



**Verified Carbon
Standard**

FINAL VALIDATION REPORT

KEPEZKAYA HYDROELECTRIC POWER PLANT PROJECT



Document Prepared by RINA Services S.P.A

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Client	Entek Elektrik Üretimi A.Ş.
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Summary:	

Brief description of the re-validation and the project: The project activity, a run-off-river hydroelectric power plant, is located on the Göksu River, in the Eastern Mediterranean region of Türkiye /17/ with the aim to generate electricity through renewable energy source as hydro energy power. The project has 29.4 MWm/28 MWe with two-renewable, 2 vertical axis Francis type turbines, each having capacity of 14.7 MWm/14 MWe installed capacity as confirmed through generation license /17/ of the project activity.

The Project Activity utilizes the Göksu River water to generate electricity with zero carbon emissions for the Turkish Power Grid /24/. Hydroelectricity is generated in the powerhouse by pelton type turbines with a combined installed capacity of 28 MWe /18/. Within the scope of this irrigation project at the upper elevation of 1,000 m of Göksu basin three dams: Namely Bağbaşı, Afşar, and Bozkır dams. The generated electricity is transmitted to the National Electricity System through 33 kV conveyance lines through 154 kV Kepezkaya Havza Transformer Station /17/.

Kepezkaya Hydroelectric Power Plant Project is expected to generate 107,587 MWh/year /17/. The estimated amount of emission reductions due to the realization of the proposed clean energy project is 61,389 tons CO₂ per annum as verified through calculation spreadsheet /3/.

Purpose and scope of Re-validation: The re-validation scope is defined as an independent and objective review by a VVB of the project activity to be registered. In order to confirm that the project activity, as documented, is sound reasonable and meets the identified criteria. The validation involves the assessment of project conformance to VCS rules /4/ /5/ /6/; project conformance to the applied methodology /10/, including the procedure for the demonstration of additionality specified in the methodology; the likelihood that methods and procedures set out in the project description will generate verifiable GHG data and information when implemented.

Method and criteria used for Re-validation: The objective of the Re-Validation is to have an independent evaluation of a project activity by a designated operational entity against the requirements of the VCS Version 4.7 /5/ and GHG program applied, on the basis of the project design document. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant VCS requirements, GHG

program requirements and host Party criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Re-Validation is a requirement for all VCS projects (or projects approved by another non-approved GHG Program) and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Voluntary Carbon Units (VCUs). The project activity is found to be appropriately eligible under Project Scope 1 “Energy industries (renewable / non-renewable sources)” and project type “Renewable energy projects”. The validation criteria followed the guidance documents provided by VCS including the following: VCS Standard version 4.7 /5/, VCS Program Guide version 4.4 /4/ and CDM Methodology ACM0002: Grid-connected electricity generation from renewable sources, version 20.0 /10/.

Any uncertainties associated with the Re-validation: There are no restriction of uncertainty.

Number of findings raised during Re-validation: Re-Validation is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design. In the course of re-validation, no CRs / CARs were raised during the re-validation. All corrections were made during videoconference.

Summary of the Re-validation conclusion: Entek Elektrik Üretimi A.Ş. has commissioned RINA to carry out the re-validation of the Kepezkaya Hydroelectric Power Plant Project. This report summarizes the findings of the validation performed on the basis of VCS Version 4.7 /5/ criteria, GHG program applied as well as criteria given to provide for consistent project operations, monitoring and reporting. RINA confirms all validation activities including objectives, scope and criteria, level of assurance, monitoring and project documentation adhere to VCS version 4.7 /5/ and all associated updated as documented in this report, are complete. RINA concludes that the project description version 1.2 of 21/01/2026/1/ meets the VCS requirements version 4.7.

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1 INTRODUCTION

1.1 Objective

The objective of the re-validation is to have an independent evaluation of a project activity by a designated operational entity against the requirements of the VCS Version 4.7 /5/ and GHG program applied, on the basis of the project design document. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant VCS requirements, GHG program requirements and host Party criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. 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 Voluntary Carbon Units (VCUs). The project still satisfies with the VCS criteria.

1.2 Scope and Criteria

The validation scope is to review the VCS PD against the VCS criteria which refer to VCS Program Guide Version 4.4 standard /4/; VCS Standard Version 4.7 of 16/04/2024 /5/ and all the GHG program requirements. Re-validation is not meant to provide any consultancy towards the project participants.

The validation was based on the guidance given in the CDM validation and verification standard for project activities and VCS guideline and standard version 4.7. The assessment team has employed a risk-based approach to assess the completeness and accuracy of the claims and conservativeness of the assumptions in the VCS PD /1/. The main focus of the assessment team is to identify the significant risks for the project implementation and the generation of VERs. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design and monitoring report combined. The only purpose of the validation and verification is its usage during the registration issuance process as part of the VCS project cycle. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring of the project activity.

1.3 Reasonableness of Assumptions

All the revisions of the validation report before being submitted to the client were subjected to an independent internal technical review to confirm that all validation activities had been completed according to the pertinent RINA instructions. The technical review was performed by a technical reviewer(s) qualified in accordance with RINA's qualification scheme for VCS and CDM validation and verification.

RINA confirms all validation activities, including objectives, scope and criteria, with reasonable level of assurance and PD adherence to the VCS Standard, as documented in this report are complete.

The validation team and the technical reviewers consist of the following personnel:

Role/Qualification	Last Name	First Name	Country
VCS Team Leader – VCS Validator – Technical Expert	ONARAN	Ilayda	Türkiye
Independent Technical Reviewer	ERDOĞAN	Mehmet	Türkiye

1.4 Summary Description of the Project

The Project Activity is a run-off-river type hydro power plant with a total installed capacity of 29.40 MWm/28 MWe /17/. The Project Activity utilizes the Göksu River water to generate electricity with zero carbon emissions for the Turkish Power Grid /2/. The Kepezkaya HEPP consists of a single hydropower plant. A concrete gravity weir diverts water into the conveyance tunnel with 40 m³/s flow rate capacity. A net water head of 81.57 m (gross head 87.88 m) is formed, and water is discharged into two vertical Francis turbines. A 30 km 33 kV transmission line interconnects to the national grid at the 154 kV Kepezkaya Havza Transformer Substation.

The net electricity production (delivered to the grid after losses and consumption in the plant) from the plant is estimated to be 107,587 MWh per annum /17/. The amount of electricity generated by the project is not influenced by factors outside the project boundary such as other power plants or demand for electricity.

The Project Activity is located on the Göksu River, in Karaman Province, Türkiye /17/. The nearest residential settlement are Damlapınar, Güzer, Çukurköy, and Buçakkışla villages /24/.

2 VALIDATION PROCESS

2.1 Method and Criteria

The validation was conducted using RINA procedures in line with the requirements specified in the VCS.

The scope is defined as an independent and objective review of the VCS PD (version 1.2 of 21/01/2026) /1/ is reviewed against the criteria stated in the relevant decisions by the CDM Executive Board and VCS standard and guideline version 4.7 /5/, including the approved baseline and monitoring methodology ACM0002: Grid-connected electricity generation from renewable sources, version 20.0 of 28/11/2019 /10/. The re-validation was based on the requirements in the CDM validation and verification standard for project activities Version 03.0 /9/ and VCS program guide version 4.4 /4/ and standard version 4.7 /5/.

The re-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 document (PD).

Therefore, re-validation of the selected methodology ACM0002: Grid-connected electricity generation from renewable sources, version 20.0 of 28/11/2019 /10/ and reported project results were measured for compliance against the following criteria:

- VCS Standard, version 4.7 /5/
- VCS Program Guide, version 4.4 /4/
- CDM Methodological Tool “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion”, version 03 /13/
- CDM Methodological Tool “Tool to calculate the emission factor for an electricity system”, version 07.0 /11/
- CDM Methodological Tool “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 /12/

The re-validation consists of the following three phases:

- Document review (Project Description Report and supporting documents)
- On-site assessment
- The resolution of outstanding issues and the issuance of the final Re-Validation Report and opinion.

2.2 Document Review

A detailed review of all project documentation was conducted to ensure consistency with and identify any deviation from VCS requirements, the baseline methodology and the project description document. The VCS PD version 1.2 of 21/01/2026/1/ and previous versions in particular the applicability of the methodology, the validity of baseline determination, the validity of additionality of the project activity, the starting date of the project, the monitoring plan, the emission reduction calculations provided in the form of a spreadsheet, were assessed as part of

the validation. All documents that are reviewed are shared under appendix of this validation report.

2.3 Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	BORAN	Burcu	Seem Turkey Danışmanlık <i>Carbon Consultant</i>	13/01/2022	Description of the project activity, Emission reductions calculations,	Tugce KIRATLI
2.	BEYCE	Burak	Kepezkaya HEPP <i>Project Responsible</i>	13/01/2022	Monitoring plan and monitoring arrangements, Environmental and social impacts Monitoring Equipment	
3.	ULUER	Ekrem	Catak Village <i>Stakeholder</i>	13/01/2022	Benefit of the project activity Complaints about project Contact details of the project proponents Tail Water Local Employment	
4.	CAN	Muttalip	Catak Village <i>Stakeholder</i>	13/01/2022		
5.	ONKOL	Ali	Catak Village <i>Stakeholder</i>	13/01/2022		
6.	ALTAY	Ertugrul	Catak Village <i>Stakeholder</i>	13/01/2022		

During on remote audit, the project proponent and the carbon consultant were interviewed about description of the project activity, emission reductions calculations, monitoring plan and monitoring arrangements, monitoring equipment and environmental and social impacts of the project activity. In addition, 4 stakeholders were interviewed about the benefits or complaints about the project. They all defined that they have no complaints about the project activity.

Due to delays and the contracted consultant's misinterpretation of rules, the project was unable to request a renewal of the crediting period on time and an exemption request regarding the subsequent project process and the revalidation timeline was submitted to and approved by Verra. The approved Exemption Request [/32/](#) is publicly uploaded to Verra Registry.

2.4 Site Visits

On 13/01/2022, RINA team performed remote audit via video conference for Kepezkaya Hydroelectric Power Plant Project due to covid-19 pandemic. Project location is confirmed via google earth and monitoring equipment are verified through video conference and also PDD [/2/](#). During the remote assessment of the project, there were no hindrance and all the equipment's and the systems were accessible. RINA assessed the implementation and operation of the proposed project activity, reviewed the information flows for generating, aggregating and reporting the monitoring parameters, interviewed key personnel of the plant to confirm the operational and data collection procedures, cross-checked between information provided in the monitoring report and data plant, checked the monitoring

equipment, reviewed calculations and assumptions made in determining the GHG data and emission reductions, checked the quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

2.5 Resolution of Findings

The objective of this phase of the re-validation is to resolve any outstanding issues which need to be clarified for RINA's positive conclusion on the project description. To guarantee transparency a re-validation protocol has been customized for the project. The protocol shows in a transparent manner the requirements, means of re-validation and the results from validating the identified criteria. The re-validation protocol consists of three tables; the different columns in these tables are described below.

A corrective action request (CAR) is raised 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. Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions.
- The VCS requirements have not been met. There is a risk that emission reductions cannot be monitored or calculated.

A clarification request (CR) is raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met.

Re-Validation Protocol, Appendix 3 - Resolution of Corrective Action Requests and Clarification		
Corrective action requests and/or clarification requests	Response by project participants	Re-Validation Conclusion
The CAR and/or CRs raised in table 1 are repeated here.	The responses given by the project participants to address the CARs and/or CRs.	The re-validation team's assessment and final conclusion of the CARs and/or CRs.

In summary, no CRs / CARs were raised during the re-validation. All corrections were made during videoconference.

2.5.1 Forward Action Requests

A forward action request (FAR) is raised during re-validation to highlight issues related to project implementation that require review during the first verification of the project activity.

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

1. the actual project monitoring and reporting practices requires attention and /or adjustment for the next consecutive verification period, or
2. an adjustment of the MP is recommended.

No forward action requests (FAR) were identified during the re-validation process.

3 RE-VALIDATION FINDINGS

3.1 Project Details

Kepezkaya Hydroelectric Power Plant Project project activity (hereafter referred to as the “Project” or “Kepezkaya HEPP”), Türkiye, which is developed by Entek Elektrik Üretimi A.Ş. (hereafter referred to as the “project owner”) is a hydroelectric power plant in Karaman province, Türkiye /17/.

The Project has been implemented and operated by Entek Elektrik Üretimi A.Ş./18/. The project aims to generate electricity from hydro energy and feed it to the national electricity grid. The project was not rejected by another GHG program before. In addition, the project highly supports the sustainable economic development in the region.

The Project Activity utilizes the Göksu River /2/ water to generate electricity from hydropower scheme to generate electricity with zero carbon emissions for the Turkish Power Grid. The Project Activity is a run-off-river type hydro power plant with a total installed capacity of 29.40 MWm/28 MWe /18/ as confirmed through the Provisional Acceptance Protocols of the hydro turbines. The project producing positive environmental and economic benefits through the following aspects:

- Displacing the electricity generated by fossil fuel fired power plants by utilizing the renewable resources to avoid environmental pollution and GHG emissions,
- Contributing the economic development of the region by providing sustainable energy resources,
- Increasing the income and local standard of living by providing job opportunities for the local people,
- Reducing the blackout because of low voltage by lowering required capacity of the transformer.

Kepezkaya HEPP are expected to generate 107,587 MWh/year /17/ as verified through generation license. The project started operation on 01/10/2010 as confirmed through the provisional acceptance protocol /18/. There is no update or change to the project design after the registration of the project.

Start date of the first crediting period: 01/10/2010 - End date of the first crediting period: 30/09/2020 as verified through latest verification report /25/. Start date of the second crediting period: 01/10/2020 - End date of the second crediting period: 30/09/2030 /1/.

Item	Evidence gathering activities, evidence checked, and assessment conclusion				
	Audit type	Period	Program	VVB name	Number of years
Audit history	Validation Registration	01-October-2010 to 30-September-2020	VCS	TÜV Rheinland Energie und Umwelt GmbH	10 years
	Verification	01-October-2010 to 31-August-2012	VCS	TÜV Rheinland Energie und Umwelt GmbH	2 years
	Verification	01-September-2012 to 28-February-2018	VCS	Re Carbon Gözetim Denetim ve Belgelendirme Ltd. Şti.	6 years
	Verification	01-March-2018 to 30-September-2020	VCS	RINA Services S.p.A.	2 years
	Re-Validation	01-October-2020 to 30-September-2030	VCS	RINA Services S.p.A.	10 years
Sectoral scope	Sectoral Scope 1: Energy industries (renewable-/non -renewable sources).				
AFOLU project category, if applicable	NA				
Project activity type	Grid connected electricity generation from renewable sources				
General eligibility of the project to participate in the VCS Program	- The project is not excluded under Table 2.1 of the VCS Standard. /5/ - ACM0002: Grid-connected electricity generation from renewable sources, version 20.0 /10/ - The project is a single green field investment and is not part of a project group or bundle. /18/ - Type of project: Hydro /17/ - The registered project activity is 29.4 MWm/28 MWe as small scale. /17/				
AFOLU project eligibility, if applicable	NA				
Transfer project eligibility, if applicable	NA				
Project design	Single location or installation				
Project ownership	Entek Elektrik Üretimi A.Ş.				
Project start date	01/10/2010				
Project crediting period	01/10/2010 to 30/09/2020 CP1 01/10/2020 to 30/09/2030 CP2				
Project scale	Project (less than 300,000 tCO ₂ e/year)				
Likelihood of achieving estimated	For a while the project site and reservoir has been received less rain compared to ex-ante assumption. For this crediting period it has been				

GHG emission reduction or removals	expected to reach generation values that is described in electricity generation license.
Technologies and measures implemented by the project activity or activities	Kepezkaya HEPP which was developed by Entek Elektrik Üretimi A.Ş. is located at Karaman province /17/ and utilizes the Göksu River water /2/ to generate electricity from hydropower. The project is a run-of-river and the total installed capacity of the project is 29.4 MWm/28 MWe, with a predicted net power supply to the grid of 107,587 MWh per annum /17/. There is no new reservoir formation as it is just the collection of water. The water is collected as it just enables hourly regulation. The Project Activity is a run-off-river type having a total installed capacity of 28 MWe /17/.
Implementation schedule of the project activity or activities	The Kepezkaya HEPP consists of a single hydropower plant. A concrete gravity weir diverts water into the conveyance tunnel with 40 m ³ /s flow rate capacity. A net water head of 81.57 m (gross head 87.88 m) is formed, and water is discharged into two vertical Francis turbines. A 30 km 33 kV transmission line interconnects to the national grid at the 154 kV Kepezkaya Havza Transformer Substation. The project start to generate electricity on 01/10/2010/2/.
Project location	The Project Activity is located on the Göksu River in the Eastern Mediterranean region of Turkey, within the Karaman city borders. The nearest residential settlements are Damlapınar, Güzer, Çukurköy, and Buçakkışla villages /24/. The power-house is located between the elevations of 500 m and 410 m between 32°57'15" – 33°01'25" east longitudes and 36°57'00" – 36°58'15" north latitudes.
Conditions prior to project initiation	There was no other hydroelectric power plant installation at the project location. The project activity does not generate greenhouse gas emissions, so it can be excluded that the implementation has been made only in order to generate GHG emissions with their subsequent reduction.
Project compliance with applicable laws, statutes and other regulatory frameworks	Identify Addition of a new power generation capacity to the grid is regulated by Energy Market Regulatory Authority (EMRA) /17/ who issues the licenses for electricity generation and is responsible for ensuring that new capacity additions are in compliance with its rules and regulations.
Double counting and participation under other GHG programs	• No double accounting • No other VER programs • The project has not been rejected by another GHG programs
No double claiming with emissions trading programs or binding emission limits	No
No double claiming with other forms of environmental credit	No
Supply chain (Scope 3) emissions double claiming	The project activity does not affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain.
Sustainable development contributions	The project produces electricity from renewable energy sources using hydro as the power source and to contribute to Türkiye's growing electricity demand through a sustainable and low carbon technology. The project displaces the same amount of electricity generated by the

	grid dominated with fossil fired power plants. The project is expected to generate 107,587 MWh annually /17/. The annual emission reduction estimated by the project is 61,389 tonnes CO₂, /3/ approximately. While this number of emissions is mitigated, technology transfer is also realized as benefiting from hydropower. The project contributes improving the environmental situation in the region and in the country as avoiding fossil fuel-based electricity will enhance the air quality and help to reduce the negative effects on the climate. Through renewable technologies and hydro-based electricity sustainable and climate friendly development is promoted. During construction and operational period, the project has created employment opportunities for the local community. The project contributes the economic development of the region by providing sustainable energy resources. The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments.
Additional information relevant to the project	• No leakage • No commercially sensitive information • No further information.

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	The Project Proponent identified stakeholders through a review of the administrative structure, consultations with local authorities, and proximity to the project site. Official stakeholders were identified through direct engagement with local and provincial institutions, while community stakeholders were identified through the Mukhtars. Identified stakeholders included the Karaman Governorship, Provincial Directorate of Environment and Forestry, Karaman Municipality, Mukhtars and residents of Damlapınar, Güzer, Çukurköy, and Buçakkışla villages, and regional and national media (Anadolu Manşet and Türkiye Gazetesi).
Legal or customary tenure/access rights	Stakeholders, including the local communities of Damlapınar, Güzer, Çukurköy, and Buçakkışla villages, hold legal and customary access rights to surrounding agricultural lands, water resources, and forested areas. The project does not interfere with any private or communal lands. No indigenous peoples or customary rights holders with conflicting claims exist in the project area.
Stakeholder diversity and changes over time	Most of the stakeholders are villagers from Damlapınar, Güzer, Çukurköy, and Buçakkışla village, Karaman province /24/

Expected changes in well-being	The Project has resulted in the creation of new jobs in the project region and improvement in local roads, contributing to living standards in the region. Moreover, the project owner has provided contribution in kind to the local community, although these activities are not required legally. As a result, the community is supporting the project, and they believe that it creates a momentum for local sustainable development.
Location of stakeholders	Damlapınar, Güzer, Çukurköy, and Buçakkışla village, Karaman province, Türkiye
Location of resources	The resources that stakeholders use or have customary access to (such as agricultural land and local water sources) are located in the vicinity of the project site. The project does not restrict or modify access to these resources.

3.2.1.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder engagement process	The stakeholder consultation meeting was organized and conducted by Çınar Mühendislik Müşavirlik ve Proje Hizmetleri Ltd. Şti. on October 2 nd , 2007. Invitations were sent to the Mukhtars of Damlapınar, Güzer, Çukurköy, and Buçakkışla villages via fax and personal delivery, while relevant institutions were invited by phone. The meeting was publicly announced in a regional (Anadolu Manşet) and a national (Türkiye) newspaper. It included a presentation, open dialogue, and a questionnaire. All materials were provided in Turkish, and participation was documented through attendance sheets and distributed brochures.
Consultation outcome	A total of 42 participants attended the meeting. The presentation covered the principles of run-of-river hydropower, project-specific technical details, environmental impacts, climate change and global warming, the Kyoto Protocol and emission reduction credits, the role of the project in addressing climate change, and developer contact information. Participants raised questions regarding employment opportunities, and the Project Owner committed to prioritizing local villagers for unskilled positions; subsequently, five local residents were employed. No environmental concerns or objections were raised, and participants acknowledged observable impacts of climate change.
Ongoing communication	Ongoing communication between the Project Owner and local communities is maintained through the village Mukhtar, who holds the contact details of the plant's responsible person. The Project Owner conducts regular follow-ups to identify any complaints or requests. A signed confirmation from the Mukhtar (dated 13 January 2020) was submitted to the VVB. No grievances were reported during the monitoring period.
Stakeholder input	Stakeholder input primarily concerned employment opportunities. This was addressed through the hiring of five local workers and the maintenance of open communication channels. No design changes were required, as all concerns were adequately addressed.

3.2.1.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Obtaining consent	Consent for project implementation was obtained transparently during and after the stakeholder consultation. Relevant information on project design, environmental and social impacts, and feedback channels was provided. The Mukhtars, representing local communities, expressed their support for the project. No disputes or conflicts related to land use or project activities were identified.
Outcome of FPIC discussion	The consultation resulted in community consent to proceed with the project following full disclosure of information in an accessible manner. The project has not caused land encroachment, displacement, or involuntary resettlement, and no unresolved conflicts or ongoing disputes were identified.

3.2.1.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Development process	The VVB assessed that whether a comment book available at the most appropriate and publicly accessible location (Damlapınar, Güzer, Çukurköy, and Buçakkışla Villages) so that stakeholders can provide feedback on the project. The continuous input/grievance mechanism has been verified through interview with local stakeholders of the village and the logbook have been checked. There is not any positive or negative comment written on them.
Grievance redress procedure	The Mukhtar serves as the primary point of contact for local grievances, with regular communication maintained by the Project Owner. Stakeholders may also directly contact the plant's responsible person, whose contact details are publicly available. Any complaints are recorded, assessed, and addressed within a reasonable timeframe. To date, no grievances have been reported.

3.2.1.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
Primary stakeholder concerns centered on water rights and irrigation. As most villagers farm within the Project area, they expressed apprehension that project implementation may affect water availability.	The project owner assured Mukhtar that sufficient water would remain available for irrigation. Acknowledging the community's concerns, the owner also indicated that, if technically feasible, irrigation water could be released from the top of the penstock to	The project did not affected water availability in the project area.

	provide higher pressure, enabling the use of drip irrigation.	
Stakeholders related to future employment opportunities. Feedback indicated that local residents view unemployment as the most pressing issue in the region.	The project owner stated that, for unskilled labor needs during both construction and operation, priority would be given to hiring local villagers.	Project owner will inform local villagers when they need new employers.

3.2.2 Respect for Human Rights and Equity

3.2.2.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination and sexual harassment	Turkey has ratified ILO convention 100, 111, 122 and 142, which provides gender equality and promotes women's employment /27/. The project outputs serve everyone without regarding gender. It provides electricity for all. During remote site review and interview with stakeholders and employees it is examined that the project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis.
Management experience	There is not an expert required for the Gender Safeguarding Principles & Requirements. Since this is a renewable energy project no gender expert was required as we executed for the other similar project activities. Additionally, no need was raised by the stakeholders.
Gender equity in labor and work	The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis.
Human trafficking, forced labor, and child labor	Turkey has ratified ILO 87 and 98 conventions. All employees are recruited according to the national legislations. Turkey is a party of IPEC since 1992 and ratified ILO convention 138 and 182. During onsite no child and young labor is seen /28/.

3.2.2.2 Human Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	Türkiye is a party to European Convention on Human Rights since 18 May 1954 /29/.

3.2.2.3 Indigenous Peoples and Cultural Heritage

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Preservation and protection of cultural heritage	According to the registered PDD /2/ of Kepezkaya Hydroelectric Power Plant Project no sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture were observed in the project area. According to Turkish regulations project description report was presented to Ministry and EIA Not Required decision (Decision

Number: 7692-40009 dated 16/07/2007) /19/ was taken. Hence effect of project can be said as limited.

3.2.2.4 Property Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Rights to territories and resources	There are no uncertainties with regards land tenure, access rights, usage rights or land ownership.
Respect for property rights	Forestry Permit is received by local authorities and the process is evaluated in EIA /19/.

3.2.2.5 Benefit Sharing

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

3.2.3 Risks to Local Stakeholders and the Environment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Risks to stakeholder participation	Stakeholder consultation process was conducted during the remote audit. No risk is determined.
Working conditions	The Project avoids community exposure to increased health risks and does not adversely affect the health of the workers and the community. No risk is determined.
Safety of women and girls	No risk is determined.
Safety of minority and marginalized groups, including children	No risk is determined.
Pollutants (air, noise, discharges to	The project activity is operated in line with Environmental Law and related regulations.

water, generation of waste, release of hazardous materials)	Water Pollution Control Regulation, Hazardous Wastes Control Regulation, Industrial Air Pollution Control Regulation. No risk is determined.
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3.2.4 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	The Project does not physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified. Regarding the monitoring of “Water quality and quantity”, “Biodiversity and aquatic life”, streamgauge gauging station is built for the measurement of flow to assess the environmental flow. General directorate for state hydraulic works executes the monitoring as seen onsite visit and the Project complies with the regulations.
Soil degradation and soil erosion	The project is operated under Soil Pollution Control Regulation.
Water consumption and stress	Wastewater is collected through the septic tank and is transferred through the sewage truck.
Usage of fertilizers	Not related to the project activity.

3.2.4.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species and habitat	EIA Not Required decision /19/ is provided. The project has not impact habitats for rare, threatened, or endangered species.

3.2.4.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
NA	NA

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
NA	NA

3.2.4.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
<i>Ecosystem conversion</i>	NA

3.3 Application of Methodology

3.3.1 Title and Reference

Methodology: ACM0002: Grid-connected electricity generation from renewable sources, version 20.0 of 28/11/2019 /10/, refers to correctly applied for the project activity. The application of the methodology is subject to the following methodological tools:

Type (methodology, tool or module).	Reference ID, if applicable	Title	Version
Methodology	ACM0002	Grid-connected electricity generation from renewable sources	20.0
Tool	TOOL07	Tool to calculate the emission factor for an electricity system	07.0
Tool	TOOL11	Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period	03.0.1
Tool	TOOL03	Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion	03

3.3.2 Applicability

The methodology ACM0002: Grid-connected electricity generation from renewable sources /10/ is applicable to grid-connected renewable 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).

The project activity installs a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield), ACM0002: Grid-connected electricity generation from renewable sources is applicable. The applicability criteria are listed and justified below:

For each of the applied methodology's applicability conditions are described the steps taken to assess compliance of the project with the applicability condition;

The choice of methodology ACM0002 Version 20.0 is justified as the proposed project activity meets relevant applicability criteria:

Methodology ID	Applicability condition	Justification of compliance
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)	The Kepezkaya HEPP project is installation of a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity.
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 battery energy storage systems (BESS) with a Greenfield power plant; (b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic 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)	The project does not involve an integration of a BESS. Hence, this condition is N/A.
ACM0002	The methodology is applicable under the following conditions: (a) The project activity may include renewable energy power plant/unit of one of the following types: 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,	The project is a hydro power plant. Hence, this condition is applicable.

	and no capacity expansion, 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 2 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 (3), is greater than 4 W/m²; or (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (3), is greater than 4 W/m². (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	As per the methodology, the power density calculation is as following: $PD = \frac{28,000,000 \text{ W} - 0}{166,258.40 \text{ m}^2} = 0$ PD = 168 W/m² which is greater than 4 W/m². Hence, this condition is applicable.

	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.	The project is not an integrated hydropower plant. Hence, this condition is N/A.
ACM0002	In the case of PSP, the project participants shall demonstrate in the PDD that the project is not using water which would have been used to generate electricity in the baseline.	The project does not include a PSP. Hence, this condition is N/A.
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.	The project does not involve switching from fossil fuels to renewable energy sources and 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 project does not involve retrofits, rehabilitations,

	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 business as usual maintenance”.	replacements, and it is not a capacity addition.
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RINA hereby confirms that the selected baseline and monitoring methodology has been previously approved by the CDM EB, and is applicable to the project, which complies with all the applicability conditions therein and the selected version is valid at the time of the re-validation commencement. It is also confirmed that the methodology is correctly applied by comparing it with the actual text of the applicable version of the methodology.

3.3.3 Project Boundary

The project boundary clearly defined in accordance with the applied methodology. According to the approved baseline and monitoring methodology ACM0002, version 20.0 /10/, the project boundary includes the project power plant and all power plants connected physically to the electricity system that the project is connected to since there is no dispatch grid system in Türkiye, project boundary is considered as the National Electricity Grid of Türkiye according to applied tool.

By checking the information during the onsite audit, RINA can confirm that all the emission sources, gases have been included in the project boundary, and the description in the latest version of VCS PD version 1.2 of 21/01/2026/1/ is accurate and complete, and also that the selected sources and gases are justified for the proposed project activity.

Source		Gas	Included?	Justification/Explanation
Baseline	Electricity generation in baseline (Turkey's Grid)	CO2	Yes	Main emission source
		CH4	No	Minor emission source
		N2O	No	Minor emission source
		Other	No	N/A
Project	Emission from the reservoir of the proposed project	CO2	No	Minor emission source
		CH4	No	Minor emission source (Power density greater than 10 W/m²)
		N2O	No	Minor emission source
		Other	No	N/A
		CO2	Yes	Neglected (according to ACM0002 v.22)
		CH4	No	Minor emission source

Source		Gas	Included?	Justification/Explanation
	Auxiliary Diesel Generator	N ₂ O	No	Minor emission source
		Other	No	N/A

3.3.4 Baseline Scenario

According to the approved baseline methodology ACM0002, version 20.0, the baseline scenario is “Electricity delivered to the grid by the project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid”. Since the baseline is defined by the approved methodology, no further analysis is required as per the paragraph 75 of the Validation and Verification Standard for project activities /9/, version 03.0.

RINA verified that the baseline was updated assessed according to the tool “Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period”. The conclusion is that the baseline of the type I component of the project activity complies and will continue to comply with the laws and regulations in the sector for the next crediting period. It can be concluded that the conditions used to determine the baseline emissions in the previous crediting period are still valid.

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. Hence 1st step is approved for this project activity.

The validity of the current baseline is assessed using the following Sub-steps:

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

The approved baseline methodology “Electricity delivered to the grid by the project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid” /10/ has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed VCS project activity. The current baseline has been updated with the latest data and projections available by the official bodies. It is clear that the baseline scenario is still valid for the second crediting period in accordance with the tool.

Step 1.2: Assess the impact of circumstances.

The present circumstances do not influence the calculation of the current baseline emissions. A new grid emission factor of the Türkiye grid is chosen and defined for the new crediting period.

As demonstrated in the assessment above the baseline of the grid and it does not need to be updated.

Step 1.3: Assess whether the continuation of use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested.

This sub-step is not applicable since the baseline scenario identified at the validation of the project activity was not the continuation of use of the current equipment(s) without any investment.

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

The data and parameters that were only determined at the start of the crediting period and not monitored during the crediting period are still valid have been assessed. For baseline calculation there are two main parameters: the electricity generation and the grid emission factor. In line with the tool and methodology, only the grid emission factor has been updated during the second crediting period renewal.

Step 2.1: Update the current baseline

The current baseline emissions for the subsequent crediting period have been updated.

Step 2.2: Update the data and parameters

In line with the tool and methodology, only the grid emission factor has been updated during the second crediting period renewal.

According to the tool, the application of Steps 1.1, 1.2, 1.3, 1.4, 2.1 and 2.2 confirmed that the current baseline as well as data and parameters are still valid for the 2nd crediting period, then this baseline, data and parameters can be used for the renewed crediting period.

The project activity is in its 2nd crediting period. The ongoing financial need for carbon revenue continues for the last crediting period. Since the increased maintenance and repair costs, exchange rate effect. The system usage and operation fees that need to be paid by the project activity to Distribution Company is another important factor contributing to the project's expenditure.

RINA verified that the baseline was updated assessed according to the tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" /12/. The conclusion is that the baseline of the type I component of the project activity complies and will continue to comply with the laws and regulations in the sector for the next crediting period. It can be concluded that the conditions used to determine the baseline emissions in the previous crediting period are still valid.

3.3.5 Additionality

A full reassessment of additionality is not required when renewing the project crediting period in line with the VCS rules. Additionally, ongoing financial need has been demonstrated by explanation related to VERs revenues under section B.5.2 of the PDD has been validated.

The project continues into its second crediting period, reducing GHG emissions by generating renewable hydroelectricity instead of fossil-based power. Additionality was already established in the first crediting period, and no capacity changes have occurred since. The project is not mandatory, complies with all relevant regulations, and holds all required permits, with no regulatory changes affecting its status.

3.3.6 Quantification of GHG Emission Reductions and Carbon Dioxide Removals

According to the applied methodology baseline emissions are calculated with the formulae below:

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

where:

BE_y = Baseline Emissions in year y (tCO₂e)

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

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

In accordance with ACM0002 /10/, the baseline emissions are calculated as the net electricity generated by the project activity, multiplied with the baseline emission factor of the project grid.

Baseline Emissions

The calculation of baseline emission reductions is carried out in a conservative manner providing documentation and references to data sources. An approved CDM methodology, ACM0002, version 20.0 /10/, and methodological tool “Tool to calculate the emission factor for an electricity system, version 07.0 /11/, is applied. The directly official published data¹ by Turkish Ministry of Energy and Natural Resources is used for this monitoring period:

Calculating of the Combined Margin Emission Factor

¹ [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://enerji.gov.tr/Media/Dizin/EVCED/tr/%C3%87evreVe%C4%B0klim/%C4%B0klimDe%C4%9Fi%C5%9Fikli%C4%9Fi/TUESEmisyonFktr/Belgeler/2019_Sebeke_EF.pdf](https://enerji.gov.tr/Media/Dizin/EVCED/tr/%C3%87evreVe%C4%B0klim/%C4%B0klimDe%C4%9Fi%C5%9Fikli%C4%9Fi/TUESEmisyonFktr/Belgeler/2019_Sebeke_EF.pdf)

It's been published as 0.5706 tCO₂/MWh by the Ministry of Energy.

According to the methodology the baseline emissions may consist of:

According to the methodology the baseline emissions may consist of:

$$BE_y = 107,587 \times 0.5706 = 61,389 \text{ tCO}_2 \text{ per year}$$

Project Emissions

As per applied methodology ACM0002 "Grid-connected electricity generation from renewable sources", v20.0, "For most renewable power generation project activities, $PE_y = 0$. However, some project activities may involve project emissions that can be significant. These emissions shall be accounted for as project emissions by using the following equation:

$$PE_y = PE_{FF,y} + PE_{GP,y} + PE_{HP,y}$$

where:

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

$PE_{FF,y}$ = Project emissions from fossil fuel consumption in year y (tCO₂/yr)

$PE_{GP,y}$ = Project emissions from the operation of dry, flash steam or binary geothermal power plants in year y (t CO₂e/yr)²

$PE_{HP,y}$ = Project emissions from water reservoirs of hydro power plants in year y (tCO₂e/yr)

Since this project uses hydroelectric power, $PE_{GP,y}$ is "0" (tCO₂/yr)

The only emission source in the plant is the diesel generator which is used as auxiliary power source when there is no electricity generation in the plant or supply by the grid. In urgent cases, a diesel-powered generator will be operated for the daily consumption of personnel and the building, which is negligible. Project emissions are taken as zero. The same is also stated in paragraph 33 of "ACM0002: Grid-connected electricity generation from renewable sources, v20.0". Hence it is neglected. Therefore, $PE_{FF,y} = 0$ (tCO₂/yr)

Beside of the diesel generator, other potential project emission for this proposed project is $PE_{HP,y}$.

However, if the power density of the project activity is greater than 10 W/m² than $PE_{HP,y} = 0$

The power density (PD) of the project activity is calculated as follows:

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

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

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

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

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

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

Power density has been calculated as follows:

$$Cap_{PJ} = 28,000,000 \text{ W} / 17 /$$

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

$$A_{PJ} = 166,258.40 \text{ (m}^2\text{)} / 2 /$$

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

Therefore, PD is calculated as;

$$PD = \frac{28,000,000 - 0}{166,258.40 - 0}$$

$$PD = 168 \text{ W/m}^2$$

Since the power density higher than 10 W/m², project emissions are identified as zero as per the methodology.

Leakage

In accordance with the ACM0002 (version 20.0), leakage is taken as zero since the project is a new power plant is taken as zero, LEy= 0

Emission Reductions

$$ERy = BEy - PEy - LEy$$

$$ERy = 61,389 \text{ tCO}_2/\text{year}$$

It is confirmed that all the documentation used by the project participants as the basis for assumptions and source of data are quoted and interpreted in the PDD and the Emission Reduction Calculation Spread Sheet are correctly applied in line with the methodology.

3.3.7 Methodology Deviations

Not applicable

3.3.8 Monitoring Plan

The monitoring plan (data and parameters fixed ex ante) includes all data and parameters fixed ex ante required by the applied methodology and baseline tool.

Parameters ex-ante:

Data/ parameter	Unit	Value applied	Assessment
EF _{grid,CM,y} Combined Margin of Türkiye National Grid (CM)	tCO ₂ /MWh	0.5706	Emission factor of the Turkish grid determined ex-ante. It's been published by the Ministry of Energy for 2019 on 06/10/2021 /7/. It is confirmed that public official data vintage is in line with the tool for the 2 nd crediting period.

The re-validation team considers that the description of the monitoring plan contains all necessary parameters, that they are described and that the means of monitoring described in the plan complies with the requirements of the methodology including applicable tool(s).

Parameters ex-post:

Data/ parameter	Unit	Assessment			
EG _{PJ,y}	MWh	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y Two sets of meters measuring continuously then calculate the net electricity generation supplied by the project to grid. The annual electricity fed to the grid is estimated as 107,587 MWh /17/ as verified through generation license. The electricity generation of the plant will be calculated based on EPIAS records and crosschecked with TEIAS records that are the basis of sold electricity. The net electricity is measured continuously and recorded at least monthly. Net electricity generation will be measured by two meters are sealed by TEIAS. Meters information: Unit-1 <table> <tr> <th>Specifications</th><th>Main meter</th><th>Spare Meter</th></tr> </table>	Specifications	Main meter	Spare Meter
Specifications	Main meter	Spare Meter			

Manufacturer:	ITRON	ITRON
	84260262	84260263
Serial No:		
Accuracy	0.2S	0.2S
Class:		
Unit-2		
Specifications	Main meter	Spare Meter
Manufacturer:	ITRON	ITRON
Serial No:	84260264	84260265
Accuracy	0.2S	0.2S
Class:		
As verified during remote site audit and TEIAS documents. Date of the first index protocols of electricity meters is 23/07/2019 /21/. The latest test was conducted on 07/08/2025 /22/. Calculations are as follows: $EG_{facility,y} = EG_{export,y} - EG_{import,y}$ The technical specifications of the power meters should be in line with Measure and Metering Devices Regulation by Ministry of Industry and Trade /15/. In addition, the metering devices are in line with the technical requirements which are set out by the Communiqué for Metering Devices to be used in the Electricity Market. TEIAS performs a regular maintenance on a regular basis. TEIAS is the main responsible for calibration and maintenance of the devices. TEIAS performs the necessary maintenance and calibration. Since the electricity generation data is used for the billing and accounting between TEIAS and Project Participant the data is of high quality. The calibration will be implemented in accordance with the related standard procedures. The periodical maintenance is under the responsibility of TEIAS and has been fixed as once 10 years /15/. The periodic tests are conducted every two years. However, as part of the PP initiative ,electricity meters will be tested on an annual basis. The necessary regulations regarding to electricity generation and metering are checked by the re-validation team. The monitoring plan of the $EG_{PJ,y}$ parameter is line with the necessary regulations. The re-validation team considers that the description of the monitoring plan contains all necessary parameters, that they are described and that the means of monitoring described in the plan complies with the requirements of the methodology including applicable tool(s).		

Cap_{Pj} Installed capacity of the hydro power plant after the implementation of the project activity	W	28,000,000 /17/ This parameter will be monitored once at the beginning of each crediting period. It is confirmed also by the parameter readings on the design plates of each turbine and by summing the two units
A_{Pj} Area of the reservoir measured on the surface of the water, after the implementation of the project activity, when the reservoir is full	m ²	166,258.40 /2/ Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m ²) Reference of parameter is google earth /24/ calculation of Area of reservoir as registered PDD. It is verified onsite visit.
PEFC _{j,y}	tCO ₂ /yr	CO ₂ emissions from fossil fuel combustion in process j during the year y will be monitored once at every monitoring period by the methodological tool “Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion”
FC _{j,y}	tonne/yr	Quantity of fuel type i combusted in process j during the year y will be monitored once at every monitoring period by onsite logs and measurements.
NCV _{i,y}	GJ/ton	Weighted average net calorific value of fuel type i in year y will be monitored for this crediting period. A default value is used for this parameter which is defined as 43.3 GJ/ton.
EFCO _{2,i,y}	tCO ₂ /GJ	Weighted average CO ₂ emission factor of fuel type i in year y will be monitored for this crediting period. A default value is used for this parameter which is defined as 74.80 tCO ₂ /GJ.

3.4 Non-Permanence Risk Analysis

There is not any risk for the project activity.

4 RE-VALIDATION OPINION

4.1 Re-Validation Summary

RINA has performed the re-validation of the updated VCS-PD version 1.2 of 21/01/2026) /1/ for the project activity “Kepezkaya Hydroelectric Power Plant Project”. The re-validation is performed for the 2nd crediting period (from 01-October-2020 to 30-September-2030). The project complies with the re-validation criteria for projects set out in VCS guideline version 4.4 /4/ and standard version 4.7 /5/. The project activity is likely to achieve estimated GHG emission reduction or removals. RINA also declares that GHG statement was conducted in accordance with ISO 14064-3.

4.2 Re-Validation Conclusion

Crediting period: From 01-October-2020 to 30-September-2030

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 VCUs (tCO ₂ e)	Estimated removal VCUs (tCO ₂ e)	Estimated total VCUs (tCO ₂ e)
01/10/2020 to 31/12/2020	15,473	0	0	15,473	0	15,473
01/01/2021 – 31/12/2021	61,389	0	0	61,389	0	61,389
01/01/2022 – 31/12/2022	61,389	0	0	61,389	0	61,389
01/01/2023 – 31/12/2023	61,389	0	0	61,389	0	61,389
01/01/2024 – 31/12/2024	61,389	0	0	61,389	0	61,389
01/01/2025 – 31/12/2025	61,389	0	0	61,389	0	61,389
01/01/2026– 31/12/2026	61,389	0	0	61,389	0	61,389
01/01/2027 – 31/12/2027	61,389	0	0	61,389	0	61,389
01/01/2028 – 31/12/2028	61,389	0	0	61,389	0	61,389

01/01/2029 - 31/12/2029	61,389	0	0	61,389	0	61,389
01/01/2030 - 30/09/2030	45,916	0	0	45,916	0	45,916
Total	613,890	0	0	613,890	0	613,890

APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION

Section	Information	Justification	Assessment method and conclusion
NA	NA	NA	NA

APPENDIX 2: SUPPORTING DOCUMENTS

1	Climate Balanced İklim Enerji Ticaret ve Eğitim Ltd. Şti VCS PD for Kepezkaya Hydroelectric Power Plant Project, version 1.2 of 21/01/2026
2	VCS PD for 1st crediting period of Kepezkaya Hydroelectric Power Plant Project, version 2.0 of 24/08/2012
3	Climate Balanced İklim Enerji Ticaret ve Eğitim Ltd. Şti ER Calculation Excel Spreadsheet version 01 of 04/11/2025
4	VCS Verified Carbon Standard: VCS Program Guide, VCS Version 4.4 of 29/08/2023
5	VCS Verified Carbon Standard: VCS Standard, VCS Version 4.7 of 16/04/2024
6	VCS Verified Carbon Standard: VCS Validation report template, 4.4 of 16/04/2024
7	Ministry of Energy and Natural Resources: Turkish National Electricity Grid Emission Factor, for 2019 on 06/10/2021
8	CDM Executive Board: Clean Development Mechanism Project Standard for project activities, version 03.0 of 09/09/2021
9	CDM Executive Board: Clean Development Mechanism Validation and Verification Standard for project activities, version 03.0 of 09/09/2021
10	CDM Executive Board: Baseline and Monitoring Methodology ACM0002 Grid-connected electricity generation from renewable sources, version 20.0 of 28/11/2019
11	CDM Executive Board: Methodological Tool “Tool to calculate the emission factor for an electricity system”, version 07.0 of 31/08/2018
12	CDM Executive Board: Tool “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 of 02/03/2012
13	CDM Executive Board: Methodological Tool “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion”, version 03.0 of 22/09/2017
14	TUV Rheinland: Validation Report of 1st crediting period N° 21220321, version 2.0 date of 11/09/2012
15	Energy Market Regulatory Authority: Communiqué for Measurement Devices used in the Electricity Market, date of 22/03/2003
16	Energy Market Regulatory Authority Regulation of Metering and Testing of Metering Systems date of 24/07/1994
17	Energy Market Regulatory Board: Generation License numbered EU/1245-6/897 dated 05/07/2007
18	Provisional Acceptance Protocol dated 06/09/2010
19	EIA Not Required Decision dated 25/07/2008
20	Social Security Records of Employees
21	First Index Protocols of Electricity Meters dated 23/07/2019
22	Last Meter Test dated 07/08/2025

23	Connection Agreement dated 02/10/2009
24	PDF File of the Project Activity
25	Re-Carbon: Previous Verification Report, report ID: 564 version 02.1 of 30/12/2020
26	Regulation numbered 26939 that was published in the Official Gazette on July 17, 2008 by the Ministry of Environment and Forestry
27	http://www.ilo.org/ankara/areas-of-work/equality-discrimination/lang-tr/index.htm Gender Equality and Women's Rights
28	http://www.ilo.org/ipecc/programme/lang-en/index.htm Elimination of Child Labour
29	https://www.mevzuat.gov.tr/MevzuatMetin/1.5.6701.pdf Human Rights
30	Old Validation Report, VCS-Validation-Report-Kepezkaya HEPP_Rev 1.1Aa_15042022, prepared by RINA
31	Old excel file used in VCS-Validation-Report-Kepezkaya HEPP_Rev 1.1Aa_15042022: CM_Damlapınar_13012022
32	Exemption Request, VCS_Exemption_Request_Granted_954_04SEP2025

APPENDIX 3: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS

Table 1. Remaining FAR from previous validation

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

Table 2. CR from this validation

CR ID	1	Section no.		Date: 17/09/2025
Description of CR				
1.				
Project participant response				Date:
Documentation provided by project participant				
VVB assessment				Date:

CR ID	2	Section no.		Date: 17/09/2025
Description of CR				
1.				
Project participant response				Date:
Documentation provided by project participant				
VVB assessment				Date:

Table 3. CAR from this validation

CAR ID	1	Section no.		Date: 03/12/2025
Description of CAR				
1.				
Project participant response				Date:
Documentation provided by project participant				
VVB assessment				Date:

CAR ID	2	Section no.		Date: 17/09/2025
Description of CAR				
1.				
Project participant response				Date:
Documentation provided by project participant				
VVB assessment				Date:

Table 4. FAR from this validation

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

APPENDIX 4: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS



CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:
We declare that Mr/Mrs/Ms:

Ilayda ONARAN

è qualificato come¹:
is qualified as:

VAL – VER – TL – TEC

nello schema²:
for the scheme:

GS4GG – VCS

per le seguenti aree tecniche:
for the following technical areas:

1.1 – 1.2 – 3.1 – 13.1 – 13.2

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.1	Thermal Energy Generation	1
1.2	Renewables	1
3.1	Energy Demand	3
13.1	Waste handling and disposal	13
13.2	Manure	13

in accordo alle istruzioni dell'Unità responsabile (OU) per sostenibilità & cambiamenti climatici.
in accordance with the instructions of the responsible unit (OU) for the sustainability & climate change.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	31/01/2025	First Issue
1	21/03/2025	TL Update
2	18/08/2025	Update qualification as TE- 1.2, 13.1, 13.2

Il Resp. OU
Head of OU

Raima Ruvins

¹ Legend:

VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
REG-EXP: Regional Expert

ITR: Independent Reviewer
DET: Determiner

² Legend:

CDM: Clean Development Mechanism
VCS: Verified Carbon Standard
GS4GG: Gold Standard for Global Goals
SCS: SocialCarbon Standard
JI: Joint Implementation
ISO14064-2: International standard 14064 part 2

RNA Services S.p.A. è accreditata da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologia Institute per condurre la Validazione e la Verifica di Progetti SCS.

RNA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS4GG Projects and by the Ecologia Institute, to carry out Validation and Verification of SCS Reports.

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CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig.:
We declare that Mr:

Mehmet ERDOGAN

è qualificato come¹:
is qualified as:

TL – VAL⁴ – VER – TEC – REG-EXP³ – ITR

nello schema²:
for the scheme:

VCS – CCB – GS4GG

per le seguenti aree tecniche:
for the following technical areas:

1.1 – 1.2 – 9.2 – 13.1 – 13.2

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.1	Thermal energy generation	1
1.2	Renewables	1
3.1	Energy demand	3
9.2	Iron, steel and Ferro-alloy production	9
13.1	Waste handling and disposal	13
13.2	Manure	13

in accordo alle istruzioni dell'Unità responsabile (OU) per sostenibilità & cambiamenti climatici.
in accordance with the instructions of the responsible unit (OU) for the sustainability & climate change.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	24.03.2023	First Issue
1	12/04/2023	GS4GG extension
2	24/07/2023	GS4GG VAL extension
3	10/12/2023	TEC SS3 extension
4	31/01/2024	ITR extension

Il Responsabile di schema
Scheme Manager



¹
VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
REG-EXP: Regional Expert
ITR: Independent Reviewer
DET: Determiner

²
CDM: Clean Development Mechanism
VCS: Verified Carbon Standard
GS4GG: Gold Standard for Global Goals
SCS: SocialCarbon Standard
JI: Joint Implementation
ISO14064-2: International standard 14064 part 2
UER: Upstream Emission Reduction
CCB: The Climate, Community & Biodiversity Alliance

³ Turkey

⁴ For GS4GG only

RINA Services S.p.A. è accreditata da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di rapporti SCS.
RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS4GG Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports.

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01.0	10/06/2016	Initial publication.
