. All CARs, CLs and FARs are listed in a transparent and clear manner.

During the validation period, a Validation Protocol (attached in Appendix-1 to this validation report) was used to submit the findings to the project participants.

In line with Re Carbon Ltd. internal terminology and VCS Standard version 4.7, 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 Validation team raises a **CAR** if one of the following occurs:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions
- The CDM and/or VCS requirements have not been met
- There is a risk that emission reductions cannot be monitored or calculated.

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

The Validation team raises a **FAR** during the validation to highlight issues related to project implementation that require a review during the crediting period renewal of the project activity.

According to these principles, a total of 42 CARs, 06 CLs and 00 FARs were raised; all of which are listed in the Validation Protocol.

The appointment process of the validation team considers the technical area(s), sectoral scope(s), and relevant host country experience required amongst team members for the accurate and thorough assessment of the project design. The relevant VCS validation and previous ITR experiences are also assessed during the selection of the team members and the Independent Technical Reviewer (ITR), respectively. The validation team and ITR were assigned to this validation activity on 18/05/2023, taking all the above factors into consideration and as a result of the contract review process. Team composition has been changed as Selen Cilasun has been

changed as Team Leader on 06/01/2024 and Helin Tüzer has been added to the team as Trainee Validator on 01/07/2024.

The validation team members and ITR are given in Table 2-7 below:

Table 2-7: Validation team and ITR details

Name	Role	Host Country Experience	Scope Coverage	Technical Expertise	Financial Expertise	Involv.
Selen Cilasun	Team Leader	☒	☒	☒	☐	A, DR, R, SV
Helin Tüzer	Trainee Validator	☒	☐	☐	☐	A, DR, R,
Sandeep Kanda	Previous Team leader	☒	☒	☒	☒	A, DR, R, RA
Rohit Badaya	ITR	☒	☒	☒	☒	ITR

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

A : Administrative

DR : Desk Review

SV : Site Visit

RA : Remote Assessment²

R : Reporting

ITR : *Independent Technical Review*

2.5.1 Forward Action Requests

The CP Renewal Validation team raises a FAR during the validation in order to highlight issues related to project implementation that require review during the crediting period renewal of the project activity as explained in the Section 2.5.

According to these principles a total of 00 FARs were raised; all of which are listed in the Validation Protocol. Details of these FARs are explained below.

3 VALIDATION FINDINGS

3.1 Project Details

“Toros Hydro Electricity Power Plant” is operated by “Aydem Yenilenebilir Enerji A.S.”. The project activity is located in Çakıt stream on the Belededik Village, Pozantı District of Adana Province, Turkey. The project uses the water of Çakıt Stream to generate electricity and supply it into the National Grid of Turkey. The hydropower plant is connected to the Karaisalı TM (154 kV) transformer station via a 15-km transmission line.

The project activity consists of two unit with the installed capacity of 24.995 MWm /26.025 MWe each. Therefore, the total installed capacity of 49.99 Mwe.

The first crediting period of the project activity is in between 17/05/2013-16/05/2023. Therefore, the second crediting period starts from 17/05/2023 and it ends on 16/05/2033.

The annual estimated annual electricity generation value is 208,570 MWh as per the generation license. Therefore, the estimated total electricity generation for the second crediting period is 297,957 MWh.

The estimated annual emission reduction value is calculated as 96,275 tCO₂e with taking the emission factor as 0.4616 tCO₂e/MWh. Therefore, the estimated total emission reduction value for the second crediting period is 962,749 tCO₂e.

The project scale is a “medium” in line with VCS rules and requirements due to the estimated annual average emission reductions (which is less than 300,000 tCO₂e/year) and since the project is a greenfield project activity, pre-project conditions are same with the baseline scenario as discussed in the Section 3.3.4 of the validation report. The installed capacity and the expected annual generation amount of the project have been checked through the generation license document dated as 18/01/2007.

Item	Evidence gathering activities, evidence checked, and assessment conclusion
------	--

Audit history	Audit history provided in the PD/ Section 1.2 is checked via document review of the previous validation report.		
Sectoral scope	1		
AFOLU project category, if applicable	N/A		
Project activity type	Energy Industries (renewable/non-renewable sources)		
General eligibility of the project to participate in the VCS Program	Toros HEPP project is grid-connected renewable power generation project that applies a methodology (ACM0002) eligible under VCS program.		
AFOLU project eligibility, if applicable	N/A		
Transfer project eligibility, if applicable	N/A		
Project design	Single		
Project ownership	Aydem Yenilenebilir Enerji A.S.		
Project start date	17/05/2013		
Project crediting period	17-May-2023 to 16-May-2033		
Project scale	Project		
Likelihood of achieving estimated GHG emission reduction or removals	96,275 tCO ₂ e/yr		
Technologies and measures implemented by the project activity or activities	Hydro power plant		
Implementation schedule of the project activity or activities	The Electricity Production License is granted		18/01/2007
	Project Registration Date		09/11/2015

	EIA Exemptions certification issued	23/06/2010
	Amendment to the Water Usage Agreement Signed	30/09/2010
	Grid Connection	07/12/2010
	Commissioning Date for Unit 2	17/05/2013
	Commissioning Date for Unit 1	17/05/2013
	Project Start Date	17/05/2013
	The first crediting period	17/05/2013 – 16/05/2023 (10 years)
	The second crediting period	17/05/2023 – 16/05/2033 (10 years)
Project location	Çakıt Stream, within the jurisdiction of Belededik Village, Pozantı District of Adana Province, Turkey.	
Conditions prior to project initiation	The project is a renewable energy project, prior the project initiation, there was no other hydroelectric power plant installation at the project site.	
Project compliance with applicable laws, statutes and other regulatory frameworks	There is no commercially sensitive information about the project activity. Hence, this section is not applicable.	
Double counting and participation under other GHG programs	No Double Issuance	

No double claiming with emissions trading programs or binding emission limits	No Double Issuance
No double claiming with other forms of environmental credit	No Double Issuance
Supply chain (Scope 3) emissions double claiming	N/A
Sustainable development contributions	- Climate Action (SDG 13): Renewable energy power plants contribute to “Emission Reductions or Removals and/or Adaptation to Climate Change” by reducing CO₂ emissions caused by fossil fuel-fired power plants that are displaced due to the project activity. - Decent Work and Economic Growth (SDG 8): The project generates employment and income. The project has created permanent job opportunities. - Affordable and Clean Energy (SDG 7): Increasing the number and percentage of renewable energy power plants provides substantial increase in the share of renewable energy in the global energy mix and ensure universal access to affordable, reliable, and modern energy services.
Additional information relevant to the project	N/A

3.2 Safeguards and Stakeholder Engagement

3.2.1 Stakeholder Engagement and Consultation

3.2.1.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	Stakeholders are identified through consultation meetings, and the project manager remains accessible to locals at all times. It's important to note that the project was previously granted an exemption from the EIA process by the Adana Provincial Directorate of Environment and Forestry due to the regulations in place at the time of the license application. Consequently, no stakeholder consultation meetings were held during that period. Thus far, no issues have arisen regarding the project or communication methods. If there are any inputs or grievances, locals can express them directly or through the mukhtar. Furthermore, individuals from the company have also participated in these consultation meetings alongside locals and mukhtars.
Legal or customary tenure/access rights	No expropriation was necessary throughout the implementation period, and there are no lands occupied by indigenous peoples (IPs). The project site isn't privately owned; instead, it's classified as government land within a forestry area. The government has leased the property to the project owner until the expiration of the generation license.
Stakeholder diversity and changes over time	There was no sign of stakeholder diversity evolving over time.
Expected changes in well-being	As per the registered PD Version 2.02, the project is anticipated to have no adverse effects on the well-being of stakeholders. No complaints have been received during stakeholder consultation.
Location of stakeholders	Toros HPP is located a few kilometers of the Pozantı town in Adana Province, specifically within the boundaries of the Pozantı town.

Location of resources	The project is located in Pozantı Town of Adana province, along the Çakıt Stream.
-----------------------	---

3.2.1.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder engagement process	Since the EIA process was not followed in the past (EIA not required decision - 23/06/2008), no stakeholder consultation was held. However, in order to comply with the rules and regulations of the host country, the project owner arranged subsequent meetings with the Mukhtar and facilitated communication by considering the stakeholders' comments.
Consultation outcome	The results of the consultation meeting were as follows: - Stakeholders inquired about potential job opportunities stemming from the project, to which the company's HR department assured that such opportunities would indeed be available. - The board, which includes elderly individuals, expressed appreciation for the sale of their land. Land acquisition agreements were conducted in accordance with agreed-upon protocols. Evidence documents have been provided to VVB.
Ongoing communication	A grievance box is available at a market in Gülüşlü, allowing anyone to submit feedback regarding project activities. The box is routinely monitored, and any demands or complaints are promptly addressed by the project owner. Grievance book has been seen by VVB during the on-site visit.
Stakeholder input	There has been no input received from the stakeholders during the on-site visit.

3.2.1.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
------	--

Obtaining consent	As part of the Environmental Impact Assessment (EIA) process, in compliance with Article 9 of the EIA Regulation, community meetings were arranged to secure the consent of stakeholders. (please write here which evidence was provided by the client e.g.: meeting notes, attendance lists with signatures) During these meetings, stakeholders were provided with comprehensive information regarding various aspects of the project, including details about the construction site, construction timeline, project costs, technical specifications of equipment to be utilized, potential environmental impacts, and proposed mitigation measures. Following these discussions, all stakeholders expressed satisfaction with the prospect of environmentally friendly energy production being implemented. During the on-site visit VVB has interviewed local stakeholders and they have been stated that they are satisfied with the power plant.
Outcome of FPIC discussion	EIA not required decisions have been made for Toros HEPP on 23/06/2008 and 23/06/2008. They have been provided to VVB

3.2.1.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Development process	The project owner's contact details have been provided to the Mukhtar's Office. The project manager is available to locals at all times, and there have been no issues regarding communication or the project thus far. If there are any suggestions or grievances, locals can express them directly or through the mukhtar. The Project Provider (PP) will address all grievances throughout the entire funding period.
Grievance redress procedure	Local stakeholders can provide feedback, whether positive or negative, regarding the operation of the project activity. The Project Provider (PP) commits to resolving all grievances throughout the entire crediting period

3.2.1.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No comment received.	N/A	N/A

3.2.2 Risks to Local Stakeholders and the Environment

3.2.2.1 Management Experience

The records for training have been provided to VVB (dated 2023) VVB checked and confirmed that.

3.2.2.2 Risk Assessment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Natural and human-induced risks to stakeholders' wellbeing	no risk has been identified
Risks to stakeholder participation	no risk has been identified
Working conditions	Occupational accidents stemming from the operation of vehicles, machinery, and equipment.
Safety of women and girls	no risk has been identified
Safety of minority and marginalized groups, including children	no risk has been identified
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous	Risks identified with generation of wastewater and solid wastes

materials, and chemical pesticides and fertilizers)

3.2.3 Respect for Human Rights and Equity

3.2.3.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination	no risk has been identified
Sexual harassment	no risk has been identified
Equal pay for equal work	no risk has been identified
Gender equity in labor and work	no risk has been identified
Forced labor	no risk has been identified
Child labor	no risk has been identified
Human trafficking	no risk has been identified

3.2.3.2 Human Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk has been identified	N/A

3.2.3.3 Indigenous Peoples and Cultural Heritage

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk has been identified	N/A

3.2.3.4 Property Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk has been identified	N/A

3.2.3.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Process used to design the benefit sharing plan	N/A
Summary of the benefit sharing plan	N/A
Approval and dissemination of benefit sharing plan	N/A

3.2.4 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	No risk has been identified
Soil degradation and soil erosion	No risk has been identified
Water consumption and stress	No risk has been identified

3.2.4.1 Rare, Threatened, and Endangered species

Risk identified	Evidence gathering activities, evidence checked, and assessment conclusion
Species and habitat	No risk has been identified
Areas needed for habitat connectivity	No risk has been identified

3.2.4.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
N/A	

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
N/A	

Evidence gathering activities, evidence checked, and assessment conclusion	
Invasive species	N/A

3.2.4.3 Ecosystem conversion

Risks Identified	Evidence gathering activities and evidence checked
Ecosystem conversion	N/A

3.3 Application of Methodology

3.3.1 Title and Reference

The title and reference of the applied methodology and any tools by the project proponent for this project are:

Methodology/ Tool	ID	Title	Version
Methodology	ACM0002	Grid-connected electricity generation from renewable sources	21.0
CDM Tool	01	Tool for the demonstration and assessment of additionality	07.0.0
CDM Tool	07	Tool to calculate the emission factor for an electricity system	07.0
CDM Tool	10	Tool to determine the remaining lifetime of equipment	01.0
CDM Tool	11	Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period	03.0.1

It is confirmed by the Validation Team that the methodology and tools, and the specific versions of them applied by the project and referred in the *Final_PD_1116 Toros Hydro_v04_03-10-2024* are valid at the time of CP Renewal validation.

3.3.2 Applicability

The steps taken to assess conformance of the project with each of the applied methodology's applicability condition, and Validation Team's conclusion with respect to each applicability condition is provided in the table below:

Methodology ID	Applicability condition	Assessment and conclusion
ACM0002	This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plants/units; (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s)/unit(s).	<i>VVB checked during physical site visit and checked project documents (e.g. generation license) therefore confirmed information below:</i> <i>"TOROS HEPP is a hydro power project type, greenfield, grid connected renewable electricity generation project. So, the project meets (a) Install a Greenfield power plant."</i>
ACM0002	In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Integrate BESS with a Greenfield power plant;	<i>VVB checked during physical site visit and confirmed information below:</i> <i>This project does not include an integration of a BESS. Hence, this condition is N/A.</i> <i>a) This project does not include an</i>

	(b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic¹ or wind power plant(s)/unit(s); (c) Integrate a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s); (d) Integrate a BESS together with implementing a retrofit of (an) existing solar photovoltaic or wind power plant(s)/unit(s).	<i>integration of a BESS. Hence, this condition is N/A.</i> <i>b)This project does not include integration a BESS together with implementing a capacity addition to (an) existing solar photovoltaic¹ or wind power plant(s)/unit(s). Hence, this condition is N/A.</i> <i>c)This project does not include integration of a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s). Hence, this condition is N/A.</i> <i>d)This project does not include integration of a BESS together with implementing a retrofit of (an) existing solar photovoltaic or wind power plant(s)/unit(s). Hence, this condition is N/A.</i>
--	--	--

		e) This project does not include integration of a BESS together with a Greenfield power plant that is operating in coordination with a PSP. Hence, this condition is N/A.
ACM0002	The methodology is applicable under the following conditions: (a) Hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit; (b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion,	VVB checked during physical site visit and checked project documents therefore confirmed information below: (a) Toros HEPP is a hydro power plant unit with reservoir. (b) There were no capacity additions. (c) This project does not include an integration of a BESS. Hence, this condition is N/A. (d) This project does not include an integration of a BESS. Hence, this condition is N/A.

retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;

(c) In case of Greenfield project activities applicable under paragraph 5 (a) above, the project participants shall demonstrate that the BESS was an integral part of the design of the renewable energy project activity (e.g. by referring to feasibility studies or investment decision documents);

(d) The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only during exigencies may the BESS be charged with electricity from the grid or a fossil fuel electricity generator. In such cases, the corresponding GHG emissions shall be accounted for as project emissions following the requirements under section 5.4.4 below. The charging using the grid or using fossil fuel electricity generator

	should not amount to more than 2 per cent of the electricity generated by the project renewable energy plant during a monitoring period. During the time periods (e.g. week(s), months(s)) when the BESS consumes more than 2 per cent of the electricity for charging, the project participant shall not be entitled to issuance of the certified emission reductions for the concerned periods of the monitoring period.	
ACM0002	In case of hydro power plants, one of the following conditions shall apply: (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (7), is greater than 4 W/m²; or (c) The project activity results in new single or multiple	<i>VVB checked and confirmed during physical site visit and checked project documents (e.g. generation license) therefore confirmed information below:</i> The project is a hydro power plant. (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs.

reservoirs and the power density, calculated using equation (7), is greater than 4 W/m²; or

(d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m², all of the following conditions shall apply:

(i) The power density calculated using the total installed capacity of the integrated project, as per equation (8), is greater than 4 W/m²;

(ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity;

(iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m² shall be:

a. Lower than or equal to 15 MW; and

b. Less than 10 per cent of the total installed capacity of

	integrated hydro power project.	
ACM0002	In the case of integrated hydro power projects, project participants shall: (a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or (b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account	<i>VVB checked and confirmed during physical site visit and checked project documents (e.g. generation license) therefore confirmed information below:</i> The project is not an integrated hydro power project. Hence, this condition is N/A..

	seasonal flows from river, tributaries (if any), and rainfall for minimum of five years prior to the implementation of the CDM project activity.	
ACM0002	The methodology is not applicable to: (a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; (b) Biomass fired power plants/units.	<i>VVB checked during physical site visit and checked project documents (e.g. generation license) therefore confirmed information below:</i> a) The project does not involve switching from fossil fuel use to renewable energy at the site of the project activity. b) The project is not a biomass fired power plant.
ACM0002	In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking	Based on the technical expertise VVB checked and confirmed: <i>The project does not involve retrofits, rehabilitations, replacements, or capacity additions. Hence, this condition is N/A.</i>

	business as usual maintenance”.	
ACM0002	In addition, the applicability conditions included in the tools referred to below apply.	VVB checked and confirmed.

The steps taken to assess that the appropriate tool or module has been selected and Validation Team’s conclusion with respect to each selected tool or module is provided in the table below:

Methodology ID	Applicability condition	Assessment and conclusion
TOOL01	Tool for the demonstration and assessment of additionality	Tool for the demonstration and assessment of additionality is applied in this project since there is no new methodologies proposed. VVB checked and confirmed.
	Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.	The additionality tool is applied using this methodology. VVB checked and confirmed.

Methodology ID	Applicability condition	Assessment and conclusion
TOOL07	This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid	VVB checked and confirmed information below: The project activity supplies electricity to a grid. Hence, this condition is met.

	(e.g., demand-side energy efficiency projects).	
	Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are available to the project participants, i.e., option IIa and option IIb. If option IIa is chosen, the conditions specified in “Appendix 1: Procedures related to off-grid power generation” should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	<i>VVB checked and confirmed information below:</i> CO₂ emission factor for the displacement of electricity generated by power plants in an electricity system is determined by calculating the “combined margin” emission factor (CM) of the electricity system.
	Under this tool, the emission factor for the project electricity system can be	<i>Based on the technical and local expertise VVB checked and confirmed:</i>

	calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are available to the project participants, i.e., option IIa and option IIb. If option IIa is chosen, the conditions specified in “Appendix 1: Procedures related to off-grid power generation” should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	The project electricity system is not located partially or totally in an Annex I country. Hence, this condition is N/A.
	Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are	<i>VVB checked and confirmed information below:</i> The project does not involve biofuels in any way.

	available to the project participants, i.e., option IIa and option IIb. If option IIa is chosen, the conditions specified in “Appendix 1: Procedures related to off-grid power generation” should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	
	Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are available to the project participants, i.e., option IIa and option IIb. If option IIa is chosen, the conditions specified in “Appendix 1: Procedures related to off-grid	<i>VVB checked and confirmed.</i>

	power generation” should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	
	Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are available to the project participants, i.e., option IIa and option IIb. If option IIa is chosen, the conditions specified in “Appendix 1: Procedures related to off-grid power generation” should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants	<i>VVB checked and confirmed.</i>

	in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	
	Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are available to the project participants, i.e., option IIa and option IIb. If option IIa is chosen, the conditions specified in “Appendix 1: Procedures related to off-grid power generation” should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid	<i>VVB checked and confirmed.</i>

	power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	
	In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.	<i>VVB checked and confirmed.</i>

M e t h o d o l o g y I D	Applicability condition	Assessment and conclusion
T O O L 1 0	Option (a): Use manufacturers information for the technical lifetime of equipment and compare to the date of first commissioning. In this option, the remaining lifetime is determined as a difference between the technical lifetime and the operational time. This option can only be applied if: (i) Manufacturer s information for the technical lifetime of the equipment is available;	<i>VVB checked and confirmed that “ The manufacturer does not provide an information for the technical lifetime of equipment. This option is N/A.”.</i>

(ii) The project participants can demonstrate that the equipment has been operated and maintained according to the recommendations of the equipment supplier to ensure that the technical lifetime specified by the manufacturer is not reduced; and (iii) There are no periodic replacement schedules or scheduled replacement practices specific to the industrial facility, that require early replacement of equipment before the expiry of the technical lifetime; (iv) The equipment has no design fault or defect and did not have any industrial accident due to which the equipment cannot operate at rated performance levels.	
Option (b): Obtain an expert evaluation. In this option, an independent expert having relevant experience in evaluating the remaining lifetime for the type of equipment can be requested to determine the remaining lifetime of the equipment. The information that could be evaluated includes an analysis of • The operational history of the equipment to identify the past performance, equipment retrofits, failures/accidents, capacity upgrades/degradations, replacements etc.;	An evaluation from an expert did not obtain. This option is N/A.

• The current operation and maintenance practices; • Documented specific sectoral/industry practices for replacements; Conducting tests on the equipment, such as magnetic particle examinations, ultrasonic testing, metallurgical analysis, etc.	
Option (c): Use default values. In this option, project participants may use the following default values for the technical lifetime and determine the remaining lifetime as the difference of the technical lifetime and the operational time. This option can only be applied if: (i) The project participants can demonstrate that the equipment has been operated and maintained according to the recommendations of the equipment supplier; (ii) There are no periodic replacement schedules or scheduled replacement practices specific to the industrial facility, that require early replacement of equipment before the expiry of the technical lifetime; and The equipment has no design fault or defect and did not have any industrial accident due to which the equipment	<i>VVB checked and confirmed information below:</i> The default values have been used. For hydro turbines, the technical lifetime is 150,000 hours³.

³ <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-10-v1.pdf>

cannot operate at rated performance levels.	
---	--

Methodology ID	Applicability condition	Assessment and conclusion
TOOL11	This tool provides a stepwise procedure to assess the continued validity of the baseline and to update the baseline at the renewal of a crediting period, as required by paragraph 49 (a) of the modalities and procedures of the clean development mechanism. The tool consists of two steps. The first step provides an approach to evaluate whether the current baseline is still valid for the next crediting period. The second step provides an approach to update the baseline in case that the current baseline is not valid anymore for the next crediting period.	<i>VVB checked and confirmed that " This is the renewal of the crediting period. Therefore this tool is applicable."</i>

3.3.3 Project Boundary

As clearly defined in the revised PD, the project boundary encompasses the physical, geographical site of the renewable generation source. The hydro power plant with all installation is the project boundary and this had been validated during the physical audit.

The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the VCS project power plant is connected to as clearly defined in the applied methodology.

As the project activity is connected to Turkish national grid, the baseline boundary is defined as the Turkish national grid. This includes the project site and all power plants connected physically to the Turkish national grid and there are no off-grid power plants in Turkish grid.

The baseline emission source is CO₂ and fossil fuels fired for electricity generation cause CO₂ emissions which is the main source. It is included to baseline calculation to find the displaced amount by the project activity. The other sources and gases are minor sources and excluded due to the simplification in line with the applied methodology.

The project activity is greenfield hydro power plant project, so there has not been any project emissions and sources, reservoirs and gas in line with the applied methodology.

As a result, Re Carbon Ltd. confirms that the project boundary and associated GHG sources have been clearly and correctly identified in the PD by the PP and will be valid during the second crediting period.

Source		Gas	Included?	Assessment and conclusion
Baseline	Electricity generation in baseline (Turkey's Grid)	CO ₂	Yes	Main emission source
		CH ₄	No	Minor emission source
		N ₂ O	No	Minor emission source
		Other	N/A	N/A
Project	Emission from the reservoir of the proposed project	CO ₂	No	Minor emission source
		CH ₄	No	Minor emission source (Power density is 12,634.11 W/m ² and is greater than 10 W/m ²)
		N ₂ O	No	Minor emission source
		Other	N/A	N/A
	Auxiliary Diesel Generator	CO ₂	Yes	Neglected
		CH ₄	No	Minor emission source
		N ₂ O	No	Minor emission source
		Other	N/A	N/A

3.3.4 Baseline Scenario

The project activity was earlier registered using the methodology ACM0002 version 21.0. The PD has been updated using the latest approved version of the methodology ACM0002 version 21.0. All the applicability conditions of the methodology have been justified appropriately in the revised PD, version 04 and dated as 03/10/2024.

Considering the “CDM Tool to assess the validity of the original/current baseline and to update the baseline at the renewal of a crediting period” requirements:

Step 1: Assess the validity of the current baseline for the next crediting period :

The project activity is supplying power to the Turkish national grid. Also, the fossil fuel sources are still dominant in the energy generation in Turkey. There are no changes in market characteristics in Turkey. Thus, the baseline scenario continues to remain same as earlier, as follows: “Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the “Tool to calculate the emission factor for an electricity system”.

Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies

Project activity follows laws, requirements listed in below:

- Environmental Impact Assessment Regulation, Official Gazette No. 26939 dated July 17, 2008.
- Water Pollution Control Regulation, Official Gazette No. 25687 dated December 31, 2004 and revised in Official Gazette No. 26786 dated February 13, 2008;
- Regulation on Construction of Cesspits where there is no Wastewater Collection System, Official Gazette No. 13783 dated March 13, 1971;
- Hazardous Chemicals Regulation, Official Gazette No.21634 dated July 11, 1993 and revised in Official Gazette No. 27092 dated December 26, 2008;
- Regulation on General Principles of Waste Management, Official Gazette No. 26927 dated July 5, 2008;
- Hazardous Wastes Control Regulation, Official Gazette No. 25755 dated March 14, 2005;
- Waste Oil Control Regulation, Official Gazette No. 26952 dated July 30, 2008 and revised Official Gazette No. 27304 dated July 31, 2009;
- Vegetative Waste Oil Control Regulation, Official Gazette No. 25791 dated April 19, 2005; and revised Official Gazette No. 27305 dated July 31, 2009

- Solid Waste Control Regulation, Official Gazette No. 20814 dated March 14, 1991 and revised in Official Gazette No. 25777 dated April 5, 2005;
- Medical Waste Control Regulation, Official Gazette No. 25883 dated July 22, 2005;
- Environmental Audit Regulation, Official Gazette No. 27061 dated November 21, 2008;
- Packaging Waste Control Regulation, Official Gazette No. 26562 dated June 24, 2007 and revised in Official Gazette No. 27046 dated November 6, 2008; and
- Waste Batteries and Accumulators Control Regulation, Official Gazette No. 25569 dated August 31, 2004 and revised in Official Gazette No. 25744 dated March 03, 2005;
- The Excavation, Construction and Demolition Waste Control Regulation, Official Gazette No. 25406 dated March 18, 2004;
- Soil Pollution Control Regulation, Official Gazette No. 25831 dated May 31, 2005;
- Regulation Related to Workplace Opening and Operation Permits, Official Gazette No. 25902 dated August 10, 2005 and revised in Official Gazette No. 26492 dated April 13, 2007;
- Industrial Air Pollution Control Regulation, Official Gazette No. 27277 dated July 3, 2009
- Air Quality Assessment and Management Regulation, Official Gazette No. 26898 dated June 6, 2008 and revised in Official Gazette No. 27219 and dated May 5, 2009;
- Air Pollution Control Regulation For Heating Sources, Official Gazette No. 25699 dated January 13, 2005 and revised in Official Gazette No. 27134 dated February 07, 2009;
- Exhaust Gases Emission Control Regulation, Official Gazette No. 27190 dated April 04, 2009; and
- Regulation on Protection of Wetlands, Official Gazette No. 25818 dated May 17, 2005.

In addition to the Environmental Law and its associated regulations, there are several other laws that directly or indirectly include environmental review, and thus, are applicable to the proposed project. The project complies with the 4857 numbered Labour Law and its regulations stated below:

- Health and Safety Regulation for Construction Works, Official Gazette No. 25325 dated December 23, 2003;
- Regulation on Health and Safety Regarding Temporary Works, Official Gazette No. 25463 dated May 15, 2004.

Other regulations that the project complies with can be listed as follows:

- 5346 numbered Utilization of Renewable Energy Resources for the Purpose of Generating Electrical Energy;

- Regulation on Protection and Usage of Agricultural Lands, Official Gazette No. 25766 dated March 25, 2005;
- 2863 numbered Law on Protection of Cultural and Natural Heritage (revised by 5226 numbered Law);
- 4342 numbered Pasture Law;
- 6831 numbered Forestry Law (amended by 5192 numbered Revision in Forestry Law); Regulation on Buildings located on the Disaster Areas, Official Gazette No. 26582 dated July 14, 2007.

Step 1.2: Assess the impact of circumstances

The project activity does not involve new fuel or raw materials. The information about the project activity in the previous crediting period validation still valid.

The emission factor has been updated and fixed ex-ante for the 2nd crediting period. The procedures as defined in the “Tool to calculate the emission factor for an electricity system”, version 07.0 have been followed.

The OM is taken as 0.7424 tCO₂/MWh.

The BM is taken as 0.3680 tCO₂/MWh.

All other projects than wind and solar power generation project activities wOM = 0.5 and wBM = 0.5 for the first crediting period, and wOM = 0.25 and wBM = 0.75 for the second and third crediting period. Therefore wOM = 0.25 and wBM = 0.75 have been considered for the second crediting period. CM is taken as 0.4616 tCO₂/MWh.

The combined margin (CM) emission factor of Turkish National Transmission System has been published by the Ministry of Energy and Natural Resources. The latest values belong to the 2020 statistics. According to this, the emission factor is taken as 0.4616 tCO₂/MWh.

The same has been checked from the following link and the document available: <https://enerji.gov.tr/evced-cevre-ve-iklim-turkiye-ulusal-elektrik-sebekesi-emisyon-faktoru>

The combined margin (CM) emission factor of Turkish National Transmission System has been published by the Ministry of Energy and Natural Resources. The latest values belong to the 2020 statistics. According to this, the emission factor is taken as 0.4616 tCO₂/MWh.

The same has been checked from the following link and the document available: <https://enerji.gov.tr/evced-cevre-ve-iklim-turkiye-ulusal-elektrik-sebekesi-emisyon-faktoru>

VVB confirms that the Turkish National EF has been calculated to be in line with the “Tool to calculate the emission factor for an electricity system”, version 07.0.

the Turkish National EF has been calculated to be in line with the “Tool to calculate the emission factor for an electricity system”, version 07.0.

Step 1.3: Assess whether the continuation of use of current baseline equipment(s) or an investment

VVB confirmed that the baseline scenario for the project activity is the continued use of the existing equipment(s) without any investment, and the project owners or third party(ies) do not plan to make an investment later but before the end of the crediting period. Therefore the existing baseline scenario does not need to be updated for that crediting period, nor does the crediting of emission reductions need to be limited to the period before the base equipment ceases to operate.

Step 1.4: Assessment of the validity of the data and parameters

“EF_{grid,y}” parameter is correctly defined, which is described during validation.

“EG_y”, “CapPJ” and “APJ” parameters are correctly monitored.

Based on the technical expertise VVB confirmed that.

Step 2: Update the current baseline and the data and parameters

There is no update about the baseline and data and parameters.

Step 2.1: Update the current baseline

No updates in policy and regulatory framework comparing with the initial validation process have been found in Turkey. Therefore, it can be concluded that the baseline scenario has not changed and continues to be the same as during the second crediting period.

3.3.5 Additionality

The project’s additionality had been checked during the initial validation of the project activity and the project was found to be as additional by the relevant VVB at that time.

Re Carbon Ltd. can also confirm that in Turkish legislation there is no law or any other regulation that mandates such power plants to be built. The project will be used only for the purpose of energy generation and has an Energy Generation License for 49 years. Also, the EIA affirmation has been taken to the project activity. Therefore, this project is a regulatory surplus.

3.3.6 Quantification of GHG Emission Reductions and Carbon Dioxide Removals

The emission reduction calculation estimations have been included in the PD in line with the latest approved version of the methodology ACM0002 version 21.0. The baseline emissions are calculated based on the combined emission factor multiplied by the expected net electricity generation, which amounts to 96,275 -ton CO₂ per annum.

Emission factor had been calculated in line with the selected methodology and the Ministry of Energy and Natural Resources document named as “Turkey’s National Electricity Network Emission Factor Factsheet, EF of hydropower plants” as 0.4616 tCO₂/MWh (with considering weighing factors of wOM= 0.25 and wBM= 0.75 since this is the second crediting period).

$$BE_y = 208,570 \text{ MWh} \times 0.4616 \text{ tCO}_2\text{e/MWh} = 96,275 \text{ tCO}_2\text{e}$$

There are no project emissions or leakage emissions associated with the hydro power project according to applied methodology. Thus, the emission reductions correspond to the baseline emissions and the project is expected to result in an average emission reduction of 96,275 tCO₂e/year during the second crediting period.

$$ER_y = BE_y - PE_y - LE_y$$

$$LE_y = 0, PE_y = 0$$

$$ER_y = BE_y = 96,275 \text{ tCO}_2\text{e/yr}$$

3.3.7 Methodology Deviations

N/A (There are no methodology deviations.)

3.3.8 Monitoring Plan

According to ACM0002 version 21.0, one of the parameters required to be monitored is “net electricity supplied by the proposed project to the grid in year y, $EG_{\text{facility},y}$ which will be continuously measured and recorded at least monthly.

Net electricity generation will be based on measured value of electricity export and import and recorded via meters sealed by TEIAS (the distribution and grid company) for billing purposes therefore no new additional protocol will be needed for monitoring emission reduction. According to meter reading protocols, the internal consumption of the facility was subtracted from the gross generation. EPIAS records will be used as the main source for the quantity of net electricity delivered to the grid, and it has been cross checked with the meter reading records (OSF forms) provided to the company by TEIAS.

The site electricity technicians and plant manager will be responsible for the electricity generated, gathering all relevant data and keeping the records.

There are two electricity meters, one main meter and one back up meters. Meters have been changed on 20/06/2021 due to meters have been expired (completed its 10-year period) according to the regulations. Old meter details are:

- Old Main Electricity Meter: ITRON : Serial Number: 65000768
- Old Back-up Electricity Meter: ITRON : Serial Number: 65000769

All meters are inspected and sealed by TEIAS before the commissioning of the power plant in order to be protected from interference by any of the parties and the relevant information about the electricity meters including the serial numbers have been provided by the PP. Installation of the meters and data monitoring will be carried out according to the relevant regulation by TEIAS which will record the meter readings via EPIAS system and through remote reading. The details of the current electricity meters are as follows:

	Brand	Serial Number	Accuracy Class	First Index Date	Calibration Date
Main Meter	EMH-(LZQJ-XC)	10172377	0.2S – 05S	20/06/2021	20/06/2031
Back-up Meter	EMH-(LZQJ-XC)	10172378	0.2S – 05S	20/06/2021	20/06/2031

The main data source will be EPIAS data and TEIAS meter records will be used for cross checking purpose.

The other monitoring parameter APJ will be monitored throughout the second crediting period in order to calculate the project emissions of the project.

Besides, validation team has not identified emission sources that are not addressed by the applied methodology which are expected to contribute more than 1% of the annual emission reduction.

Therefore, Re Carbon Ltd. can confirm that the list of parameters that need to be monitored ex post for the second crediting period is complete and consistent with the relevant applied methodology which is ACM0002 version 21.0.

3.4 Non-Permanence Risk Analysis

N/A (The project is not an AFOLU project)

4 VALIDATION OPINION

4.1 Validation Summary

Re Carbon Ltd. performed the validation of the “Toros Hydroelectric Power Plant” in “Turkey” between 17/05/2023 and 16/05/2033. The GHG Statement is the responsibility of the “Aydem Yenilenebilir Enerji A.S.”. The validation was performed based on Validation criteria for projects set out in VCS Version 4, UNFCCC criteria for the CDM and Host Party criteria, as well as per criteria given to provide for consistent project operations, monitoring and reporting.

The validation was performed by a validation team consisting of “Selen Cilasun as the Team Leader, Helin Tüzer as the trainee validators, Sandeep Kanda as the previous Team Leader and Rohit BADAYA as the technical experts (ITR).” and the project activity was checked against the applicable rules and regulations of CDM including CDM Validation and Verification Standard for project activities version 3.0, CDM Project Standard for project activities version 3.0 and VCS Standart Version 4.7.

Re Carbon Ltd. hereby confirms that the proposed project activity “Toros Hydroelectric Power Plant” in Turkey, applied all relevant EB-guidance as the selected baseline and monitoring methodologies and the associated methodological tools have been applied correctly. The total emission reductions from the project are estimated to be on the average 96,275 tCO₂e per year over the selected 10 year crediting period.

As a result, the validation team assigned by the Re Carbon Ltd. concludes that the proposed Project Activity “Toros Hydroelectric Power Plant” in Turkey, as described in the PD (04 and 03/10/2024)

- meets all relevant Host Country criteria;
- meets all relevant requirements of the VCS project activities [including VCS version 3.0, Article 12 of the Kyoto Protocol, the Modalities and Procedures for CDM (Marrakesh Accords) and the subsequent decisions and guidance by the COP/MOP and the CDM Executive Board];
- applies correctly the baseline and monitoring methodology “ACM0002 “Grid-connected electricity generation from renewable sources”, v21.0;
- its additionality is sufficiently justified in the PD;
- is likely to achieve estimated emission reductions;

4.2 Validation Conclusion

As a result, the validation team assigned by the Re Carbon Ltd. concludes that the proposed Project Activity “Toros Hydro Electricity Power Plant” in Turkey, as described in the PD (04 and 10/09/2024)

- meets all relevant Host Country criteria;
- meets all relevant requirements of the VCS project activities [including VCS version xx, Article 12 of the Kyoto Protocol, the Modalities and Procedures for CDM (Marrakesh Accords) and the subsequent decisions and guidance by the COP/MOP and the CDM Executive Board];
- applies correctly the baseline and monitoring methodology “Name and version of the methodology”;
- its additionality is sufficiently justified in the PD;
- is likely to achieve estimated emission reductions;

Crediting period: From [17-May-2023] to [16-May-2033]

Validated estimated GHG emission reductions and carbon dioxide removals for the project crediting period:

Vintage period	Estimated baseline emissions (tCO ₂ e)	Estimated project emissions (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated reduction VCU (tCO ₂ e)	Estimated removal VCU (tCO ₂ e)	Estimated total VCU (tCO ₂ e)
17-May-2023 to 31-December-2023	60,402	0	0	60,402	60,402	60,402
01-January-2024 to 31-December-2024	96,275	0	0	96,275	96,275	96,275
01-January-2025 to 31-December-2025	96,275	0	0	96,275	96,275	96,275
01-January-2026 to	96,275	0	0	96,275	96,275	96,275

31-December-2026						
01-January-2027 to 31-December-2027	96,275	0	0	96,275	96,275	96,275
01-January-2028 to 31-December-2028	96,275	0	0	96,275	96,275	96,275
01-January-2029 to 31-December-2029	96,275	0	0	96,275	96,275	96,275
01-January-2030 to 31-December-2030	96,275	0	0	96,275	96,275	96,275
01-January-2031 to 31-December-2031	96,275	0	0	96,275	96,275	96,275
01-January-2032 to 31-December-2032	96,275	0	0	96,275	96,275	96,275
01-January-2033 to 16-May-2033	35,872	0	0	35,872	35,872	35,872
Total	962,749	0	0	962,749	962,749	962,749

For projects required to assess permanence risk:

i) Provide a conclusion on the following information:

The non-permanence risk rating (%)	% 0
If applicable, the Long-term Average (LTA), whether it has been properly updated, and if it has been reached.	N/A

ii) Complete the table below for the project crediting period:

Vintage period	Estimated baseline emissions (tCO ₂ e)	Estimated project emissions (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated reduction VCUs (tCO ₂ e)	Estimated removal VCUs (tCO ₂ e)	Estimated total VCUs (tCO ₂ e)
17-May-2023 to 31-December-2023	60,402	0	0	60,402	60,402	60,402
01-January-2024 to 31-December-2024	96,275	0	0	96,275	96,275	96,275
01-January-2025 to 31-December-2025	96,275	0	0	96,275	96,275	96,275
01-January-2026 to 31-December-2026	96,275	0	0	96,275	96,275	96,275
01-January-2027 to 31-December-2027	96,275	0	0	96,275	96,275	96,275

01-January-2028 to 31-December-2028	96,275	0	0	96,275	96,275	96,275
01-January-2029 to 31-December-2029	96,275	0	0	96,275	96,275	96,275
01-January-2030 to 31-December-2030	96,275	0	0	96,275	96,275	96,275
01-January-2031 to 31-December-2031	96,275	0	0	96,275	96,275	96,275
01-January-2032 to 31-December-2032	96,275	0	0	96,275	96,275	96,275
01-January-2033 to 16-May-2033	35,872	0	0	35,872	35,872	35,872
Total	962,749	0	0	962,749	962,749	962,749

Therefore, Re Carbon Ltd. requests the registration of the proposed project activity as a VCS project activity.

		
Selen Cilasun	Rohit BADAYA	Havva ÖZTÜRK

Team Leader	ITR and Decision Maker	CMD Review
14/10/2024		

APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION

N/A

Section	Information	Justification	Assessment method and conclusion

APPENDIX 2: VALIDATION PROTOCOL

Table 1 – Resolution of Corrective Action, Forward Action and Clarification Requests

Draft Report Clarifications, Forward Action and Corrective Action Requests by Validation Team	Ref. to Checklist Questions in Table-1	Summary of Project Participants' Response	Validation Team Conclusion
CAR-1 Arial or Century Gothic 10.5pt, black, regular (non-italic) font should be use for all items in the PD.	1	Response-1: The font type, size, and color has been made consistent.	Review-1: Ok, closed.
CAR-2 PD template is not latest version.	4	Response-1: PD template has been updated to 4.2.	Review-1: Since the project is currently ongoing, Version 4.3 will be valid from 1st of March. Review-2: OK, closed. (Has been revised.)
CAR-3 The page numbers specified in the Table of Contents with section page numbers are not aligned.	6	Response-1: The page numbers have been made aligned.	Review-1: The page numbers specified in the Table of Contents with section page

			numbers are not aligned. Review-2: OK, closed. (Has been revised.)
CAR-4 The source of the annual estimated electricity generation is missing.	1.1.1.1	Response-1: The source of annual estimated electricity generation has been included.	Review-1: The source of the annual estimated electricity generation is missing. In addition total estimated emission reduction value is missing. Review-2: OK, closed. (Has been added.)
CAR-5 Brief description of the installed technology and equipment including turbines and generators are missing in the Section 1.1.	1.1.1.3.	Response-1: A brief description of the installed technology has been included starting from the second paragraph of section 1.1.	Review-1: OK, closed.
CAR-6 Description of the scenario existing prior to the implementation of the project is missing in Section 1.1.	1.1.1.4	Response-1: The baseline scenario has been included to the section 1.1.	Review-1: Ok, closed.
CAR-7 The historical dates in VCS are missing in milestone table in Section 1.1.	1.1.1.6	Response-1: The registration date in the VCS has been included to the milestone table in section 1.1.	Review-1: OK, closed.

CAR-8 Description about how the project is eligible under the scope of the VCS Program is not appropriate in Section 1.3.	1.3.1.	Response-1: The section has been made detailed.	Review-1: Ok, closed.
CAR-9 There is missing informations about “ The estimated annual GHG emission reductions/removals of the project are .. ” in Section 1.10 of PD.	1.10.1	Response-1: The table in the section 1.10 has been updated.	Review-1: OK, Closed (revised).
CAR-10 Project scale is incorrect.	1.10.2.	Response-1: Project scale has been corrected.	Review-1: Ok, Closed (Corrected).
CAR-11 a) Emission factor is not matched with the related evidence document. Therefore calculations are incorrect in PD and ER Calculation Excel Sheet. b) References are missing in Section 1.11. c) Information about project activity is a greenfield project or not is missing in Section 1.11. d) The lifetime of the project activity is not included in Section 1.11.	1.11.1	Response-1: a) Emission factor has been made consistent and the calculations have been revised. b) The necessary references have been given, and the section has been revised. c) The information has been included. d) The lifetime of the project activity is included in section 1.11.	Review-1: a) OK, closed. b) OK, closed. c) OK, closed (added.) d) There is incorrect font type in Section 11 of the PDD. Review-2: d)OK, closed. (Has been indicated.)
CAR-12 The baseline scenario is missing in Section 1.11.	1.11.3.3.	Response-1: The baseline scenario has been included.	Review-1: Ok, closed added).
CAR-13 References are missing in Section 12.1	12.1.	Response-1: The reference of the figure has been included.	Review-1:

			KMZ file is not official source. Review-2: OK, closed. (Has been indicated.)
CAR-14 Region/state/province information are missing.	1.12.1.2.	Response-1: The town information has been included.	Review-1: OK, closed.
CAR-15 KML file as supporting document has not been provided to VVB.	1.12.2.1.	Response-1: KMZ file has been provided.	Review-1: Ok, closed (provided).
CAR-16 Information is not satisfied with requirements for Section 1.14.	1.14.1.	Response-1: The section has been revised.	Review-1: Ok, closed (The section has ben revised).
CAR-17 Please provide the signed and sealed letter on company letterhead that the project hasn't been registered, or hasn't been seeking registration under any other GHG programs.	1.15.1.1.	Response-1: A signed and sealed letter on company letterhead that the project hasn't been registered, or hasn't been seeking registration under any other GHG programs has been provided.	Review-1: OK,closed (provided).
CAR-18 Explanation is missing in section 1.15.2.	1.15.2.1.	Response-1: The explanation has been included.	Review-1: OK, closed (added).
CAR-19 Please provide the signed and sealed letter on company letterhead that project hasn't been included in emissions trading program; or any other mechanism that includes GHG allowance trading.	1.16.1.1.	Response-1: A signed and sealed letter on company letterhead that the project hasn't been registered, or hasn't been seeking registration under any other GHG programs has been provided.	Review-1: OK,closed (provided).

CAR-20 Precautions taken for the possible negative environmental and socio-economic impacts of the project activity is not included in the Section 2.1 of the PD.	2.1.1.	Response-1: The section has been revised.	Review-1: OK, closed (explanation added).
CAR-21 a) All local stakeholder communication details are not provided in the Section 2.2 of the PD. b) The current status of the on-going communication with the local stakeholders are not provided in the Section 2.2 of the PD. c) Provided evidence are not relevant to this crediting period.	2.2.1.	Response-1: a) The local stakeholder communication is carried out with a grievance box, and it has been included to PD and provided. b) The current status of the on-going communication with the local stakeholders has been provided in section 2.2. c) The evidence documents have been revised.	Review-1: It is not matched with site visit interview and evidence is not enough. Review-2: OK, closed. (Has been revised.)
CAR-22 a) The description about scale of the project activity is incorrect based on the relevant CDM methodology. b) Please provide relevant up-to-date evidences.	2.3.1.	Response-1: a) Can you please specify which part is incorrect? b) The relevant evidence has been provided.	Review-1: a) OK, closed. (After revision on the PD this finding is invalid.) b) OK, closed (provided).
CAR-23 Methodology is not latest version.	3.1.1.	Response-1: The methodology version has been updated.	Review-1: OK, closed.
CAR-24 There are missing parts in the applicability of the methodology.	3.2.1.	Response-1: The applicability of the methodology has been revised.	Review-1: OK, closed.
CAR-25 The figure of the Project activity is not included in Section 3.3.	3.3.1.	Response-1: The figure has been included.	Review-1: OK, closed.

CAR-26 There is no necessary information in Section 3.6.	3.6.1.	Response-1: The section has been revised.	Review-1: OK, closed (Added).
CAR-27 a) The power density calculation incorrect in the ER Calculation Excel sheet and PD. b) There are missing information in ER Calculation in PD.	4.2.1.	Response-1: a) The power density calculation has been corrected in the PD. b) Can you please specify?	Review-1: a) There is incorrect unit in the PD calculations. b) There are missing information in ER Calculation about power density. Review-2: a) OK, closed. (Has been corrected.) b) OK, closed. (Has been added.)
CAR-28 Crediting period dates are incorrect in ER Calculation Excel Sheet and PD.	4.4.1.	Response-1: The crediting period dates have been corrected in ER sheet and PD.	Review-1: OK, closed.
CAR-29 a) Meter evidence documents are not provided to VVB. b) Values in the parameters incorrect (please see above CARs.)	5.2.1.	Response-1: a) Meter evidence documents have been provided to VVB. b) Values in the parameters have been corrected.	Review-1: a) OK, closed. b) OK, closed.
CL-1 There are unnecessary information.	1.17.1.1.	Response-1: The section has been revised.	Review-1: OK, closed.

CL-2 Values are missing in the section 4.1.	4.1.1.	Response-1: Values have been included to the section 4.1.	Review-1: OK, closed.
CL-3 Methodology justifications are missin in section 4.2.	4.2.3.	Response-1: The methodology justification has been included to section 4.2.	Review-1: OK, closed.
CL-4 There is no diagram including to display the GHG data collection and management system	5.3.13	Response-1: A figure has been included.	Review-1: OK, closed.
CL-5 The appendix 1 is not matched with guideline.	appendix 1	Response-1: Appendix section has been updated.	Review-1: OK, closed.
CL-6 The appendix 2 is not matched with guideline.	appendix 2	Response-1: Appendix section has been updated.	Review-1: OK, closed.
CAR-30 The details in the row “Total” is missing in the table provided in the Section 1.2 of VCS-PD.	ITR	Reponse-1: The “Total” row has been indicated in the table provided in the section 1.2 of the VCS-PD.	Review-1: OK, closed. (The “Total” row has been indicated in section 1.2)
CAR-31 Some of the fonts used are “white fonts” in the VCS-PD. The appropriate fonts permitted by the VCS-PD filling guidelines shall be used.	ITR	Reponse-1: The “white fonts” have been corrected as black font. However there is an error in that specific parts of the VCS-PD. Response-2: The errors have been fixed again.	Review-1: Still errors has not been fixed. Review-2: OK, closed. (Has been revised.)
CAR-32 The version 2 of the VCS-PD has been referred; however the registered VCS-PD is of version 2.02.	ITR	Reponse-1: The correct version of the registered VCS-PD has been referred.	Review-1: OK, closed. (Version of the registered VCS-PD has been revised.)

CAR-33 The Section 5.3 make reference to the Appendix V, which is not traceable in the VCS-PD.	ITR	Reponse-1: The reference to Appendix V has been corrected as Appendix 3 in the VCS-PD.	Review-1: OK, closed. (Has been corrected.)
CAR-34 a) The installed capacity is indicated as 49.99 MW in the MR, however the capacity of 49 MW as per the VCS-PD. b) Similarly the installed capacity of turbine is 24.995 MWe as per the MR, while the capacity is 24.50 MWe as per the registered VCS-PD.	ITR	Reponse-1: a) The installed capacity is 49.99 MWe as per the Generation License by EMRA (provided), and it has been made consistent throughout the VCS-PD for the second crediting period. b) The installed capacity per turbine is 24.995 MWe as per the Generation License by EMRA (provided), and it has been made consistent throughout the VCS-PD for the second crediting period.	Review-1: a) OK, closed. (The installed capacity has been revised.) b) OK, closed. (Has been revised.)
CAR-35 The decimal places in the value (1167,04 W/m2) in Section 4.2 of VCS-PD.	ITR	Response-1: The decimal places have been corrected in section 4.2 of the VCS-PD.	Review-1: OK, closed. (Has been revised.)
CAR-36 The monitoring parameter table for the parameter (CapPJ: Installed capacity of the hydro power plant after the implementation of the project activity), where the value is provided as “49,990,000 W”, however the value is “49000000 W” as per the registered VCS-PD.	ITR	Response-1: The installed capacity is 49.99 MWe as per the Generation License by EMRA (provided), and the value in the CapPJ parameter has been updated as per the value in the generation license for the second crediting period. Response-2: The necessary notation has been included.	Review-1: Comma and dots are missing. Review-2: OK, closed. (Has been revised.)
CAR-37	ITR	Response-1:	Review-1:

The accuracy class of 0.5S is indicated in MR, however the accuracy class is 0.2S as per the VCS-PD. Similarly the differences in the Calibration date is observed between MR and VCS-PD.		The accuracy class of the meters is “0.2S-0.5S” as per the latest First Index Protocol (provided), and it has been made consistent throughout the VCS-PD. Also, the information of the current meters has been made consistent with the ones in the MR.	OK, closed. (Has been revised.)
CAR-38 Some of the milestones have been repeated in Table 1 of the VCS-PD. The repetition on the milestones may be avoided.	ITR	Response-1: The repeated milestones have been removed from the Table-1 of the VCS-PD.	Review-1: OK, closed. (Has been removed.)
CAR-39 Why the title name is provided in the “table of contents”. Clarify.	ITR	Response-1: The title name has been removed from the “table of contents”.	Review-1: OK, closed. (Has been revised.)
CAR-40 In section 2.1.1 more updated PD version is available on the VCS portal. Check.	ITR	Response-1: The current PD version is the latest version available on the VCS portal. The white and bold format has been corrected.	Review-1: OK, closed. (Registered PD has been revised.)
CAR-41 In section 4.2 Calculation is this 1167.04? Check.	ITR	Response-1: The value is correct. A comma has been included for clarification.	Review-1: OK, closed. (Has been revised.)
CAR-42 In section 5.2 of the PD “Value monitored” has been written 96,275 MWh but 208570 MWh/year has been written in ER sheet tab “ER”. Check.	ITR	Response-1: The value in section 5.2 has been revised.	Review-1: OK, closed. (Relevant value has been revised.)

APPENDIX 3: VALIDATION TEAM AND ITR COMPETENCE

Mr. Rohit Badaya holds a Master's degree in "Nanotechnology" and a Bachelor's degree in "Pulp and Paper Engineering" from the Indian Institute of Technology Roorkee (IIT Roorkee). He is also an Energy Auditor, certified by the Bureau of Energy Efficiency, Ministry of Power, Govt. of India. Rohit has more than 14 years of work experience in the area of Climate Change (CDM, GS, VCS, GCC) and has worked for various DOEs/VVBs in the capacity of Team Leader, Validator/Verifier, Technical Expert, ITR, Manager (Technical & Certification) and Quality Manager. Within the context of CDM/GS/VCS/GCC, Rohit has a record of accomplishment 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/ GCC projects, located in countries in Asia, Africa, Middle East, Asia Pacific as well as in Türkiye. With re-carbon, Rohit is a free-lance Team Leader, ITR and an expert in Project-Level Group 1 - GHG Project Types: Renewable Energy Production & Energy Efficiency Improvements // Project-Level Group 5 - GHG Project Types: Methane collection & destruction as well as Livestock and other anaerobic digester operations // Project-Level Group 6 - GHG Project Types: Capture & destruction of Landfill gas & Capture & use of Landfill gas & Avoidance of methane production in wastewater treatment. Rohit is also a Regional Expert for Bhutan, Brazil, Cambodia, Chile, Democratic Republic of Congo, Egypt, El Salvador, Ethiopia, The Gambia, India, Indonesia, Iran, Kenya, Madagascar, Malawi, Mauritius, Mexico, Morocco, Myanmar, Nepal, Nicaragua, Nigeria, Papua New Guinea (PNG), Republic of Madagascar, Senegal, South Africa, Sri Lanka, Thailand, Türkiye, Uganda, Vietnam and Zambia.

Mr. Sandeep Kanda holds a Bachelor's degree in "Mechanical Engineering", a Master's degree in "Energy Systems Engineering" from the Indian Institute of Technology/Bombay and a Post Graduate Diploma in "Industrial Safety & Environmental Management" from the National Institute of Industrial Engineering in India. He has over 20 years of professional experience working in the area of energy and environmental management, capacity building, climate change adaptation and mitigation activities, sustainability, auditing and product development. Sandeep has been involved in various capacities in the development and impact assessment of more than 500 climate change mitigation projects and programmatic activities worldwide, covering a range of sectoral scopes, such as Energy industries (renewable-/non-renewable), Energy distribution, Energy demand, Manufacturing industries, Chemical industries, Transport, Metal production, Waste handling & disposal and Agriculture. With re-carbon, Sandeep is a free-lance Team Leader, ITR and a Project-Level Group 1, 5 and 6 Expert. Sandeep is also a Regional Expert for China, India, Indonesia, Mexico, Nepal, Philippines, Tanzania, Thailand, Türkiye and Vietnam.

Ms. Selen Cilasun holds a B.Sc. and a M.Sc. Degree in "Bioengineering". With re-carbon, Selen is an internal Team Leader, a Technical Expert for Project-Level Group 1 - GHG Project Type: Renewable Energy Production and a Regional Expert for Türkiye. Selen is also a Trainee for Project-Level Group 5 - GHG Project Types: Methane collection & destruction as well as Livestock and other anaerobic digester operations // Project-Level Group 6 - GHG Project Types: Capture & destruction of Landfill gas & Capture & use of Landfill gas & Avoidance of methane production in wastewater treatment.

Ms. Helin Tüzer holds a B.Sc. degree in “Agriculture” from Ankara University. With re-carbon, Helin is an internal Validator/Verifier Trainee in Project-Level Group 1 - GHG Project Type: Renewable Energy Production.

CERTIFICATE OF APPOINTMENT



Within the scope and in strict accordance to the appointments indicated below, the bearer may:

- Participate in assessments conducted by re-carbon Ltd.
- Take the appointed positions within and outside of an assessment team
- Bring specific expertise to 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. 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 performance assessments and/or other reasons as defined above.

[Signature]

This Appointment Certificate is granted on the date of **27.03.2024** by

Christian Johannes
(General Manager)

Gold Standard
Climate Security & Sustainable Development

Verified Carbon Standard
A VERBA STANDARD

CERCARBONO
Certified Carbon Standard

This Certificate of Appointment is given to

Mr. Rohit Badaya

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:

PROJECT LEVEL GROUP	GHG PROJECT TYPE EXPERTISE	EQUIVALENT GHG TECHNICAL AREA EXPERTISE (reference only)	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
1	Renewable Energy Production	1.2	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021					25.10.2021
1	Energy Efficiency Improvements	3.1	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021					25.10.2021
5	Methane Collection & destruction	15.2	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021					
5	Livestock & other anaerobic digester operations	15.2	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021					25.10.2021
5	Agricultural methane emission reduction	16.1															
5	Agricultural carbon emission reduction	16.1															
6	Capture & destruction of landfill gas	18.1	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021					25.10.2021
6	Capture & use of landfill gas	18.1	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021					25.10.2021
6	Avoidance of methane production in wastewater treatment	19.1	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021					25.10.2021
	SDS Criteria:		25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021					25.10.2021

ICR International Carbon Registry

BioCarbon Registry



PROJECT LEVEL GROUP	GHG PROJECT TYPE EXPERTISE	EQUIVALENT GHG TECHNICAL AREA EXPERTISE (reference only)	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
1	Renewable Energy Production	1.2	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
1	Energy Efficiency Improvements	3.1	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
5	Methane Collection & destruction	15.2	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
5	Livestock & other anaerobic digester operations	15.2	02.02.2023	02.02.2023	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
5	Agricultural methane emission reduction	16.1															
5	Agricultural carbon emission reduction	16.1															
6	Capture & destruction of landfill gas	18.1	02.02.2023	02.02.2023	02.02.2023	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
6	Capture & use of landfill gas	18.1	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
6	Avoidance of methane production in wastewater treatment	19.1	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
	SDS Criteria:		02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022

COUNTRY EXPERTISE:

Egypt, India, Indonesia, Iran, Kenya, Malawi, Senegal, Thailand, Türkiye, Uganda for all above listed GHGRSs

F1	Trainee	Trainee	Trainee	Trainee	Trainee
31	Trainee	Trainee	Trainee	Trainee	Trainee
30/31/4	Trainee	Trainee	Trainee	Trainee	Trainee

CERTIFICATE OF APPOINTMENT



Within the scope and in strict accordance to the appointments indicated below, the bearer may:

- Participate in assessments conducted by re-carbon Ltd.
- Take the appointed positions within and outside of an assessment team
- Bring specific expertise to 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. 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 performance assessments and/or other reasons as defined above.

This Appointment Certificate is granted on the date of **27.03.2024** by

Christian Johannes
(General Manager)

Gold Standard
Climate Security & Sustainable Development

Verified Carbon Standard
A VERBA STANDARD

CERCARBONO
Certified Carbon Standard

This Certificate of Appointment is given to

Mr. Sandeep Kanda

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:

PROJECT LEVEL GROUP	GHG PROJECT TYPE EXPERTISE	EQUIVALENT GHG TECHNICAL AREA EXPERTISE (reference only)	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
1	Renewable Energy Production	1.2	08.02.2022	08.02.2022	06.03.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022					
1	Energy Efficiency Improvements	3.1	08.02.2022	08.02.2022	06.03.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022					
5	Methane Collection & destruction	13.2	08.02.2022	08.02.2022	06.03.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022					
5	Livestock & other anaerobic digester operations	13.2	08.02.2022	08.02.2022	06.03.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022					
5	Agricultural methane emission reduction	16.1	08.02.2022	08.02.2022	06.03.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022					
5	Agricultural carbon emission reduction	25.1	08.02.2022	08.02.2022	06.03.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022					
6	Capture & destruction of landfill gas	19.1	08.02.2022	08.02.2022	06.03.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022					
6	Capture & use of landfill gas	19.1	08.02.2022	08.02.2022	06.03.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022					
6	Avoidance of methane production in wastewater treatment	13.1	08.02.2022	08.02.2022	06.03.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022					
SDS Criteria:			08.02.2022	08.02.2022	06.03.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022					

ICR International Carbon Registry

BioCarbon Registry



PROJECT LEVEL GROUP	GHG PROJECT TYPE EXPERTISE	EQUIVALENT GHG TECHNICAL AREA EXPERTISE (reference only)	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
1	Renewable Energy Production	1.2	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
1	Energy Efficiency Improvements	3.1	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
5	Methane Collection & destruction	13.2	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
5	Livestock & other anaerobic digester operations	13.2	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
5	Agricultural methane emission reduction	16.1	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
5	Agricultural carbon emission reduction	25.2	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
6	Capture & destruction of landfill gas	19.1	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
6	Capture & use of landfill gas	19.1	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
6	Avoidance of methane production in wastewater treatment	13.1	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022
SDS Criteria:			02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022

COUNTRY EXPERTISE:

China, India, Indonesia, Mexico, Philippines, Tanzania, Thailand, Türkiye, Vietnam for all above listed GHGRSs

F4	Trainee	Trainee	Trainee	Trainee	Trainee
S1	Trainee	Trainee	Trainee	Trainee	Trainee
COBIA	Trainee	Trainee	Trainee	Trainee	Trainee

CERTIFICATE OF APPOINTMENT



Within the scope and in strict accordance to the appointments indicated below, the bearer may:

- Participate in assessments conducted by re-carbon Ltd.
- Take the appointed positions within and outside of an assessment team
- Bring specific expertise to 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. 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 performance assessments and/or other reasons as defined above.

This Certificate of Appointment is given to

Ms. Selen Cilasun

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:

This Appointment Certificate is granted on the date of **27.03.2024** by

Christian Johannes
(General Manager)



Project Level Group	GHG Project Type / Emissions	Accountant / GHG Technical Area/Expertise	Verifier	Validator	Team Leader	ITR	Expert	Verifier	Validator	Team Leader	ITR	Expert	Verifier	Validator	Team Leader	ITR	Expert
		Reference Org															
1	Renewable Energy Production	2.2	10.01.2023	10.01.2023	10.11.2023		15.10.2022	27.02.2023	27.02.2023	10.11.2023		15.10.2022					15.10.2022
1	Energy Efficiency Improvements	3.2															
5	Methane Collection & destruction	23.2	Trainee	Trainee	Trainee		Trainee	Trainee	Trainee			Trainee					
5	Livestock & other enteric digestive operations	23.2	Trainee	Trainee	Trainee		Trainee	Trainee				Trainee					
5	Agricultural methane emission reduction	25.1															
5	Agricultural carbon emission reduction	25.1															
6	Capture & destruction of landfill gas	23.1	Trainee	Trainee	Trainee		Trainee	Trainee	Trainee			Trainee					
6	Capture & use of landfill gas	23.1	Trainee	Trainee	Trainee		Trainee	Trainee	Trainee			Trainee					
6	Avoidance of methane production in wastewater treatment	23.1	Trainee	Trainee	Trainee		Trainee	Trainee	Trainee			Trainee					
		SOS Criteria:	10.01.2023	10.01.2023	10.11.2023		15.10.2022	27.02.2023	27.02.2023	10.11.2023		15.10.2022					15.10.2022



Project Level Group	GHG Project Type / Emissions	Consistent GHG Technical Area Expertise Reference ID	Verifier	Validator	Team Leader	ITR	Expert	Verifier	Validation	Team Leader	ITR	Expert	Verifier	Validator	Team Leader	ITR	Expert
1	Renewable Energy Production	2.2	27.02.2023	27.02.2023	10.11.2023		15.10.2022	27.02.2023	27.02.2023	10.11.2023		15.10.2022	27.02.2023	27.02.2023	10.11.2023		15.10.2022
1	Energy Efficiency Improvements	2.1															
5	Methane Collection & destruction	23.2	Trainee	Trainee	Trainee		Trainee						Trainee	Trainee	Trainee		Trainee
5	Livestock & other anaerobic digester operations	23.2	Trainee	Trainee	Trainee		Trainee						Trainee	Trainee	Trainee		Trainee
5	Agricultural methane emission reduction	25.1															
5	Agricultural carbon emission reduction	25.2															
6	Capture & destruction of landfill gas	23.1	Trainee	Trainee	Trainee		Trainee						Trainee	Trainee	Trainee		Trainee
6	Capture & use of landfill gas	23.1	Trainee	Trainee	Trainee		Trainee						Trainee	Trainee	Trainee		Trainee
6	Avoidance of methane production in wastewater treatment	23.1	Trainee	Trainee	Trainee		Trainee						Trainee	Trainee	Trainee		Trainee
		SDS Criteria:	27.02.2023	27.02.2023	10.11.2023		15.10.2022						27.02.2023	27.02.2023	27.02.2023		27.02.2023

COUNTRY EXPERTISE:

Türkiye for all above listed GHGRSSs

F1	15.03.2024	15.03.2024	15.03.2024		15.03.2024
S1	15.03.2024	15.03.2024	15.03.2024		15.03.2024
COISA	15.03.2024	15.03.2024	15.03.2024		15.03.2024

CERTIFICATE OF APPOINTMENT



Within the scope and in strict accordance to the appointments indicated below, the bearer may:

- Participate in assessments conducted by re-carbon Ltd.
- Take the appointed positions within and outside of an assessment team
- Bring specific expertise to 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. 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 performance assessments and/or other reasons as defined above.

[Signature]

This Certificate of Appointment is given to

Ms. Helin Tüzer

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:

This Appointment Certificate is granted on the date of **27.03.2024** by

Christian Johannes
(General Manager)



PROJECT LEVEL GROUP	GHG PROJECT TYPE EXPERTISE	EQUIVALENT GHG TECHNICAL AREA EXPERTISE (reference only)	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
1	Renewable Energy Production	1.2	Trainee	Trainee			Trainee	Trainee	Trainee			Trainee					
1	Energy Efficiency Improvements	3.1															
5	Methane Collection & destruction	13.2															
5	Livestock & other anaerobic digester operations	13.2															
5	Agricultural methane emission reduction	15.1															
5	Agricultural carbon emission reduction	15.2															
6	Capture & destruction of landfill gas	18.1															
6	Capture & use of landfill gas	18.1															
6	Avoidance of methane production in wastewater treatment	23.1															
SDS Criteria:																	



PROJECT LEVEL GROUP	GHG PROJECT TYPE EXPERTISE	EQUIVALENT GHG TECHNICAL AREA EXPERTISE (reference only)	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
1	Renewable Energy Production	1.2	Trainee	Trainee			Trainee	Trainee	Trainee			Trainee	Trainee	Trainee			Trainee
1	Energy Efficiency Improvements	3.1															
5	Methane Collection & destruction	13.2															
5	Livestock & other anaerobic digester operations	13.2															
5	Agricultural methane emission reduction	15.1															
5	Agricultural carbon emission reduction	15.2															
6	Capture & destruction of landfill gas	18.1															
6	Capture & use of landfill gas	18.1															
6	Avoidance of methane production in wastewater treatment	23.1															
SDS Criteria:																	

COUNTRY EXPERTISE:

Trainee for Türkiye for all above listed GHGRSs

Fr	15.03.2024	15.03.2024	15.03.2024
It	15.03.2024	15.03.2024	15.03.2024
Other	15.03.2024	15.03.2024	15.03.2024