GLOBAL CARBON COUNCIL

Driving Climate Actions

Project Verification Report

V3.1 - 2020

CONTENTS

COVER PAGE Project Verification Report Form (PVR)	
BASIC INFORMATION	
Name of approved GCC Project Verifier / Reference No. (also provide weblink of approved GCC Certificate)	LGAI Technological Centre S.A / GCCV009/00 (https://www.globalcarboncouncil.com/wp-content/uploads/2022/06/GCCV009-00_LGAI-Applus_GCC-Verifier-Certificate_06062022.pdf)
Type of Accreditation	☐ Individual Track[1] ☒ CDM Accreditation Name of the entity that provided the accreditation: UNFCCC Date of validity: 04/10/2023 Weblink of the active accreditation certificate and approval: https://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0032 ☐ ISO 14065 Accreditation
Approved GCC Scopes and GHG Sectoral scopes for Project Verification	GCC Scopes: Environmental No-harm (E+) Social No-Harm (S+) Sustainable Development Goals (SDG+) GHG sectoral Scope: Scope 1 - Energy (renewable/non-renewable sources).
Validity of GCC approval of Verifier	05/09/2023
Title, completion date, and Version number of the PSF to which this report applies	Title: Dereköy Regulator and Hydro Power Plant Completion date: 10/07/2023 Version number: 05
Title of the project activity	Dereköy Regulator and Hydro Power Plant
Project submission reference no. (as provided by GCC Program during GSC)	S00271
Eligible GCC Project Type[2] as per the Project Standard (Tick applicable project type)	☒ **Type A:** ☐ Type A1 ☒ Type A2 (Sub-Type 1) ☐ **Type B – De-registered CDM Projects:** ☐ Type B1

[1] **Note:** GCC Verifier under Individual tack is not eligible to conduct verifications for the GCC project that intends to supply carbon credits (ACCs) for CORSIA requirements.

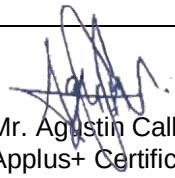
[2] Project Types defined in Project Standard and Program Definitions on GCC website.

	☐ Type[3] B2
Date of completion of Local stakeholder consultation	Date of completion: 12/04/2022
Date of completion and period of Global stakeholder consultation. Have the GSC comments been verified. Provide web-link.	Date of GSC completion: 10/08/2022 GSC Period: 27/07/2022 to 10/08/202 https://www.globalcarboncouncil.com/global-stakeholders-consultation-5/ No comments received for this project
Name of Entity requesting verification service (can be Project Owners themselves or any Entity having authorization of Project Owners)	Reis RS Enerji Elektrik Üretim Sanayi ve Ticaret A.Ş.
Contact details of the representative of the Entity, requesting verification service (Focal Point assigned for all communications)	Mr. Fatih Reis fatih.reis@reisotomotiv.com.tr
Country where project is located	Turkey
GPS coordinates of the Project site(s)	Latitude - 36°36'38.48" N to 36°35'23.42" N (36.6106°N to 36.5898 N). Longitude - 30°18'55.28" E to 30°18'56.14" E (30.3153° E to 30.3155° E).
Applied methodologies (approved methodologies of GCC or CDM can be used)	AMS-I.D: Grid connected renewable electricity generation – Version 18.0[4]
GHG Sectoral scopes linked to the applied methodologies	GHG-SS #1. Energy (renewable/non-renewable sources)
Project Verification Criteria: Mandatory requirements to be assessed	☒ ISO 14064-2, ISO 14064-3 ☒ GCC Rules and Requirements ☒ Applicable Approved Methodology ☒ Applicable Legal requirements /rules of host country ☒ National Sustainable Development Criteria (if any) ☒ Eligibility of the Project Type ☒ Start date of the Project activity ☒ Meet applicability conditions in the applied methodology ☒ Credible Baseline

[3] GCC Project Verifier shall conduct Project Verification for all project types except B_2.

[4] https://cdm.unfccc.int/methodologies/DB/W3TINZ7KKWCK7L8WTXFQQOFQQH4SBK

	☒ Additionality ☒ Emission Reduction calculations ☒ Monitoring Plan ☒ No GHG Double Counting
	☒ Local Stakeholder Consultation Process ☒ Global Stakeholder Consultation Process ☒ United Nations Sustainable Development Goals (Goal No 13-Climate Change) ☐ Others (please mention below)
Project Verification Criteria: Optional requirements to be assessed	☒ Environmental Safeguards Standard and do-no-harm criteria ☒ Social Safeguards Standard do-no-harm criteria ☒ United Nations Sustainable Development Goals (in additional to SDG 13) ☒ CORSIA requirements
Project Verifier's Confirmation: The *GCC Project Verifier* has verified the GCC project activity and therefore confirms the following:	The GCC Project Verifier [LGAI Technological Centre S.A], certifies the following with respect to the GCC Project Activity [Dereköy Regulator and Hydro Power Plant]. ☒ The Project Owner has correctly described the Project Activity in the Project Submission Form (version 5.0, dated 10/07/2023 including the applicability of the approved methodology [AMS-ID, version 18.0] and meets the methodology applicability conditions and is expected to achieve the forecasted real and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder consultation processes and has calculated emission reductions estimates correctly and conservatively. ☒ The Project Activity is likely to generate GHG emission reductions amounting to the estimated 6,634tCO_2e annual average, as indicated in the PSF, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable GCC rules, including ISO 14064-2 and ISO 14064-3. ☒ The Project Activity is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard, and is likely to achieve the following labels: ☒ Environmental No-net-harm Label (**E**$^+$) ☒ Social No-net-harm Label (**S**$^+$) ☒ The Project Activity is likely to contribute to the achievement of United Nations Sustainability Development Goals (SDGs), complies with the Project Sustainability Standard, and contributes

	to achieving a total of [6 SDGs (4, 7, 8, 9,11 and 13)] SDGs, with the following[5] SDG certification label (**SDG+**): ☐ Bronze SDG Label ☐ Silver SDG Label ☐ Gold SDG Label ☐ Platinum SDG Label ☒ Diamond SDG Label ☒ The Project Activity complies with all the applicable GCC rules[6] and therefore recommends GCC Program to register the Project activity with above mentioned labels.
Project Verification Report, reference number and date of approval	Ref.No. TQC - 28022 26-07-2023
Name of the authorised personnel of GCC Project Verifier and his/her signature with date	 Mr. Agustin Calle de Miguel Applus+ Certification CDM Technical Manager Date: 26-07-2023

[5] SDG Certification labels: Bronze label (1 star): by achieving 2 out of 17 SDGs; Silver label (2 star): by achieving 3 out of 17 SDGs; Gold label (3 star): by achieving 4 out of 17 SDGs; Platinum label (4 star): by achieving 5 out of 17 SDGs; and Diamond label (5 star): by achieving more than 5 out of 17 SDGs.

[6] "GCC Rules" are defined in Project Definitions and refers to the rules and requirements set out by the GCC program related to GHG emission reductions and its voluntary certification labels and are available on the GCC Program's public website: https://www.globalcarboncouncil.com/resource-centre.html

1. PROJECT VERIFICATION REPORT

Section A. Executive summary

LGAI Technological Center S.A has been contracted by "Reis RS Enerji Elektrik Üretim Sanayi ve Ticaret A.Ş" an authorised Project Owner to perform Project Verification of GCC Project Activity "Dereköy Regulator and Hydro Power Plant" (GCC ref. no. S00271) and implemented safeguards aimed to achieve environmental and social impacts without causing any net harm. During this verification exercise, emission reductions claimed and contribution of the project activity towards the United Nations Sustainable Development Goals would also be verified along with Environmental (E+) and Social safeguards (S+).

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

- The project activity has been implemented as per the PSF/1/ and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- PSF and other supporting documents are complete;
- The actual monitoring systems & procedures and monitoring report conforms with the requirements of the approved monitoring methodology/4/;

Brief Summary of the Project Activity

The purpose of project activity is to generate clean form of electricity through renewable hydro energy source. The project "Dereköy Regulator and Hydro Power Plant" is a grid-connected 5.84 MWm / 5.64 MWe hydro power plant consisting 2 units of turbines with a capacity of 2.92 MWm / 2.82 MWe for the supply of generated electricity to the fossil-fuel intensive Turkish National Power Grid of Turkey.

The project activity is commissioned as stated in the following table. The table is having commissioning date, total installed capacity along with the location of the project activity.

Project Name	Project Location	Total Installed Capacity (MWm)	Total Installed Capacity (MWe)	Number of Turbines	Commissioning Date
Dereköy Regulator and Hydro Power Plant	Antalya/Turkey	5.84	5.64	2	20/10/2017

The project activity involves the development, construction and operation of a Greenfield hydro power plant by Reis RS Enerji Elektrik Üretim Sanayi ve Ticaret A.Ş. It is a green field power project located in Kumluca district, Antalya province, Turkey. The generated electricity is sold to Turkish Electricty Board under a Generation License/17/.

Some of the important technical specifications of the project are provided in the following table

Regulator	Features
Location	Kumluca / Antalya
Type	Concrete, solid body-controlled regulator
Project flow rate	10.5 m^3/s

$Thalw_{eg}$ level	391.6 m
Crest level	408.5 m
Maximum water level	407.4 m
Transmission Channel	**Features**
Type	U-section channel
Length	1,718.47 m
Slope	0.0005
Depth	4.95 m
Length of Transmission Tunnel	863.72 m
Forebay	**Features**
Length	16.20 m
Width	20.75 m
Penstock	**Features**
Length	180 m
Inner Diameter	2.0 m
Power House	**Features**
Level of Tail-Water	343 m
Installed Capacity	5.84 MWm / 5.64 MWe
Turbines	**Features**
Type	Francis
Installed Capacity	2 x 2.92 MWm / 2 x 2.82 MWe
Number of Units	2
Gross Head	62.52 m
Net Head	61.12 m
Main Transformer	**Features**
Type	External type three-phase oil insulated
Number of Units	2
Installed Capacity	2x3350 kVA
Input and Output Voltage	6.3/34.5 kV
Form of Cooling	ONAN

The project boundary includes the project site where the plant has been installed, power evacuation infrastructure including the other power stations feeding to the connected electricity grid, energy metering points, switch yards and other civil constructions. The estimated annual average power generation, by the project activity is 11,950 MWh, which is exported to the National Power Grid of Turkey. It will result into annual average ACCs of up to 6,634 tCO_2e and a total of 66,340 tCO_2e ACCs over 10-year period. The generated ACCs will be utilized to offset GHG emissions.

Scope of verification:

The scope of the services provided by LGAI Technological Center S.A, for the project is to perform Project Verification of concerned GCC Project Activity and implemented safeguards aimed to achieve environmental and social impacts without causing any net harm. The contribution of the project activity towards the United Nations Sustainable Development Goals and CORSIA requirements would also be verified.
The scope of project verification is to provide an independent evaluation on the proposed GCC project activity with respect to commitments and targets based on forecasted GHG emission reductions or net anthropogenic GHG removals, sustainability and environmental and social do no-net-harm, against applicable GCC rules and requirements/6/. Claims and assumptions made in the Project Submission Form (PSF) /1/are assessed against ISO 14064-2 and ISO 14064-3/5/ and GCC criteria, including but not limited to, GCC Program Framework

and Program Manual, GCC PS, GCC VS/6/, applied CDM methodology/4/ and other relevant rules and requirements established under Program process.

Project Verification Process:

LGAI Technological Center S.A employed a risk-based approach in the verification, focusing on the identification of significant risks for project implementation. The verification process was undertaken by a competent verification team and involved the following:

(a) Document review, involving:

- A review of documents and evidence submitted by the project owner in context of the reference rules and guidelines issued by GCC;
- Cross checks between the information provided in the PSF/1/ and information from the publicly available sources, GCC Verifier's sectoral expertise; and, independent background investigations;

(b) Follow-up actions (remote interviews), including:

- Interviews with stakeholders/ representative of the project owners in the project host country (i.e. Turkey);
- Cross checks between information provided by interviewed personnel to ensure that no relevant information has been omitted;

(c) Reference to available information related to projects or technologies similar to the proposed GCC Project Activity under verification;

(d) Review, based on the selected methodologies and applied methodological tools, on the appropriateness of formulae and accuracy of calculations;

(e) Reporting audit findings with respect to clarifications, non-conformities and the closure of the findings, as appropriate and;

(f) Preparation of a draft verification opinion based on the auditing findings and conclusions;

(g) Technical review of the draft verification opinion along with other documents as appropriate by an independent competent technical review team;

(h) Finalization of the Project Verification Opinion (this report).

Assessment of the verification:

According to the applicable sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center, S.A. has composed a project assessment team in compliance with the contract Review and Assessment Team appointment rules in the Internal Quality Management Systems of LGAI Technological Center as well as in compliance with the applicable requirements in the accreditation standard.

The composition of Assessment Team (LGAI Technological Center validation team) has been approved by LGAI Technological Center during the Contract Review process ensuring that the required skills and capabilities are covered.

The four qualification levels for Assessment Team members that are assigned by team members that are assigned by aforementioned appointment rules are as presented below:

- Lead Auditor (LA)
- Auditor (A)
- Technical Expert (TE)
- Financial Expert (FE)
- Technical Reviewer (TR)
- Any of the above-mentioned roles in training (iT, e.g. AiT for auditor in training).

The Sectoral Scope / Technical Areas required knowledge linked to the applied methodology(ies) is covered by the Assessment Team as shown below:

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Mr. Jitendra Mohan Singh	LA/TE	Yes	Yes	Yes	Yes
Mr. Jitendra Mohan Singh	FE	Yes	Yes	Yes	Yes
Mr. Denny Xue	TR/TE	Yes	Yes	Yes	NA

The complete list of CVs is included as Appendix 2 of this report.

Team has been selected based on host country knowledge, technical expertise, understanding of ISO 14064-2, ISO 14064-3/5/, applied methodology and methodological tool, GCC guidelines, rules and regulations related to project activity/4//6/, and auditing skills. LGAI confirms that assessment team is completely independent of all other aspect of project or its components

Conclusion

The review of the PSF/1/, supporting documentation, Interview with PP representatives have provided LGAI with sufficient evidence to determine the fulfillment of stated criteria. LGAI is of the opinion that the project activity "Dereköy Regulator and Hydro Power Plant" as described in the final PSF/1/ meets all relevant requirements of GCC, applied E+, S+, SDG+ & C+ Label/criteria requirements and host country (legal requirements for producing power) criteria and has correctly applied the methodology AMS-ID version 18.0./4/ Therefore, the project is being recommended to GCC Operations Team for request for registration.

The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v1.3 paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project.

Section B. Project Verification team, technical reviewer and approver

B.1 Project Verification team

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of GCC Project Verifier or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Project Verification findings
1.	Team Leader, Technical Expert,	OR	Singh	Jitendra Mohan	True Quality Certifications Private Limited-Outsourced entity	✓	x	✓	✓
3.	Financial Expert	OR	Singh	Jitendra Mohan	True Quality Certifications	✓	x	✓	✓

					Private Limited-Outsourced entity				

B.2 Technical reviewer and approver of the Project Verification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of GCC Project Verifier or outsourced entity)
1.	Technical reviewer, Technical Expert	EI	Xue	Denny	Central office
2.	Approver	IR	Calle de Miguel	Agustin	Applus+ Certification

Section C. Means of Project Verification

C.1 Desk/document review

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

- A review of the data and information presented to verify their completeness, and to assess the nature, scale and complexity of the verification activity.
- A review of the monitoring plan and monitoring methodology, paying attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- An evaluation of data management and the quality assurance & quality control system in the context of their influence on the generation and reporting of emission reductions, to achieve the desired confidence in the project owner's GHG information and claims regarding the additional certification labels (E+, S+, SDG+ and CORSIA market eligibility).
- Review of GCC and GSC comments have been taken into account. There are no GCC comment from GCC during the listing of project and global stakeholder. Assessment team confirms the same has been checked through screenshots of project listing webpage by the PP.

The list of documents reviewed is included in the section 'Appendix 3' of this report.

C.2 On-site inspection

Duration of on-site inspection: NA				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	-	**-**	-	**-**

In accordance with GCC Verification standard version 3.1– paragraph 29/6/, a site visit is not mandatory for the verification, as the estimated annual average of ERs is below 100,000 tCO_2e and there is no pre-project information that is relevant to the requirements for registration of the project activity and may not be traceable after the registration since the project has been operational since September 2017. However, FAR has been raised for verifier of ERVR.

Nevertheless, the team leader adopted alternative means in order to assure that all features are in accordance with PSF and undertook independent checks. Verifier conducted online interview through video conferencing on 16/09/2022 in which PP representatives have

attended (Refer Section C.3 of this report). The technical expert received all necessary information as documentary evidence to show the facilities and equipment (e.g., feasibility report, installation agreement) and team leader's notes necessary to have a clear and precise understanding of the project activity, which has been considered sufficient for the purpose of the present verification.

Therefore, for reasons provided above, and in line with verification standard, the verification team conducted the verification for this project using alternative means as defined in the GCC verification standard, version 3.1/6/. The verification team applied standard auditing techniques while verifying the project details, as discussed below.

Alternative means applied:

Following alternative means have been used to verify the project details:

- Interview with site in-charge confirming the implementation, project details such as installed capacity, location, monitoring, and consultant for emission reduction calculation
- Commissioning certificate /14/.
- Employment records /12/.
- Review of other documentary evidence (ER sheet /2/, IRR sheet /3/).

C.3 Interviews

Sr No	Interview			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Cebi	Omer	PP representative	16/09 /2022	Project Boundary, Geographical Location, Eligibility criteria, Host country requirements, Emission reduction calculations, Operational lifetime of the project activity, Monitoring plan (feasibility of monitoring arrangements described in PSF/1/), QA/QC procedures, responsibility of implementation of monitoring plan, data recording & storage procedures Local Stakeholder Consultation process, Implementation plan, Additionality, Investment inputs, benchmark and Financial Analysis E+, S+, SDG+, CORSIA+ Contribution of the project towards sustainable development	Jitendra Mohan Singh
2.	Ozbel	Erden	PP representative			
3.	Dutta	Supratik	Consultant EKI Energy Services Limited			
4.	Rajput	Pankaj	Consultant EKI Energy Services Limited			

C.4 Sampling approach

No Sampling Approach is used during project verification. All the data provided by the project owner has been duly verified.

C.5 Clarification request (CLs), corrective action request (CARs) and forward action request (FARs) raised

Areas of Project Verification findings	Applicable to Project Types	No. of CL	No. of CAR	No. of FAR
Green House Gas (GHG)				
Identification and Eligibility of project type	A_1, A_2, B_1, B_2	00	01	00
General description of project activity	A_1, A_2, B_1, B_2	00	01	01

Application and selection of methodologies and standardized baselines	A_1, A_2, B_1, B_2	00	00	00
- Application of methodologies and standardized baselines	A_1, A_2, B_1, B_2	00	00	00
- Deviation from methodology and/or methodological tool	A_1, A_2, B_1, B_2	00	00	00
- Clarification on applicability of methodology, tool and/or standardized baseline	A_1, A_2, B_1, B_2	00	00	00
- Project boundary, sources and GHGs	A_1, A_2, B_1, B_2	00	00	00
- Baseline scenario	A_1, A_2, B_1, B_2	00	01	00
- Demonstration of additionality including the Legal Requirements test	A_1, A_2, B_1, B_2	01	02	00
- Estimation of emission reductions or net anthropogenic removals	A_1, A_2, B_1, B_2	00	01	00
- Monitoring plan	A_1, A_2, B_1, B_2	00	03	00
Start date, crediting period and duration	A_1, A_2, B_1, B_2	00	00	00
Environmental impacts	A_1, A_2, B_1, B_2	00	00	00
Local stakeholder consultation	A_1, A_2, B_1	00	00	00
Approval & Authorization- Host Country Clearance	A_1, A_2, B_1, B_2	00	00	00
Project Owner- Identification and communication	A_1, A_2, B_1, B_2	00	00	00
Global stakeholder consultation	A_1, A_2, B_1	01	00	00
Others (Refer finding section attached in the report)	A_1, A_2, B_1, B_2	00	00	00
VOLUNTARY CERTIFICATION LABELS				
Environmental Safeguards (E^+)	A_1, A_2, B_1	00	01	00
Social Safeguards (S^+)	A_1, A_2, B_1	00	00	00
Sustainable development Goals (SDG^+)	A_1, A_2, B_1	00	00	00
Authorization on Double Counting from Host Country (only for CORSIA)	A_1, A_2, B_1	01	01	01
CORSIA Eligibility (C^+)		00	00	00
Total		**03**	**11**	**02**

Section D. Project Verification findings

D.1 Identification and eligibility of project type

Means of Project Verification	The project activity has identified itself as A2 category, Sub-type 1 which was found acceptable since the project has not been registered under any GHG program and the program operations started since October 2017, which was checked against the Turkish environmental regulations, an "Environmental Impact Assessment (EIA) Approval Letter" was approved by the Ministry of Environment and Forestry in 24/07/2017 /9/. This has been verified based on GCC's Rules and requirements. /6/ Further, following points are verified by the assessment team; a. It is not required by a legal mandate and it does not implement a legally enforced mandate as confirmed from the EIA certificate /9/. b. It complies with all the applicable host country legal requirements /6/ and it ensures compliance with legal requirements as it has acquired provisional acceptance certificates from the TEIAS prior to the start of the commercial operation of the project /14/

	a. The project also delivers real, measurable and additional emission reduction/2/ of 6,634 tCO_2e annually (average value over the crediting period) as compared to the baseline scenario. b. Project applies an approved CDM monitoring and baseline methodology AMS-I.D. version 18.0. /4/
Findings	CAR 02 was raised and resolved. Please refer appendix 4 for more information
Conclusion	The project activity was found eligible as per the requirements under section 4 and has been confirmed to be type A2 project in line with paragraph 11 (a) (ii) of the GCC Project Standard version 3.1/6/.

D.2 General description of project activity

Means of Project Verification

The project activity involves installation of a 5.64 MWe /14/ hydro power plant which includes 2 turbines of 2.82 MW each. The project is a greenfield project and in the absence of the same the electricity requirement would have been met from fossil fuel intensive national grid. Therefore, the national grid has been selected as the baseline appropriately.

During assessment, the verification team observed that the project installation was complete, and the project installation was carried out in accordance with the feasibility report /8/.

The project activity is located in Kumluca district, Antalya province, of Turkey. The location was checked with the help of satellite images via independent research. The coordinates of the physical site of the project activity are as follows:

Latitude	Longitude
36°36'38.48" N to 36°35'23.42" N (36.6106 N to 36.5898°N)	30°18'55.28" E to 30°18'56.14" E (30.3153° E to 30.3155° E)

Latitude and Longitude of the physical site of the project activity has been included appropriately in the PSF which was found consistent from the feasibility report.

The hydro power plant constitutes of 2 units of 2.92 MWm/2.82 MWe with total installed capacity of 5.64 MWe. Expected annual electricity production was found to be 11,950 MWh /14//8//10/.

The project has the rights to generate and supply electricity 41 years 7 months as verified from the general license /10/. The Project Owners have fixed the crediting period of 10 years which is in accordance with the GCC program manual /6/ and will generate an estimated 6,634 tCO_2e emission reductions annually.

The PA is described as Type A2, sub-type 1, PA applying CDM methodology AMS-I.D. Version 18.0 /4/, and PA falls into the small-scale category (as per the applied CDM methodology).
In addition to generating emission reductions the hydro power plant also qualifies for other voluntary certification labels

Voluntary Labels	Applied by the project	Score/Label
Achieving the United Nations Sustainable Developmental Goals (SDG+)	Yes	06 out of total 17 SDG; Diamond

	<table><tr><td>Environmental No-net harm (E+)</td><td>Yes</td><td>+3</td></tr><tr><td>Social No-Net harms (S+)</td><td>Yes</td><td>+2</td></tr><tr><td>CORSIA (C+)</td><td>Yes</td><td>All ACCs Generated during the crediting period (estimated to be 6,634 tCO_2e per annum on an average)</td></tr></table> No sampling approach was applied, as it was not required by the applied methodology, with regard to verification of project description in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities". In the baseline scenario the main source of emission was found to be CO_2 as electricity was generated mainly through fossil-fuel based power plants whereas in project scenario the electricity is generated by the hydro power plant thereby reducing the CO_2 emissions. Thus, non-application of GWP in this project activity was found to be acceptable as the project boundary does not include any of the GHG emissions in the project scenario as per the applied methodology/4/. The description in the PSF/1/ includes sufficient details and provides clarity about the project activity. The project activity is not a bundled project. The project verification team also checked the GCC website and other public domain to determine if the project was part of any other GHG Program prior to commencement of this verification. It was confirmed that the project owners have not submitted this project under any other GHG program apart from GCC.
Findings	CAR 01 was raised and resolved. Please refer appendix 4 for more information.
Conclusion	The project verification was based on review of the supportive evidence submitted by the project owner. Hence, in line with the requirements of paragraph 36 of the GCC Project Standard version 3.1/6/, project verification team confirms that project description as contained in the final PSF/1/ was found accurate and contains complete details of the GHG emission-reduction Activity, including schematics, specifications and a description of how the project reduces emission reductions by generating renewable energy.

D.3. Application and selection of methodologies and standardized baselines

D.3.1. Application of methodology and standardized baselines

Means of Project Verification	Project owner has applied CDM methodology – AMS-I.D., version 18.0 /4/ and no standardized baseline is used. Applicability of the methodology as per paragraph 04 to 11 is verified as follows: <table><tr><th>Applicability criteria</th><th>Verification by assessment team</th></tr><tr><td>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);</td><td>The project activity is a green field hydro power plant, the applicability criterion is met. Document review including feasibility report /8/, generation license /10/ acceptance certificate of project activity /14/ were</td></tr></table>

	(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).	checked and found this criterion is applicable.
	Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: (a) The project activity is implemented in an existing reservoir with no change in the volume of reservoir. (b) The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W/m^2. (c) The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m^2.	The project compiles by criteria (c) of the applicability criterion as the project activity results in new reservoirs. The power density has been calculated in line with equation 7 of ACM0002 ver 21.0 which was found acceptable. The para 39 of applied methodology AMS-I.D, version 18.0 refers ACM0002 for project emission calculation from 'Emissions from water reservoirs of hydro power plants. The power density for the reservoir based on the formulae is 77.42 W/m^2 (for Detail Refer Section B of PSF) The installed capacity and area of the reservoir used for the calculation of power density have been verified from the plant layout diagram index and the feasibility report /8/. Hence the project was found fulfilling the criteria.
	If the new unit has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	The criterion is not applicable as it only has renewable component, and it does not have any non - renewable component.
	Combined heat and power (co-generation) systems are not eligible under this category.	The criterion is not applicable as the proposed project activity is a green field project which involves only the renewable component and not a cogeneration system.
	In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	No capacity addition in the existing renewable plant. The proposed project activity is a green field project which involves electricity generation through the hydropower plant. Document review including feasibility report /8/ and acceptance certificate of project activity /14/ were checked to confirm that the project is a greenfield project.

	In the case of retrofit, rehabilitation or replacement, to qualify as a small-scale project, the total output of the retrofitted, rehabilitated or replacement power plant/unit shall not exceed the limit of 15 MW.	Since, the project is a greenfield project the applicability criterion is not applicable Document review including feasibility report /8/ and acceptance certificate of project activity /14/ were checked to confirm that the project is a greenfield project.
	In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. If the recovered methane is used for electricity generation for supply to a grid then the baseline for the electricity component shall be in accordance with procedure prescribed under this methodology. If the recovered methane is used for heat generation or cogeneration other applicable Type-I methodologies such as "AMS-I.C.: Thermal energy production with or without electricity" shall be explored	Since, the project is a greenfield project the applicability criterion is not applicable Document review including feasibility report /8/ and acceptance certificate of project activity /14/ were checked to confirm that the project is a greenfield project.
	In case biomass is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass" shall apply.	Since, the project is a greenfield project the applicability criterion is not applicable Document review including feasibility report /08/ and acceptance certificate of project activity /14/ were checked to confirm that the project is a greenfield project.
	Tool 01 (Tool for the demonstration and assessment of additionality)	
	Applicability as per tool 01: **Paragraph 8** states "Project activities that apply this tool in context of approved consolidated methodology ACM0002, only need to identify that there is at least one credible and feasible alternative that would be more attractive than the proposed project activity ".	Project owner has demonstrated additionality of the project activity as per tool 01/4/ in section B.5 of PSF/1/ which is checked and confirmed and hence acceptable.
	Tool 07 (Tool to calculate the emission factor for an electricity system):	
	Para 3 of the applied Tool: 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	This project involves generation electricity through hydro power plant where generated electricity is delivered to the grid. Thus, the applicability criteria was found to be met.

savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects).	
Tool 21: Demonstration of additionality of small-scale project activities 13.1	
Para 4 of the applied Tool: The use of the methodological tool "Demonstration of additionality of small-scale project activities" is not mandatory for project participants when proposing new methodologies. Project participants and coordinating/managing entities may propose alternative methods to demonstrate additionality for consideration by the Executive Board.	The tool is included by an approved methodology AMS-I.D. version 18 which is the applied methodology. Thus, the application of this tool was found to be acceptable, and the applicability criterion is met.
Tool 27: Investment analysis version 12.0	
Para 2 of the applied tool: This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality", the guidelines "Non-binding best practice examples to demonstrate additionality for SSC project activities", or baseline and	The tool is included by an approved methodology AMS-I.D. version 18 which is the applied methodology. Thus, the application of this tool was found to be acceptable, and the applicability criterion is met.

	monitoring methodologies that use the investment analysis for the demonstration of additionality and/or the identification of the baseline scenario.
Findings	No finding was raised.
Conclusion	The project verification team confirms that: a) It has critically assessed each applicability condition listed in the selected methodology and the relevant information contained in the PSF/1/ against these criteria. The selected CDM methodology (and tools)/4/ for the project activity is applicable. b) Applied version of methodology (AMS-I.D., version 18.0) /4/ is the latest valid version at the time of submission of the proposed GCC project activity for registration.

D.3.2. Clarification on applicability of methodology, tool and/or standardized baseline

Means of Project Verification	As discussed in the above section, the applicability of methodology was found to be fulfilled. Therefore, further clarification to the methodology were not required.
Findings	No findings raised.
Conclusion	The project verification team confirms that no clarification on applicability of methodology and tool to the proposed GCC project activity has been issued.

D.3.3. Project boundary, sources and GHGs

Means of Project Verification	As per the applied methodology AMS-I.D. version 18.0, /4/ the project boundary is the spatial extent of the project boundary includes the project power plant/unit and all power plants/units connected physically to the electricity system that the project power plant is connected to. The components of the project boundary mentioned in the PSF were found to be in compliance with paragraph 18 of the applied methodology./4/ The project verification team conducted desk review of the implemented project to confirm the appropriateness of the project boundary identified. The verification team confirmed that all GHG sources required by the methodology have been included within the project boundary. It was assessed that no emission sources related to project activity will cause any deviation from the applicability of the methodology /4/ or accuracy of the emission reductions. The project boundary is clearly depicted with the help of a line diagram in section B.3 of the PSF and duly verified by the verification team via acceptance certificates from electricity department of Turkey and was found appropriate /14/. The verification team confirms that the PSF/1/ has included all the sources of emission within project boundary and there are no sources of GHG emission left out which will contribute more than 1% of expected annual emission reduction by the project activity, which are not addressed by the applied methodology./4/
Findings	No finding was raised.
Conclusion	The project verification team was able to assess that complete information regarding the project boundary has been provided in PSF/1/ and could be assured from the line diagram. Hence, in line with the paragraph 44 of Project standard version 3.1,/6/ project verification team confirms that identified boundary and selected emissions sources are justified for the project activity.

D.3.4 Baseline scenario

Means of Project Verification	As established above in section D.3.1, the project activity is a greenfield project activity. Hence, as per paragraph 19 of the applied methodology AMS-I.D., version 18.0, /4/ *"The baseline scenario is that the 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 into the grid"*. Therefore, in accordance with above, the baseline for the project activity is continuation of the pre-project scenario wherein the equivalent amount of electricity as generated by the project activity shall be generated at the thermal dominated grid connected power plants resulting in CO_2 emissions. The same is line with all national policies and there is no policies or regulations which mandates the project participant to implement the project activity. **Determination of Grid emission factor ($EF_{grid,CM,y}$)** The baseline grid emission factor is calculated in accordance with the "Tool to calculate the emission factor of an electricity system", (version 07.0.0) /4/ which is the latest version of the tool as recommended by the applied methodology AMS-I.D. version 18. The grid specific values have been obtained from the data published by Turkish Electricity Transmission Corporation (Türkiye Elektrik Iletim A. S. (TEIAS)) which is a government owned corporation. TEIAS is the transmission system operator for electricity in Turkey. *"A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the 'Tool to calculate the emission factor for an electricity system'."* It is verified that the latest available version for "Tool to calculate the emission factor for an electricity system" is version 07.0 /4/ and the PO has correctly referred to the same in the section B.6.1 of the PSF /1/ to determine the baseline grid emission factor. **Step 1: Identify the relevant electricity systems** In accordance with step 1 of Tool; the project participant has identified the electricity system is based on the option 1 (under the para 17 of the tool) which is Turkish National Grid. Therefore, the Turkish National Grid has been correctly identified for the calculation of electricity emission factor, as the project displaces electrical energy from Turkish grid, as per the TEIAS website /27/. It is to be noted that the data published at TEIAS website has been considered the most recent information available version at the time of PSF submission, hence referred for determination of emission factor for the project activity. It can be confirmed that the determination of grid emission factor in compliance with the "Tool to calculate the emission factor for an electricity system" (version 07.0.0). **Step 2: Choose whether to include off-grid power plants in the project electricity system (optional).** The values of OM and BM have been determined ex-ante since the PO has considered option I "Only grid power plants are included in the calculation.". **Step 3: Select a method to determine the operating margin (OM)** The Project owner has used the simple operating margin calculation method to determine the operating margin (OM). Verification Team has verified from the data published at TEIAS website that the percentage of total grid generation by

	low-cost/ must-run plants for the Turkish grid is less than 50% of the total generation. Therefore, it is satisfied the condition stipulated under Para 40 (a) of Methodological Tool 07, Version 07, hence the simple OM method (Option a in paragraph 38) has been used as low cost/must run resources constitute less than 50% of total grid generation. As per Tool para 40 -42; The PO has chosen ex-ante option (option a of Para 42 of Methodological Tool 07, version 07) for calculation of Simple OM emission factor using a 3-year generation-weighted average, based on the most recent data available (2022) at the time of submission of the PSF. **Step 4: Calculate the operating margin emission factor according to the selected method** Simple operating margin has been calculated as per Option B as stipulated under Para 47 (b) of Methodological Tool 07, version 07. The PO has considered chronological order of power generation plants from TEİAŞ Load Dispatch Department with, fuel types, electricity generation for the calculated year were used as input data. By using all the input data, Turkish Ministry of Energy and Natural Resources calculated simple OM emission factor. The same has been used by the PO. The value for weighted average operating margin has been validated and used as 0.7424 tCO_2/MWh /27/. **Step 5: Calculate the build margin (BM) emission factor** Build margin for the Turkish grid is considered as 0.3680 tCO_2/MWh as per "Tool to calculate the emission factor for an electricity system" (Version 07.0, EB 100, Annex 4) para 72 (i.e., as per the provision of the section 6.5 of the tool) where the Option 1 is chosen to calculate the build margin emission factor for the project activity. BM is calculated ex-ante based on the most recent information/data from TEIAS website and is fixed for the entire crediting period. **Step 6: Calculate the combined margin (CM) emission factor** The combined margin (CM) emission factor is calculated based on option (a) i.e., weighted average CM as accordance to Tool. The weighted average combined margin has been calculated by the PO, considering the 50% weighted for operating margin and 50% for build margin; this is in accordance with the tool which states that for "*All other projects: wOM = 0.5 and wBM = 0.5 for the first crediting period*". The combined margin emission factor for the project activity arrives as 0.5552 tCO_2/MWh. The Project owner has provided the detailed calculation for the same in the ER calculation sheet. The baseline emission factor for the electricity system has been calculated on exante basis and will remain fixed For the entire crediting period. Inconsistency with the applied tool /4/, the weights for OM and BM used in PSF for calculating combined margin are 0.5 and 0.5. Hence, for baseline emissions Project Owner has included CO_2 emissions from electricity generation in power plants that are displaced due to the project activity. These are produced by the renewable generating unit (in MWh) multiplied by an emission coefficient (measured in tCO_2e/MWh) calculated in a transparent and conservative manner as: Combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in "Tool to calculate the emission factor for an electricity system" (Version 07.0), /4/ it is the latest version of the tool that is used to calculate emission factor. The Combined Margin emission factor is fixed ex ante with a calculated value as 0.5552 tCO_2e/MWh. The calculations, source of data is checked by the

	project verification team and found it to be correct.
Findings	CAR 05 was raised and resolved. Please refer appendix 4 for more information.
Conclusion	Hence, in line with paragraph 55 and 57 of the Project standard Version 3.1/6/, project verification team concluded that • All assumptions and data used by the project participants are listed in the PSF/1/, including their references and sources. • All documentation used by project participants as the basis for assumptions and source of data for establishing the baseline scenario is correctly quoted and interpreted in the PSF/1/; • All assumptions and data used in the PSF are justified appropriately and considered reasonable in the context of the proposed project activity. • The baseline methodology/4/ and the applicable tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions. Identified baseline scenario reasonably represents what would occur in the absence of the project activity and leads to a conservative estimation of GHG emission reductions.

D.3.5 Demonstration of additionality

Means of Project Verification	In line with paragraph 45 of the Project Standard v3.1, /4/ GCC project activities are required to undergo the following tests to demonstrate additionality: A. Legal requirement Test: Based on the available literature it was confirmed that there are no enforced laws, statutes, regulations, court orders, environmental mitigation, agreements, permitting conditions or other legally binding mandates requiring its implementation, or requiring the implementation of a similar technology/measure that would achieve equivalent levels of GHG emission reductions. The assessment team assessed the relevant regulations to confirm that the project meets the legal requirement test: • Electricity Market Law number 4628 /22/. • Law on utilization of renewable Energy resources for the purpose of Generating electricity Energy, Law number 5346 /22/. • Energy efficiency Law number 5627 /22/. • Forest Law number 6831 /22/. • Environment Law number 2872 /22/. • Environmental Impact Assessment approval the hydro power Plants /22/. b) **Additionality Tests**: As per the applied methodology AMS-I.D. Version 18.0 /4/, additionality of the following project activity is demonstrated and assessed by the latest version of Tool 21: Demonstration of additionality of small-scale project activities" Version 13.1 /4/ **Investment analysis** *Under this step, it is demonstrated that project activity is not economically or financially feasible, without the revenue from the sale of certified emission reductions.* PP has adopted the step-wise approach from tool 27 /4/ for demonstrating and assessing the additionality of the project activity as follows: **Determine appropriate analysis method:**

Option III i.e Benchmark Analysis has been selected by the PP as an investment analysis method. As the project is selling generated electricity to national grid, it will generate financial benefits other than carbon revenue related income. Therefore, Option I is not applicable. In all other cases, Tool 21 /4/ has provision to pick either Option II or Option III and Option II is applicable when the alternatives were similar investment projects. However, for this PA the alternative to the project activity is the supply of electricity from a grid. So, Option II is not applicable, and choice of Option III by PP has been accepted by the GCC Verification team.

Option III. Apply benchmark analysis:

Pre-tax equity IRR has been used as the financial indicator for the demonstration of financial unviability for the proposed project activity. A suitable benchmark i.e., expected return on equity has been selected as benchmark comparison purposes. The source of benchmark was assessed by the verification team and the selected pre-tax equity IRR and selected benchmark were found to be appropriate and in-line with the applied tools, guidelines and other supporting documents provided by the PO.

Para 15 of tool 27 /4/ states "*Local commercial lending rates or WACC are appropriate benchmarks for a project IRR. Required/expected returns on equity are appropriate benchmarks for an equity IRR. Benchmarks supplied by relevant national authorities are also appropriate*." In line with the above requirement, figure defined by World Bank for 'Private Sector Renewable Energy and Energy Efficiency Project' as Clean Technology Fund Loan report */17/* a threshold pre-tax IRR on equity (=required/expected return on equity) is 15% for small hydro projects has been prescribed.

The date of investment decision has been considered as 10/10/2014. The date has been verified from the Signed Board Resolution /25/. The provided board resolution signed under the "KARAR No – 2014/24". Project Owner has considered benchmark 15%, sourced from Report No: 46808-TR: Private Sector Renewable Energy and Energy Efficiency Project' of World Bank /17/ which was basis and applicable the time of investment decision. The Equity IRR value for this project is calculated to be 1.24%, which is found to be well below to selected benchmark of 15%.

The date of investment decision has been considered as 10/10/2014. The date has been verified from the Signed Board Resolution /25/. The provided board resolution signed under the "KARAR No – 2014/24".

Key financial Inputs values used in investment analysis:

Parameters		**Data Value**	**Unit**	**Reference**
Installed capacity		5.64	MWe	Feasibility report
Electricity generation		11,950	MWh /yr	Feasibility Report
Buildings	Regulator	2,966,690	$	Feasibility report, table 8.1
	Transmission Tunnel	3,543,655	$	Feasibility report, table 8.1
	Forebay	619,843	$	Feasibility report, table 8.1
	Penstock	1,293,841	$	Feasibility report,

					table 8.1
		Powerhouse	847,988	$	Feasibility report, table 8.1
		Sub Total	**92,72,017**	**$**	**Feasibility Report**
	Equipment	Hydromechanical Equipment	21,66,351	$	Feasibility report, table 8.1
		Electromechanical Equipment	17,83,535	$	Feasibility report, table 8.1
		Energy Transmission Line	4,08,605	$	Feasibility report, table 8.1
		Expropriation	45,11,627	$	Feasibility report, table 8.1
	Expropriation & other	Camping facilities	55,814	$	Feasibility report, table 8.1
		Transportation Routes	46,512	$	Feasibility report, table 8.1
		Unknown expenses (15% for Construction, 5% for study-project-engineering)	1,840,711	$	Feasibility report, table 8.1
		Study-project-engineering	2,336,032	$	Feasibility report, table 8.1
		Sub-total:	45,11,627	$	Feasibility report
	Total capital investment (CAPEX)		18,142,134	$	Feasibility Report
	Total Operation and Maintenance		122,903	$/yr	Feasibility report, table 9.1
	Tariff for first 10 years		0.073	kWh	Feasibility Report[7]
	Expected tariff for nest 10 years		0.073	kWh	Feasibility Report
	Tax rate		20	%	https://www.mevzuat.gov.tr/MevzuatMetin/1.5.5520.doc Article 32, page 40 in the above document
	Depreciation rate		Buildings: 2.5%, Machinery and equipment: 6.67%, transmissi	%	https://www.gib.gov.tr/sites/default/files/fileadmin/user_upload/Yararli_Bilgiler/amortisman_oranlari.pdf

[7] The tariff is fixed fort he first 10 years by the law no 5346. Page 10 of the following doc. of the law https://www.mevzuat.gov.tr/mevzuatmetin/1.5.5346.pdf

	on line: 3.33%		
Benchmark Equity IRR	15	%	World Bank document (May 2009), table 11.5 https://documents1.worldbank.org/curated/en/112271468311114629/pdf/468080PAD0P112101Official0Use0Only1.pdf
License Start	20/06/2019	-	Generation License
License End	26/01/2061	-	Generation License
Project Start Date	20/10/2017	-	Generation License

Appropriateness of Input parameters:

The inputs values used for investment analysis by PO are sourced from the Feasibility Report, September 2014 prepared by Third party engineering consultant "'Derekoy Electricity Generation Industry and Trade INC'/12/ which were valid and applicable at the time of investment decision taken by project Owner. This is in line with the paragraph 10 of the Tool 27: Methodological tool Investment Analysis. The investment decision was taken in board meeting on dated 10/10/2014. The same has been verified with board resolution//11/. Verifier also confirms that the input values have been consistently applied in all calculation (refer IRR calculation spread sheet/3/).

All input costs and revenues were found to be included in the IRR calculation spread sheet/3/ provided by the PO. All assumptions and estimates used for input values were checked against the relevant sources and found consistent and correct.

The timing of the investment decision i.e., 10/10/2014 was found to be appropriate which confirmed from the signed board resolution /11/

The input values of the parameters involved in the investment analysis was cross-checked against each of the evidence provided by the PO and all the values were found to be applicable at the time of the investment decision.

Calculation and comparison of financial indicators

For calculation of financial indicator, all relevant costs and revenues were found to be included in the IRR sheet/3/ provided by the PO. All assumptions and estimates used for input values were checked against the relevant sources.
The applied benchmark of 15% has been sourced from world bank report /17/ for renewable energy investments in Turkey. The IRR value for this project was calculated as 1.24% which was found to be well below applicable benchmark of 15%. Since the IRR is lower than the benchmark, the Project Activity cannot be considered as financially feasible as per Tool 01: Tool for demonstration and assessment of additionality para 42(b)/04/.

Parameters used in the investment analysis are included in the section B.5 of the PSF/1/.

As the project activity has a lower IRR (1.124%) than the benchmark (15%), thus the project activity cannot be considered financially attractive

Sensitivity analysis

The Guidance on Investment analysis requires the robustness of the conclusion arrived at to be proved through a sensitivity analysis by varying the critical assumptions to a reasonable variation. The project developer has identified Investment Cost, Operating cost, Electricity Sales Revenue and Electricity Production Cost as critical assumptions. These critical parameters constitute more than 20% of either total project costs or total project revenues.

The assessment team confirms that the parameters that have been subjected to the sensitivity is in line with para 27 of the "Methodological tool: Investment Analysis, version 12.0"/4/ The sensitivity analysis covers a reasonable range of +10% and -10%, which is in conformity with para 28 of the "Methodological tool: Investment Analysis, version 12.0"./4/.

The sensitivity analysis reveals that even under more favorable conditions, the equity IRR without GCC revenue would not cross the benchmark return as given in the following table.

Input values/ /Variation	-10%	Base (0)	+10%	%age change required to reach benchmark	Corresponding Equity IRR
Investment Cost (Capital Investment)	1.63%	1.24%	0.89%	- 80.4488%	14.95%
Annual Operational Costs (OPEX)	1.33%	1.24%	1.14%	-1777%	15.08%
Electricity Selling Price (Electricity tariff)	0.53%	1.24%	1.90%	276.5173%	15.0 %
Electricity Production	0.53%	1.24%	1.90%	276.5173%	15 .0%

Likely Hood Scenario at which each sensitivity Scenario Hits the nominated benchmark:

The likelihood of a project activity surpassing the benchmark IRR, in order to ensure the adequacy of the assumptions used in the investment analysis was performed inline to tool 27/4/.

Parameter	Variation	Percentage change	Probability of the Situation
Total Investment Costs	Investment costs US 18,142,135 to US$35,44,973	-80.46%	The total investment cost has been source from the FSR prepared by third party engineering company which was basis of investment decision and applicable at the time of investment decision by project owner. The total subjected to sensitivity and it can be observed from the IRR

				sheet/3/ that if project costs reduced by 80.46% (i.e from US$ 18,142,135 to US$ 35,44,973), the equity IRR crossed the benchmark IRR of 15%. However, project activity has been commissioned and variation in project cost is not possible. Further, verifier has also checked total actual/completion project costs which is US$ 13,210,000 which is lower than total investment cost mentioned in feasibility report. Moreover, Verifier has checked the sensitivity analysis with actual /completion cost of project and found that equity IRR is much below than the benchmark. Further, investment costs have been cross checked with the construction and supply agreement/11/. Further, verifier has also cross checked the per/MW project with similar project registered project under GS (GS ID 1003)/26/ and found the per/MW of proposed project (US$ 2.34 million) is lower than the GS registered Project US $ (2.36 million). Based on sectoral scope expert and local knowledge, the project cost considered from FSR for the project activity is found to be appropriate. Since, the project has fully commissioned. Hence reduction in actual investment costs is not possible.
	Operating cost (O & M) costs	O & M cost reduces from 122,903 to Zero	-1777%	The additionality of the project is not impacted even if the O&M expenses decrease by 100% the project cannot reach the benchmark of 15% which is impossible to happen.
	Electricity tariff	Tariff increases from US $0.073/kWh to US$0.275 /kWh	276.5173%	The revenue from electricity is dependent on electricity price and electricity generation. The PO has applied a value of 0.73$ / KWh fixed tariff increases by 277 % (i.e. from US $ 0.073 to US $ 0.275, equity IRR hits the benchmark.

					Further, project has been commissioned, Verifier has checked electricity Market Law 5346/22/ and found that tariff is same as indicated in PSF. Also, sensitivity analysis was checked with and observed the actual Tariff US $0.073/kWh. There is no change in equity remains below the benchmark. Furthermore, the value used was confirmed by the studying Law on the use of renewable energy resources for the purpose of generating electrical energy for feed-in tariffs for electricity generated by hydro power plants/21/. Hence, the likelihood by 276.5173%% is not possible. Hence, the project will not breach the benchmark under any circumstances.
		Electricity production	11,950 MWh to 44,994 MWh	276.5173% %	The electricity production has been sourced from the Feasibility Report and also cross checked the same with generation license/10/ issued by Reis RS Enerji Elektrik Üretim Sanayi ve Ticaret A.Ş. The Energy Market Regulatory Authority, a Government Agency from Turkey. Based on energy generation data, the PLF of project calculated to be 24.18%. Since, the energy generation 11,950 MWh (PLF=24.18%) sourced from the Feasibility Report prepared by third party engineering company which is in accordance with the accordance with paragraphs 39a) of EB 48, Annex 11 option 3 (a)/4/. Hence, acceptable to verifier. Further, if electricity production increase by 130%, equity IRR crossed the benchmark 15%. Moreover, Verifier has also checked from EPIAS Records (JMRs)/30/ and found that the actual average annual actual generation from October 2017 to November 2021 which is 9,963 MWh (observed PLF=20.16%) which is lower

	<table><tr><td></td><td></td><td></td><td>than estimated generation data. Hence, this is unlikely to increase the generation from breaching value.</td></tr></table> The sensitivity analysis results were found to be appropriate and was found to be calculated in-line with the tool /4/ as verified from the IRR calculation spread/3/. In conclusion of the overall additionality demonstration, the proposed project activity is deemed additional.
Findings	CL 01, CAR 06 and CAR 07 were raised and resolved. Please refer appendix 4 for more information.
Conclusion	The information mentioned in the PSF/1/ is duly supported by evidence quoted therein. The project verification team has described all steps taken, and sources of information used to cross-check the information contained in the PSF/1/. The project verification team determined that the evidence assessed is credible, where appropriate. Based on the assessment described above, the LGAI project verification team confirms that the project activity is additional and is demonstrated to be additional in line with the requirements of Tool for the demonstration and assessment of additionality version 7.0/4/ and according to paragraph 50 and 51 of the GCC Project standard Version 3.1/6/.

D.3.6. Estimation of emission reductions or net anthropogenic removal

Means of Project Verification	In accordance with the applied methodology AMS-I.D (Version 18.0)/14/, the PSF has calculated Emission Reductions in the following manner: $ER_y = BE_y – PE_y - LEy$ Where: ER_y = Emission reductions in year *y* (tCO_2e) BE_y = Baseline Emissions in year *y* (tCO_2e) PE_y = Project Emissions in year *y* (tCO_2e) LEy= Leakage emissions in year y ($t CO_2$) Baseline emissions are calculated as the product of the Baseline Emission Factor ($EF_{grid,CM,y}$ in tCO2/MWh) times the electricity supplied by the Project. BE_y = EGPj, y. $EFgrid,CM,y_{,y}$ Where: BE_y Baseline Emissions in year *y* ($t CO_2$) $EF_{grid,CM,y}$ Combined Margin Grid Emission Factor ($t CO_2$ / MWh) $EG_{PJ,y}$ Net aggregated electricity supplied to the grid by the PA Since, project activity is installation of Greenfield power plant, Therefore; in accordance with the paragraph 26 of applied methodology $EG_{PJ,y} = EG_{PJ,facility,y}$ Where; $EG_{PJ,facility,y}$= Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh) The Net electricity supplied to the grid by the project activity is determined by calculating the difference of monitored electricity export to grid and monitored electricity import from the grid by the project activity.

	Section B.6.1 of the PSF has defined the project emissions for 'Project emissions from water reservoirs of hydro power plants. Since the power density of the project activity is greater than 4 W/m2, the project is required to calculate the emissions as per the following formulae: $$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}}$$ Where: PD: Power density of the project activity (W/m^2) Cap_{PJ}: Installed capacity of the hydro power plant after the implementation of the project activity (W) Cap_{BL}: Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero A_{PJ}: Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m^2) A_{BL}: Area of the single or multiple reservoirs measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m^2). For new reservoirs, this value is zero. The installed capacity and reservoir area of the project is 5.64 MW and 72,852.992 m^2, respectively, Thus, PD= (5,640,000 -0) / (72,852.992-0) = 77.42 W/m^2 The project density of the project activity is more than 4 M/m^2. All the other sources of project emissions; from fossil fuel consumption and from the operation of geothermal power plants has not been found applicable for the project activity. As prescribed under section B.6.1 in the PSF/6/, there are no leakage emissions attributable in the context of the project activity and therefore these are accordingly depicted as zero. The following ex ante parameters and assumptions were used to estimate baseline emissions of the project activity:- **Amount of fuel type i consumed by power plant/unit m, k or n (or in the project electricity system in case of FCi,y) in year y or hour h (FCi,y)–** The values against each fuel type has been sourced from Turkish Electricity Transmission Corporation. The values are specific to the electricity production and consumption in Turkey and is being used for Operating margin calculation; therefore, was found acceptable /27/. **Net electricity generated by power plant/unit m, k or n (or in the project electricity system in case of EGy) in year y (EGy) -** The values against the requirement of Tool to calculate emission factor has been sourced from Turkish Electricity Transmission Corporation. The values are specific to the electricity production and consumption in Turkey and is being used for Operating margin calculation; therefore, was found acceptable /27/. **CO2 emission factor of fuel type i used in power unit m in year y (EFCO2, i, y) -** The values against each fuel type has been sourced from IPCC default

	values at lower limit of 95% confidence interval. This was found in accordance with the methodology/4/. **Average net energy conversion efficiency of power unit m in year y (ɳ m,y)** Default values from Annex I of the "Tool to calculate the emission factor for an electricity system//" have been applied which was found acceptable. **Net calorific value (energy content) of fossil fuel type i in year y (NCVi,y)–** The values against each fuel type has been sourced from Turkish Electricity Transmission Corporation. The values are specific to the electricity production and consumption in Turkey and is being used for Operating margin calculation; therefore, was found acceptable /27/. The emission reduction calculations were assessed by the assessment team against the requirements of the applied methodology. The ex-ante estimates given in the PSF/1/ are conservative and all input parameters have been separately validated. The project verification team confirms that the estimates of baseline emissions can be replicated using the information provided in the final PSF/1/ and emission reduction spread sheet/2/ being submitted for registration. The project verification team further confirms that assumptions have been consistently applied in both emission reduction calculations and investment analysis spread sheet/3/.
Findings	CAR 03 was raised and resolved. Please refer appendix 4 for more information.
Conclusion	The project verification team confirms the following; • All assumptions and data used by the project owners are listed in the PSF/1/, including their references and sources; • All documentation used by project owners as the basis for assumptions and source of data is correctly quoted and interpreted in the PSF; • All values used in the PSF are considered reasonable in the context of the proposed project activity; • The baseline methodology/4/ and the applicable tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions; • All estimates of the GHG emissions can be replicated using the data and parameter values provided in the PSF/1/. • No sampling has been applied in the project activity. Thus, it is in line with paragraph 55, 58 and 59 of the Project standard Version 3.1/6/

D.3.7 Monitoring plan

Means of Project Verification	The monitoring plan is included in Section B.7 of the PSF/1/ based on the approved monitoring methodology AMS-I.D. Version 18 /4/ and is correctly applied to the project activity. The monitoring plan has been found to be in compliance with the requirements of the applied methodology for calculation of GHG emission reductions, GCC Environmentand-Social-Safeguards-Standard-v3, and Project-Sustainability-Standard-v3. The monitoring plan includes following parameters:

1.	$EG_{PJ,facility,y}$ (SDG 07)	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh. Net electricity supplied to the grid by the Project activity. The monitoring parameter will be

			continuously monitored by means of main meters and back-up bi-directional tri-vector energy meter of 0.5s accuracy class. For the purpose of measurement, the readings of main meter will be accounted in normal scenario and back-up meter reading will be accounted for comparison. The calibration of the meters will be maintained by TEIAS association. The monitoring parameter will be recorded for emission reduction on monthly basis.
	2.	CO_2 Emissions (SDG 13)	Reduction of CO_2 emissions due to implementation of project activity that would otherwise be emitted by thermal power plants. The monitoring parameter will be continuously monitored by means of on-site meters
	3	Long Term Jobs (SDG 08)	Creating new employment opportunities. The PO has claimed that, they will provide employment to maximum persons on long term basis (> 10 years) under the current project activity. Employed people responsible for various plant activities such as operation & maintenance, Data Monitoring, Office work, security etc. Also, provide job related training to employed persons during the operation of the project activity. At the time of project verification employment records /12/ for employees, salary slip payments which is paid by the project owner have been verified. The monitoring parameter will be continuously monitored by means of employment records.
	4	Job Related Training (SDG 04)	Job related training for data monitoring, health & safety trainings are provided to the employees who engaged during the operation of the project activity. The monitoring parameter will be continuously monitored by means of plant imparted training records at the end of each verification period.
	5	Solid waste Pollution from Hazardous wastes	As per monitoring plan, Solid waste Pollution from Hazardous wastes like transformer oil disposal /replacement or any other hazardous from the project activity will be disposed as per guidance given in the Hazardous and Other Wastes (Solid Waste Management Regulation /28/) which is the applicable laws/regulations in the host country. This will be monitored by means of the records by the project owner in the project site as and when there is a need of disposal/replacement of transformer oil and other hazardous. This was confirmed by interviewing the monitoring personnel of the project activity during remote interview and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	6	Wastewater discharge without/with insufficient treatment	As per the monitoring plan, The Hydropower plant doesn't discharge wastewater without treatment as per the guidance given in Waste Water Control Regulation /28/ which is applicable laws/regulations in the host country. This will be monitored by means of the records maintained at project site continuously.

	7	PM 2.5 and PM 10 (SDG 11)	Avoided PM2.5 and PM10 The monitoring parameter will be calculated by means of onsite meters which will be recording the amount of electricity supplied to the grid. Based on electricity data for the year 2017 Turkey's average PM10 value and PM2.5 has been used for baseline reduction estimations.
	8	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation (SDG 9)	The monitoring parameters i.e. electricity generation & corresponding emission reductions will be monitored with installed monitoring equipment and contributes to clean and resilient electricity generation facility by the adaptation of clean technology (i.e. Hydro Power Project Activity).
	The project verification team confirmed that all the above listed parameters are sufficient to calculate the emission reductions including the contribution towards environmental (detailed in Appendix 5 below) and social safeguards (detailed in Appendix 6 below) and sustainable development goals (elaborated in Appendix 7 below) in accordance with the methodology and are correctly reported in the PSF/1/. The data will be archived and maintained by PO for entire crediting period + 2 years or till issuance of last ACCs, whichever is later and is acceptable.		
Findings	CAR 08, CAR 09 and CAR 10 were raised and resolved. Please refer appendix 4 for more information.		
Conclusion	The project verification team confirms that: The monitoring plan described in the PSF is complying with the requirements of the selected methodology/4/. Based on detailed review, the monitoring arrangement described in the monitoring plan is feasible within the project design. The project verification team confirms that the project owner will be able to implement the described monitoring plan. The means of implementation of the monitoring plan are sufficient to ensure that the emission reduction and other voluntary labels achieved from the project activity are verifiable and thereby satisfying the requirement of Verification Standard/6/. The monitoring plan will give opportunity for real measurements of achieved emission reductions. There are no host country requirements pertaining to monitoring of any sustainable development indicators. Therefore, there are no such parameters identified in the PSF/1/.		

D.4 Start date, crediting period and duration

Means of Project Verification	The start date of the project activity is 20/10/2017 which was verified from the Commissioning /14/ and corresponds to commissioning of the project. Therefore, this has been accepted as the date when the project started generating emission reductions. A crediting period of a maximum length of 10 years has been selected by PO. The start date of the crediting period is stated as 20/10/2017 and duration is form 20/10/2017 to 19/10/2027, which is appropriate as per paragraph 40(b) of the Project Standard. The lifetime of project activity is expected to be 41 years 7 months which is verified from the feasibility report /8/.
Findings	No findings were raised.
Conclusion	The start date of the project activity indicated has been checked based on commissioning certificates submitted/9/.

	The expected operational lifetime of the project activity indicated in the PSF/1/ is deemed reasonable based on sectoral expertise of the assessment team.

D.5 Environmental impacts

Means of Project Verification	The project owners have conducted Environmental Impact Assessment (EIA) in 2016 in order to assess the impact from Hydro Power Project. This is complying to the Turkish environmental regulations and received approval from the Ministry of Environment and Urbanization on 24/07/2017. The project will benefit the local people by engaging them in construction, operation and maintenance activities during the project. The verification team confirms that there are no adverse impacts on environment due to the implementation of project activity. The verification team also confirm that the project participant has taken all the necessary legal approvals from the government and other parties to implement the project activity. The project activity is complying to the following laws: Law No.5346 Support mechanism for the RES established by Energy Market Regulation Board which defines setting up of generation plants on the basis of renewable energy sources. This is a market-based purchasing operated by TEIAS/33/. • Electricity Market Law number 4628/32/ • Energy efficiency Law number 5627/34/ • Forest Law number 6831/38/ • Environment Law number 2872/36/ • Environmental Impact Assessment approval certificates for hydropower plant /13/.
Findings	No Findings were raised.
Conclusion	In the opinion of the assessment team, in the project activity there were no adverse environmental impacts revealed in the analysis. There are no trans boundary environmental impacts associated with the project.

D.6 Local stakeholder consultation

Means of Project Verification	Project Owner has carried out the stakeholder consultation/16/ for this project on 12/04/2022. Involved stakeholders during the meetings were Local administrative officials, business groups, community representatives, village heads, panchayat members, landowners, local villagers, local youth and women group were part of the consultation. The stakeholder meetings were carried out through a means of online interview (dated by 12/04/2022) held with local villagers & head of village and landowners. . Contact information of PP's representatives has been shared with the head of village (Calti) to address any complaints, suggestions or ideas about the project. Further, Stakeholder Consultation Meeting records/13/ (photographs & attendance sheet) has been verified by the assessment team. The local stakeholder consultation/16/ process was performed by the project owner before the submission of the project activity for global stakeholder consultation which is accepted. The objectives of the process were; • Promote public awareness and improve understanding of the local people about the proposed project; • Assessment of possible requirement of improvements; • Solicit the views of affected communities/individuals on environmental

	and social problems; • Improve environmental and social soundness; • To settle problems with mutual consent; and • Create accountability and sense of local ownership during project implementation. The objective of the local stakeholder consultation carried out to comply with GCC requirements and identify the comments/concerns that might be required to be addressed by PO. The stakeholder consultation responses /16/ was received by the assessment team. The verification team confirmed by review of the stakeholder responses/16/ that the summary of stakeholders' comments reported in PSF was accurate. There was no negative feedback received. The list of the relevant stakeholders who were requested for feedback is also provided in the PSF/16/.
Findings	No findings were raised.
Conclusion	The verification team confirms that the summary of stakeholders' comments reported in PSF is complete. In the opinion of the team, the local stakeholder consultation process was adequately conducted by the project participant considering the ongoing pandemic to receive unbiased comments from the all the stakeholders. The project verification team confirms that the local stakeholder consultation/16/ process performed for the project activity fulfils the requirements.

D.7 Approval and Authorization- Host Country Clearance

Means of Project Verification	As per the GCC program guidelines/6/, the submission of HCA on double counting is required by CORSIA labelled project after 31/12/2020 as verified under section D.13 of this report. For carbon credits issued during 01/01/2016 to 31/12/2020 the Host Country approval is not required.
Findings	No findings were raised.
Conclusion	The project verification team confirms that no HC approval is required for CORSIA labelled project activity and the HCA will be required during the first or subsequent verification, when the issuance of carbon credit is considered.

D. 8 Project Owner- Identification and communication

Means of Project Verification	The information and contact details of the representation of the project owner and project owners themselves has been appropriately incorporated in Appendix 1 of the PSF which was checked and verified by the verification team from Letter of Nomination/18/ signed by the project owner dated 27/01/2023. The information is consistent in these documents.
Findings	No findings were raised.
Conclusion	The project verification team confirms that the information of the project owner has been appended as per the template and the information regarding the project owners stated in the PSF/1/ and authorization letter/18/ is found to be consistent.

D.9 Global stakeholder consultation

Means of Project Verification	Global stakeholder consultation was held by making PSF/1/ available through the dedicated interface on the GCC website. The duration of the same was from 27/07/2022 to 10/08/2022. No comments were received during this period.
Findings	CL3 was raised and resolved. Please refer appendix 4 for more information..
Conclusion	The PSF had been made public for receiving stakeholder feedback and no comments were raised during the GSC process. Further, there was one minor comment of GCC during the webhosting for GSC and same has been resolved.

D.10 Environmental Safeguards (E+)

Means of Project Verification	The Project owner has chosen to apply for the Environmental No-net-harm Label (E+). The assessment of the impact of the project activity on the environmental safeguards has been carried out in section E.1 of the PSF. Out of all the safeguards no risks to the environment due to the project implementation were identified and the following have been indicated as positive impacts 1. Environment (Air) – (a) **CO_2 emissions**: By using an alternative technology (Hydropower plant), the project reduces the electrical consumption required by the coal, hence less air pollution. The carbon emission reduction calculation shows the amount if reduced CO_2 emissions by almost 6,634 tCO_2e. 2. Environment (Land) – (a) **Pollution from hazardous wastes:** Hazardous waste like tires, accumulators, cables and oil trap filters etc generated from construction & operation from the project activity will be collected and sent for disposal with the licensed waste collection vehicle. 3. Environment (Water) – (a) **Wastewater discharge without/with insufficient treatment**: The project activity does not release untreated water directly to the river. The treatment of water will follow the guidelines of Waste Water Control Regulation /28/ before the discharge and records will be maintained at project site confirms by the project proponent during remote interview. 4. Environment (Natural Resources) – (a) **Protecting /Enhancing species diversity:** The catchment area of the project might cause a hinderance in the natural passage of the fish species. There controlled amount of water should be released from the catchment area for which minimum flow rates are determined by the state and hydraulic works. The environmental flow amount has been determined in the Project Identification Report and enough amount of water will be released to the river for sustain river aquatic life and fish life /29/ An appropriate monitoring plan has been put in place to monitor the elements marked positive. The detailed matrix has been included in appendix 5 of the report
Findings	CAR 11 was raised and resolved. Please refer appendix 4 for more information.
Conclusion	Based on the documentation review the project verification team can confirm that Project Activity is not likely to cause any negative harm to the environment but would have a positive impact, hence, is eligible to achieve additional E+ certifications.

D.11 Social Safeguards (S+)

Means of Project Verification	The assessment of the impact of the project activity on the Social safeguards has been carried out in section E.2 of the PSF/1/. Out of all the safeguards no risks to the society due to the project implementation were identified and the following have been indicated as positive impacts • **Social – Jobs: Long-term jobs (> 10 year) created/ lost:** Project owner has confirmed that during construction/operational life time of the project

	activity, long term jobs (>10 year) will be created and the records of the same will be maintained for entire emission reduction verification period. • **Social – Education:** Specialized training given to local personnel: Educational services improved or not: Project owner through social welfare programs will provide job related trainings which constitutes health & safety training, Operation & Maintenance Training etc to improve education services in the adjoining villages. PO will keep records of the same for entire emission reduction verification period./12/ PO has described an appropriate monitoring plan to monitor all these elements. The detailed matrix has been included in appendix 6 of this report.
Findings	No findings were raised.
Conclusion	Based on the documentation review the project verification team can confirm that Project Activity is not likely to cause any negative harm to the society but would have a positive impact, hence, is eligible to achieve additional S+ certifications.

D.12 Sustainable development Goals (SDG+)

Means of Project Verification	The assessment of the contribution of the project activity on United Nations Sustainable Development Goals/7/ has been carried out in section F of the PSF/1/ Out of the 17 Goals project activity has no adverse effect on any of the goal and contribute to 6 SDGs/7/: • Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all . • Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all • Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all • Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. • Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable. • Goal 13. Take urgent action to combat climate change and its impacts An appropriate monitoring plan has been put in place to monitor all the elements. The detailed matrix has been included in appendix 7 of this report.
Findings	No findings raised.
Conclusion	Based on the documentation review and site visit, project verification team confirms that the project is contributing towards the United Nations Sustainable Development Goals/7/ and would have a positive impact, hence, is eligible to achieve additional SDG+ certifications.

D.13 Authorization on Double Counting from Host Country (for CORSIA)

Means of Project Verification	A declaration under section A.5 and A.6 of the PSF/1/ has been included for offsetting the approved carbon credits (ACCs) for the entire crediting period from 20/10/2017 to 19/10/2027. As confirmed during the audit, the Project Owner intends to use/sell/transfer/retire the approved carbon credits (ACCs) generated by the Project Activity for offsetting purposes to Airlines under ICAO's CORSIA requirements and complies with the following: • Environment and Social Safeguards Standard/6/ as elaborated in section D.10 and D.11 of this report to ensure that the Project Activity does not cause any net harm to the environment or society and provides an opportunity to demonstrate this achievement by obtaining the additional certification labels *E+* and *S+*. • Project Sustainability Standard /6/ as elaborated in section D.12 of this

	report to ensure that the Project Activity demonstrates the level of contribution towards achieving the United Nations Sustainability Development Goals (SDGs)/7/ and provides an opportunity to demonstrate this achievement by obtaining the additional *SDG+* label (Diamond). The host country attestation for the same will be obtained during the first issuance of ACCs and accordingly, it shall be confirmed that the project activity will not lead to double counting.
Findings	CL – 02 and FAR 01 were raised. Please refer appendix 4 for more information.
Conclusion	The project owner has clarified the intent of use of carbon credits for CORSIA hence, no double counting will take place.

D.14 CORSIA Eligibility (C+)

Means of Project Verification	A declaration under section A.5 and A.6 of the PSF/1/ has been included for offsetting the approved carbon credits (ACCs) for the entire crediting period from 20/10/2017 to 19/10/2027. The project owner has chosen to apply for CORSIA and the host country attestation will be obtained during the first issuance of ACCs and accordingly, it shall be confirmed that the project activity will not lead to double counting.
Findings	FAR 01 is raised.
Conclusion	The project owner has clarified the intent of use of carbon credits for CORSIA hence, no double counting will take place This is in line with Standard on avoidance on double counting version 1. Para 16./6/ /15/

SECTION E Internal quality control

The draft verification report prepared by team leader is reviewed by an independent technical reviewer (having competence of relevant technical area himself/herself or through an independent technical area expert) to confirm the internal procedures established by LGAI are duly followed and the verification report/opinion is reached in an objective manner and complies with the applicable GCC requirements/6/.

The independent technical reviewer may approve or reject the draft verification report. The findings may be identified even at this stage, which needs to be satisfactorily resolved, before the request for issuance is submitted to GCC. The final decision is taken by the Manager Technical and Certification. The technical reviewer and Manager (Technical &Certification) can be the same person.

SECTION F Project Verification opinion

The GCC Project Verifier, LGAI Technological Center S.A., has verified and certified that the GCC Project Activity – 'Dereköy Regulator and Hydro Power Plant' has correctly described the Project Activity in the Project Submission Form (version 5.0,/1/ dated 10/07/2023including the applicability of the approved methodology AMS-ID version 18.0./4/ and meets the methodology applicability conditions, is additional and is expected to achieve the forecasted real and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder consultation processes and has calculated emission reduction /2/ estimates correctly and conservatively; is likely to generate GHG emission reductions amounting to the estimated 6,634 tCO_2e annual average, as indicated in the PSF/1/ which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable GCC rules, including ISO 14064-2 and ISO 14064-3/5/ and therefore requests the GCC Program to register the Project Activity; is not likely to cause any net-harm to the environment and/or society and complies with the

Environmental and Social Safeguards Standard/6/, and therefore requests the GCC Program to register the Project Activity, which is likely to achieve the requirements of the Environmental No-net-harm Label (E+) and the Social No-net-harm Label (S+); and is likely to contribute to the achievement of United Nations Sustainability Development Goals (SDGs)/7/, comply with the Project Sustainability Standard/6/ and contribute to achieving a total of 06 SDGs, which is likely to achieve the Diamond[8] SDG certification label (SDG+).

[8] SDG Certification labels: Bronze (level 1): contributes to 2 out of 17 SDGs; Silver (level 2): contributes to 3 out of 17 SDGs; Gold (level 3): contributes to 4 out of 17 SDGs; Platinum (level 4): contributes to 5 out of 17 SDGs; and Diamond (level 5): contributes to more than 5 SDGs.

Appendix 1. Abbreviations

Abbreviations	Full texts
ACC	Approved Carbon Credits
ACM	Approved Consolidated Methodology
AM	Approved Methodology
AMS	Approved Methodology for SSC Projects
BE	Baseline Emission
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CH_4	Methane
CL	Clarification Request
CM	Combined Margin
CO_2	Carbon dioxide
CP	Crediting Period
DNA	Designated National Authority
DR	Desk Review
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GCC	Global Carbon Council
GHG	Green House Gas
GW	Giga Watt
GWh	Giga Watt hour
IPCC	Intergovernmental Panel on Climate Change
LGAI	LGAI Technological Centre S.A
KW	kilo Watt
KWh	kilo Watt hour
LSC	Local Stakeholder Consultation Process
MoV	Means of Verification
MP	Monitoring Plan
MW	Mega Watt
MWh	Mega Watt hour
N_2O	Nitrous Oxide
OM	Operating Margin
PSF	Project Submission Form
PE	Project Emission
PLF	Plant Load Factor
PO	Project Owner
PS	Project Standard
RFR	Request for Registration
SDG	Sustainable Development Goal

tCO_2e	Tonnes of Carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
V	Version
VS	Verification Standard
Project Specific	
HEPP	Hydro Electric Power Plant
TEIAS	Turkish Electricity Transmission Corporation (Türkiye Elektrik Iletim A. S.)

Appendix 2. Competence of team members and technical reviewers

Name	SHORT CV. BACKGROUND INFORMATION
Mr. Jitendra Mohan Singh	**Mr. Jitendra Mohan Singh**, has done Advanced MSc in Sustainable Energy Systems and Management from International Institute of Management, University of Flensburg, Germany and B.Tech. in Agricultural Engineering from Allahabad University, India. He has more than 22 years of working experience in different organisations like IARI, IIT Delhi, ICAR, IRADe, CAPART, SMEC and Perenia Carbon and M B Power (Madhya Pradesh) Ltd. in the area of Agriculture, Energy & Environment and Climate Change. He also worked on contract basis (adhoc) as a RIT expert in UNFCCC from 2010 to 2013. Currently, he is associated with True Quality Certifications Private Limited and is empanelled with Applus+ Certification to carry out validation and verification related to GHG reductions projects. Mr. Jitendra Mohan Singh is based in Ghaziabad (Uttar Pradesh), India.
Mr. Denny Xue	Mr. Denny Xue (Master's Degree in Environmental Engineering, Bachelor's Degree in Thermal Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment, auditing and technical review. He has more than 6 years of work experience in CDM/GS4GG/VCS Project assessment and technical review with Applus+. Before he joined Applus+ LGAI, he has been working for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development. Mr. Denny Xue is based in Shanghai, China. Mr. Denny Xue may participate in the project's technical review team.

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
/1/	PO	Project Submission Form	Version 2.0 dated 22/07/2022 Version 5.0 dated 10/07/2023	PO
/2/	PO	Emission reduction worksheet (Corresponding to Project Submission Form)	Version 43.0 dated 26/12/2022	PO
/3/	PO	IRR calculation spread sheet (Corresponding to Project Submission Form version 5)	Version 2.0 dated 22/07/2022 Version 5.0 dated 10/07/2023	PO
/4/	UNFCCC	- CDM Methodology – AMS-I.D: Grid Connected Renewable Energy Generation - Methodological Tool- Tool 01: Tool for the demonstration and assessment of additionality - Methodological Tool- Tool 07: Tool to calculate the emission factor for an electricity system - Methodological Tool - Tool 21: Demonstration of additionality of small-scale project activities Methodological - Tool- Tool 27: Investment analysis	Version 18.0 Version 7.0.0 Version 7.0 Version 13.1 Version 12.0	UNFCCC
/5/	ISO	ISO 14064-2 & ISO 14064-3		ISO
/6/	GCC	Project Standard Verification Standard Environment and Social Safeguards Standard Project Sustainability Standard Standard on Avoidance of Double Counting Project Submission Form Project Verification Report Program Manual	Version 3.1 Version 3.1 Version 3.0 Version 3.0 Version 1.0 Version 4.0 Version 3.1 Version 3.1	GCC
/7/	UN	Sustainable Development Goals (SDGs)	https://sdgs.un.org/goals	UN
/8/	PO .	• Technical specifications/nameplate of technology as implemented on site and confirmed during Remote Audit • Feasibility report (DPR)	Dated: 16/09/2022 Dated: September 2014	PO
/9/	Ministry of Environment &	EIA approval letter	Dated: 24/07/2017	PO

No.	Author	Title	References to the document	Provider
	Urbanization			
/10/	Energy Market Regulatory Authority (EMRA)	Generation License 1. Initial Issued (For 49 Years) 2. Issued to RS Enerji Elektrik Üretim Sanayi ve Ticaret A.Ş (41 Years, 7 Month, 06 Days) License No:- EU/8662-6/04267	Dated 26/09/2012 Dated 20/06/2019	PO
/11/	PO	Investment Document 1. Supply Agreement for Electrical Equipment. 2. Supply Agreement for Electromechanical Equipment. 3.	Dated: 25/03/2014 Dated: 10/01/2014 Date :10/10/2014	PO
/12/	PO	Latest available data (Sample Records) • Employment records • Attendance records • Social welfare program register • Corporate Social Responsibility register • Training Records (HSE, First Aid & Other)		PO
/13/	PO	Local Stakeholder consultation evidence: Invitation Letters/notes for stakeholder consultation, LSC meeting photos, Attendance sheet	24/04/2022	PO
/14/	Ministry of energy and natural resources	Commissioning Certificate (Provisional Acceptance Minute/Certificate)	20/10/2017	PO
/15/	GCC	Self-declaration on double counting	Standard on Avoidance of Double Counting, V1.0 – 2022 https://www.globalcarboncouncil.com/wp-content/uploads/2022/03/Standard-on-Avoidance-of-Double-Counting-V1.pdf	GCC
/16/	PO	Meter Details	-	PO
/17/	The World Bank	For benchmark value: Report No: 46808-TR: Private sector renewable energy and energy efficiency Project	2009	PO
/18/	PO	Letter of Nomination	Dated 27/01/2023	PO
/19/	PO	Construction Agreement	Dated :- 01/10/2016	PO
/20/	Presidency of the republic of Turkey	Link: https://www.invest.gov.tr/en/investmentguide/pages/tax-guide.aspx#:~:text=In%20Turkey%2C%20the%20corporate%20income,rate%20as%20low%20as%220%25	2014	Others

No.	Author	Title	References to the document	Provider
/21/	Turkish Electricity Transmission Corporation (Türkiye Elektrik Iletim A. S. (TEIAS))	Electricity Market Law number Link: https://www.epdk.gov.tr/Detay/Icerik/3-0-0-2256/kanunlar To verify the feed in tariff	Viewed on: 28/12/2022	Others
/22/	Turkish Electricity Transmission Corporation (Türkiye Elektrik Iletim A. S. (TEIAS))	Electricity Market Law (4628) https://www.mevzuat.gov.tr/MevzuatMetin/1.5.4628.pdf Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electricity Energy (5346) https://www.mevzuat.gov.tr/MevzuatMetin/1.5.5346.pdf Energy Efficiency Law (5627) https://www.resmigazete.gov.tr/eskiler/2007/05/20070502-2.htm Forest Law (6831) https://www.mevzuat.gov.tr/MevzuatMetin/1.3.6831.pdf Environment Law (2872) https://www.mevzuat.gov.tr/MevzuatMetin/1.5.2872.pdf	Viewed on: 28/12/2022	Others
/23/	Energy Markets Management Company (EPIAS)	Transparency Platform (for electricity price) https://seffaflik.epias.com.tr/transparency/piyasalar/gop/ptf.xhtml	Viewed on: 28/12/2022	Other
/24/	UNFCCC	Methodology: ACM0002	Version 21	Other
/25/	PO	Board Resolution		PO
/26/		Project webpage of hydro power project in turkey:GS1003 https://registry.goldstandard.org/projects/details/3	Viewed on: 28/12/2022	Other
/27/	Turkish Electricity Transmission Corporation (Türkiye Elektrik Iletim A. S. (TEIAS))	EIAS website for OM/BM values https://enerji.gov.tr//Media/Dizin/EVCED/tr/%C3%87evreVe%C4%B0klim/%C4%B0klimDe%C4%9Fi%C5%9Fikli%C4%9Fi/TUESEmisyonFktr/Belgeler/Bform2020.pdf	Viewed on: 28/12/2022	Other
/28/	Public Domain	Solid Waste Management Regulation https://www.resmigazete.gov.tr/eskiler/2015/04/20150402-2.htm Waste Water Control Regulation https://www.mevzuat.gov.tr/File/GeneratePdf?mevzuatNo=7221&mevzuatTur=KurumVeKurulusYonetmeligi&mevzuatTertip=5	Viewed on: 28/12/2022	Other

No.	Author	Title	References to the document	Provider
/29/	Energy Environment Investment and Consultancy.	EIA Report (Final)	07/11/2016	PO
/30/	EPIAS	EPIAS generation Records	Online records	PO

Appendix 4. Clarification request, corrective action request and forward action request

Table 1. CLs from this Project Verification

CL ID	*01*	***Section no.***	*D.3.5*	***Date:*** *19/09/2022*
Description of CL				
Project Participant has considered benchmark of 15%. However, PP has not mentioned the source of the benchmark in PSF. *Further, fair value of project assets not found in IRR sheet. In accordance with the paragraphs 7 of Investment analysis fair values should be included as cash flow the final year, PP is requested to clarify.*				
Project Owner's response				***Date:*** *27/09/2022*
Benchmark value has been taken from World Bank Report and the same has been provided in PSF and Supporting Evidences. *The fair value of project assets in PSF has now been revised in line with IRR sheet.*				
Documentation provided by Project Owner				
World Bank Report				
GCC Project Verifier assessment				***Date:*** *31/10/2022*
Reference of World Bank Report for applied benchmark value has now been incorporated under section B.5 of revised PSF. However, Work Bank Report observed to be missing under submitted "Set of Documents". Therefore, PP requested to furnish the report along with incorporation of referenced web link under the PSF as well. ***Hence,CL01 is currently open****.*				
Project Owner's response				***Date:*** *23/12/2022*
World Bank Report is now submitted in set of documents.				
Documentation provided by Project Owner				
World Bank Report				
GCC Project Verifier assessment				***Date:*** *28/12/2022*
The world bank report has now been submitted incorporating details of 15 % benchmark consideration for renewable projects in Turkey since there is no national benchmark data for Turkey. And, also the fair value of project assets now revised under PSF & submitted IRR sheet which was further checked and found appropriate by the assessment Team. ***Hence, CL01closed.***				

CL ID	*02*	***Section no.***	*D.13*	***Date:*** *19/09/2022*
Description of CL				
PO has not submitted Host Country Attestation on Double Counting related to CORSIA requirements. PP is requested to clarify the same.				
Project Owner's response				***Date:*** *27/09/2022*
The host country attestation for CORSIA eligibility will be submitted for the verification post December 2020. The same has now been provided in section H of PSF.				

Documentation provided by Project Owner	
The documents will be provided in the verification stage.	
GCC Project Verifier assessment	***Date:*** *31/10/2022*
Information incorporated under section H & PP's justification given for the host country attestation for CORSIA eligibility which will be submitted for verification post December 2020 is checked and acceptable to assessment team. Further, FAR – 01 has been raised regarding first and subsequent verifications. ***Hence, CL02closed.***	

CL ID	03	**Section no.**	D.9	**Date:** 07/07/2023
Description of CL				
PP is requested to confirm GCC and GSC comments (if any) have been taken into account during webhosting period. Also, submit the supporting for the same.				
Project Owner's response				**Date:** 10/07/2023
No minor comments and GSC comments have been received for the project activity.				
Documentation provided by Project Owner				
Screenshot of GSC comments period section Screenshot of GCC comment section (In the folder 32)				
GCC Project Verifier assessment				**Date:** 18/07/2023
Project Proponent has submitted the screenshot of GSC and GCC comments during the time of GCC project submission which is further checked and verified by the assessment team & found consistent with GCC project portal for stakeholder comments (https://www.globalcarboncouncil.com/global-stakeholders-consultation-5/) **Hence, CL Closed.**				

Table 2. CARs from this Project Verification

CAR ID	*01*	***Section no.***	*D.2*	***Date:*** *19/09/2022*
Description of CAR				
The audit has been performed through interview. VB has not found any supporting docs to verify the Geo-coordinates of PA. PO is requested to submit the supporting of GPS coordinate.				
Project Owner's response				***Date:*** *27/09/2022*
The geo-coordinates are taken from generation license and site layout of the project. The generation license has now been submitted to the assessment team.				
Documentation provided by Project Owner				
Project license, kml document for project site, photo of the project area				
GCC Project Verifier assessment				***Date:*** *31/10/2022*
The geo-coordinates of project activity have been cross checked & verified by the assessment team and found consistent with submitted site layout (kml document) for project site. ***Hence, CAR 01closed.***				

CAR ID	*02*	***Section no.***	*D.1*	***Date:*** *19/09/2022*
Description of CAR				
Section A.3 is not filled as per instruction provide in PSF template of para 6 (c). Further, PO requested to submit supporting for sells of electricity generated by the Project.				
Project Owner's response				***Date:*** *27/09/2022*
Single Line Diagram has now been provided to show the location of the monitoring equipment in the section A.3 of PSF and Supporting Evidences folder.				
Documentation provided by Project Owner				
Single Line Diagram				

GCC Project Verifier assessment	**Date:** *31/12/2022*
Under section A.3, of revised PSF now incorporated the Single Line Diagram along with monitoring point details. However, the monitoring equipment and information are not visible under the attached image. Therefore, PP further requested to incorporate the block diagram showing all relevant monitoring points and submit supportive evidences of selling of electricity. ***Hence, CAR02is currently open.***	
Project Owner's response	**Date:** *23/12/2022*
Visible version of Single Line Diagram showing monitoring equipment is now provided in set of documents.	
Documentation provided by Project Owner	
Single Line Diagram (visible version)	
GCC Project Verifier assessment	**Date:** *28/12/2022*
The Electrical Single Line diagram of the project has now been incorporated under section A.3 of the PSF along with indication of major monitoring equipment. And SLD, also submitted along with project supportive set of documents which is further checked & found acceptable by the assessment team. ***Hence,CAR02closed.***	

CAR ID	*03*	**Section no.**	*D.3.6*	**Date:** *19/09/2022*
Description of CAR				
PP has considered ex-ante 11,950 MWh/y net electricity supplied to grid. PP to provide justification how this value was obtained and also submit the supporting.				
Project Owner's response				**Date:** *27/09/2022*
Estimated electricity generation value has been taken from generation license given by Energy Market Regulation Authority which is a governmental institution in Türkiye. The same has now been submitted to assessment team.				
Documentation provided by Project Owner				
Generation license of the project				
GCC Project Verifier assessment				**Date:** *31/10/2022*
The considered ex-ante estimated electricity generation value has been checked and verified with reference to submitted generation license given by Energy Market Regulation Authority dated on 20/06/2019 along with justification under parameter $EG_{PJ,y}$ *of Project Submission Form (P.S.F) which is further acceptable to assessment team.* ***Hence, CAR03closed..***				

CAR ID	*04*	**Section no.**	*D.13*	**Date:** *19/09/2022*
Description of CAR				
Project Owner requested to submit Declaration for no double counting of intended use of Approved carbon credits (ACCs). *Inline with para 37 of the GCC Project standard "Project Owners shall provide documentary evidence establishing conclusively any right-of-use arising by virtue of a statutory, proprietary or contractual right of the plant, equipment, process or measure that generates GHG emission reductions and is accorded to the Project Owner". Thus, PO is required to provide signed Authorization letters to confirm the information provided in Appendix 1 of the PSF*				
Project Owner's response				**Date:** *27/09/2022*
Declaration for no double counting of intended use of ACCs has been provided in Appendix 1 of the PSF. The same has now been submitted to the assessment team.				
Documentation provided by Project Owner				
Declaration for no double counting of intended use of ACCs				
GCC Project Verifier assessment				**Date:** *31/10/2022*
Declaration for no double counting of intended use of ACCs has now been incorporated under Appendix 1 of the PSF along with signed undertaking dated on 23/09/2022. ***Hence,CAR04closed.***				

CAR ID	*05*	**Section no.**	*D.3.4*	**Date:** *19/09/2022*
Description of CAR				

Reference link of Operating Margin, Build Margin and Combined Margin is not opening; hence, ex-ante grid emission factor cannot be verified. PP is requested to correct the same.
Project Owner's response **Date:** *27/09/2022*
Operating Margin and Build Margin have been taken from Türkiye National Network Emission Factor Data Sheet given by Ministry of Energy and Natural Resources and the document has been updated recently (on 20/09/2022). Hence, OM, BM and CM values have been revised in line with the latest version of the data sheet. Source of data is https://enerji.gov.tr//Media/Dizin/EVCED/tr/%C3%87evreVe%C4%B0klim/%C4%B0klimDe%C4%9Fi%C5%9Fikli%C4%9Fi/TUESEmisyonFktr/Belgeler/Bform2020.pdf . *The same has been provided in "EF" sheet of ER Calculation Excel and Supporting Evidences folder. The data sheet is only available in Turkish as it is a governmental related document.* *Combined margin is calculated as follows as per AMS-I.D (version 18.0)* $EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}$ *Where:* $EF_{grid,BM,y}$ *= Build margin* CO_2 *emission factor in year y (*tCO_2/MWh*)* $EF_{grid,OM,y}$ *= Operating margin* CO_2 *emission factor in year y (*tCO_2/MWh*)* W_{OM} *= Weighting of operating margin emissions factor (%) = 50%* W_{BM}*= Weighting of build margin emissions factor (%) = 50%* $EF_{grid,CM,y} = 0.7424 * 0.50 + 0.3680 * 0.50$ $= 0.5552$
Documentation provided by Project Owner
Türkiye National Network Emission Factor Data Sheet
GCC Project Verifier assessment **Date:** *31/10/2022*
Türkiye National Network Emission Factor Data Sheet (attached under ER sheet tab "EF") has now been submitted by project proponent. However, the referenced web link provided for operating margin and build margin are still not working. ***Hence, CAR05 is currently open.***
Project Owner's response **Date:** *23/12/2022*
Reference web link is not working outside of Türkiye. PDF version in both Turkish and English is provided in set of documents and screen shot of the document can be seen from ER sheet.
Documentation provided by Project Owner
Türkiye National Network Emission Factor Data Sheet (English and Turkish versions)
GCC Project Verifier assessment **Date:** *28/12/2022*
Türkiye National Network Emission Factor Data Sheet, (year 2020) along with both (English & Turkish versions) now been submitted by the project proponent which is further checked & verified by the assessment team and found acceptable. ***Hence, CAR05is closed.***

CAR ID	*06*	***Section no.***	*D.3.5*	**Date:** *19/09/2022*
Description of CAR				
Input parameters provided in IRR calculation sheet is not consistent with the parameters mentioned in Section B.5 of PSF. Further, source of input parameters and reference not provided in PSF and IRR calculation sheet. *Further, PP to confirm how input values used in investment analysis meet the requirement of paragraph 10 of Tool 27: Investment Analysis, version 11.0*				
Project Owner's response				**Date:** *27/09/2022*
Input parameters have been updated in line with the IRR Calculation spreadsheet. The sources have been provided in the spreadsheet's first page. The valuation is based on the input parameters in the feasibility report dated September 2014. Hence, decision making took place before the investments with the available parameters.				
Documentation provided by Project Owner				
Feasibility report, Bank agreement, Work Bank document for Benchmark, The law no 5346 for tariff rate				

GCC Project Verifier assessment	**Date:** *31/10/2022*
Project Feasibility report has been submitted by PP, however the data source of input parameters under table 7, "financial parameters of the project used for the Investment Analysis" are missing and observed to be inconsistent with submitted IRR sheet. *Further, following documents are missing under supportive "set of documents":* • *Bank Agreement* • *World Bank document for Benchmark* • *The law no 5346 for tariff rate* ***Hence, CAR06 is currently open.***	
Project Owner's response	**Date:** *23/12/2022*
Reference documents are now provided in the set of documents.	
Documentation provided by Project Owner	
• *Bank Agreement* • *World Bank document for Benchmark* • *The law no 5346 for tariff rate*	
GCC Project Verifier assessment	**Date:** *06/04/2023*
Data source of input parameters under table 07, "financial parameters of the project used for the Investment Analysis" are now incorporated under the revised IRR sheet. Further, project proponent also submitted the Bank Agreement, World Bank Report for Benchmark and The law no 5346 for tariff rate and board resolution dated 14/10/2014 which are checked and verified by the assessment team & found acceptable. ***Hence, CAR 06is closed.***	

CAR ID	*07*	**Section no.**	*D.3.5*	**Date:** *19/09/2022*
Description of CAR				
PP is also requested to include the analysis i.e. value at which each sensitivity scenario hits the Nominated Benchmark for all parameters included in Sensitivity analysis.				
Project Owner's response				**Date:** *27/09/2022*
The breaching values are calculated in sensitivity sheet of IRR Calculation Spreadsheet and the same has been provided in section B.5 of PSF.				
Documentation provided by Project Owner				
IRR Spreadsheet of the project				
GCC Project Verifier assessment				**Date:** *31/10/2022*
Under section B.5, of revised PSF now incorporated the details of breaching values under sensitivity analysis parameter's (operating cost, electricity production, electricity income and investment cost) which is further cross checked with revised IRR sheet tab "cash flow" and found acceptable. ***Hence, CAR 07) closed .***				

CAR ID	*08*	**Section no.**	*D.3.7*	**Date:** *19/09/2022*
Description of CAR				
In Section B.7.1 of PSF, the notation of data/parameter for "Quantity of net electricity generation supplied by the project plant/unit to the grid" in for is not consistent. In data /parameter it is written as $EG_{PJ,y}$ *and other places in same table EGy .* *Further, project activity is greenfield project, PP to clarify how this parameter meets the requirement of paragraph 26 of applied methodology.*				
Project Owner's response				**Date:** *27/09/2022*
Notation has now been revised as $EG_{PJ,y}$ *in the PSF.* *Dereköy Regulator and Hydro Power Plant is a new renewable energy power plant that is constructed and operated at a site where no renewable energy power plant was operated prior to the implementation of the project activity. Hence it is a greenfield project in line with the AMS-I.D version 18.0. As per paragraph 26 of the methodology, Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y equals to quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh):* $EG_{PJ,y} = EG_{PJ,facility,y} = 11,950$ *MWh/year*				
Documentation provided by Project Owner				
Generation License				

GCC Project Verifier assessment	**Date:** *31/09/2022*
Section B.7.1 of revised PSF, under parameter "Quantity of net electricity generation supplied by the project plant/unit to the grid" is now consistent through-out the report (Project Submission Form). Further, assessment team also checked & verified parameter $EG_{PJ,y}$ and found consistent with para 26 of applied methodology AMS.I.D, version 18. ***Hence, CAR08closed.***	

CAR ID	*09*	**Section no.**	*D.3.7*	**Date:** *19/09/2022*
Description of CAR				
VB found that information of "Measurement/ Monitoring equipment" in few tables of monitoring parameters are blanks. *Further, project activity is greenfield project, PP to clarify how this parameter meets the requirement of paragraph 26 of applied methodology.*				
Project Owner's response				**Date:** *27/09/2022*
The tables have now been revised in the PSF. *Dereköy Regulator and Hydro Power Plant is a new renewable energy power plant that is constructed and operated at a site where no renewable energy power plant was operated prior to the implementation of the project activity. Hence it is a greenfield project in line with the AMS-I.D version 18.0. As per paragraph 26 of the methodology, Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y equals to quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh):* *$EG_{PJ,y} = EG_{PJ,facility,y} = 11,950$ MWh/year*				
Documentation provided by Project Owner				
Generation License				
GCC Project Verifier assessment				**Date:** *31/10/2022*
PP has now incorporate the necessary information under "Measurement / Monitoring Equipment" of "Monitored Parameters" of revised Project Submission Form (PSF) & made Quantity of Electricity, $EG_{PJ,y}$ consistent with AMS I.D version 18.0. *Further, PP has also submitted the generation license dated on 20/06/2019 having license no EU/8622/-6/04267 which is checked and verified by the verification team and found acceptable.* ***Hence,CAR09closed.***				

CAR ID	*10*	**Section no.**	*D.3.7*	**Date:** *19/09/2022*
Description of CAR				
PP is requested to submit the supporting evidence of monitoring equipment				
Project Owner's response				**Date:** *27/09/2022*
Supporting documents for electricity meters are provided in the folder.				
Documentation provided by Project Owner				
Calibration Reports of main meter and spare meter *First Index Protocol of main meter and spare meter* *Meter Test Certificates of main meter and spare meter* *Photos of main meter and spare meter*				
GCC Project Verifier assessment				**Date:** *31/10/2022*
Supporting documents including Calibration Report by Manufacturer Landis+Gyr, Meter Test Certificates along with photographs has now been submitted by project proponent which is further checked and verified by the Assessment Team. ***Hence, CAR10closed.***				

CAR ID	*11*	**Section no.**	*D.10*	**Date:** *19/09/2022*
Description of CAR				
Project Participant is requested to submit supporting for "Do-No-Harm Risk" Assessment as written in Section E.1 of PSF.				
Project Owner's response				**Date:** *27/09/2022*
Supporting documents regarding the "Do-No-Harm Risk" Assessment in section E.1 has now been submitted to the assessment team.				
Documentation provided by Project Owner				
Wastewater removal records and declaration for no waste formation				

GCC Project Verifier assessment	***Date:*** *31/10/2022*
PP has now been submitted the waste water removal records which incorporates waste water and seawage truck invoice records. However, the records for solid waste pollution from hazardous wastes along with declaration for no waste formation are observed to be missing. Therefore, this observation is still open. ***Hence, CAR11 is currently open****.*	
Project Owner's response	***Date:*** *23/12/2022*
Waste declaration is now provided in the set of documents.	
Documentation provided by Project Owner	
Declaration for no waste formation	
GCC Project Verifier assessment	***Date:*** *28/12/2022*
The project proponent has now been submitted the declaration (dated.05/10/2022) for solid waste pollution from hazardous wastes along with waste declaration form and confirms that, no oil or hazardous waste from the hydro power plant during the tenure from 20/10/2017 to 30/09/2022 has been generated. Therefore, further assessment team checked the submitted documents and found acceptable. ***Hence,CAR11closed.***	

Table 3. FARs from this Project Verification

FAR ID	*01*	***Section no.***	*D.13*	***Date:*** *31/10/2022*
Description of FAR				
The Verifier should certify CORSIA Label (C+) till 31 Dec 2020. Once the Host Country Authorization is provided later, this can be verified in first or subsequent verifications.				
Project Owner's response				***Date:*** *DD/MM/YYYY*
Documentation provided by Project Owner				
GCC Project Verifier assessment				***Date:*** *DD/MM/YYYY*

FAR ID	02	**Section no.**	D.2	**Date:** 18/07/2023
Description of FAR				
The Verifier of ERVR shall do the site visit and verify the technical specification data of the project.				
Project Owner's response				**Date:** DD/MM/YYYY
-				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** DD/MM/YYYY

Appendix 5. Environmental Safeguards assessment

Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**							**Project Owner's Conclusion**		**GCC project Verifier's Conclusion**
		Description of Impact *(positive or negative)*	**Legal/ voluntary corporate requirement / regulatory/ voluntary corporate threshold Limits**	**Do-No-Harm Risk Assessment (choose which ever is applicable)**			**Risk Mitigation Action Plansfor aspects marked as Harmful**		**Performance indicator for monitoring ofimpact**	***Ex-ante* scoring of environmental impact**	***Explanation of the Conclusion***	**3rd Party Audit**
				Not Applicable	**Harmless**	**Harmful**	**Operational Controls**	**Program of Risk Management Actions**	**Monitoring parameter and frequency of fmonitoring**	**Ex- Ante scoring of the environmental impact (as per scoring matrix Appendix-02)**	**Ex- Ante description and justification/explanation of the scoring of the environmental impact**	**Verification Process Will the Project Activity cause any harm?**
Environmental Aspects on the identified categories [6] indicated below.	*Indicators for environmental impacts*	*Describe and identify anticipated and actual significant environmental impacts, both positive and negative from all sources (stationary and mobile) during normal and abnormal/emergency conditions, that may result from the construction and operations of the Project Activity, within and outside the project boundary, over which the Project Owner(s) has/have control.*	*Describe the applicable national regulatory requirements /legal limits / voluntary corporate limits related to the identified risks of environmental impacts.*	*If no environmental impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable***	*If environmental impacts exist, but areexpected to be in compliance with applicable national regulatory /stricter voluntary corporate requirementsand will be within legal/ voluntary corporate limits by wayof plant design and operating principles, then the Project Activity is unlikely to cause any harm (is safe) and*	*If negative environmental impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm (may be un-safe) and shall be indicated*	*Describe the operational controls and best practices, focusing on how to implement andoperate the Project Activity, to reduce the riskof impacts thathave been identified as* ***'Harmfu'l*** *at least to a level that is in compliance with applicable legal/regulator requirements or industry best practice or stricter voluntary corporate requirements*	*Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., installation of pollution control equipment) that will be adopted to reduce or eliminate the risk of impacts that have been identified as* ***Harmful****.*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whetherit is harmless of harmful. The frequency of monitoring to be specified as well including the data source.*	*-1* *0* *+1*	*Confirm the score of environmental impactof the project with respect to the aspect and its monitored value in relation to legal /regulatory limits (if any) including basis of conclusion.*	*Describe how the GCC Verifier has assessed that the impact of Project Activity on social aspects (based on monitored parameters, quantitative or qualitative) and in case of "harmful aspects how has the project owner adopted Risk Mitigation Action / management actions plans and policies to mitigate the risks of negative social impacts to levels that are unlikely to cause any harm.* *Also describe the positive impacts of the project on the society as compared to the baseline alternative or BAU scenario.*

					*shall be indicated as**Harmless** /Ifthe project has an positive impact on the environment mark it as "harmless" as well.*	*as **Harmful***						
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 13 (e) (ii)*	*Paragraph 12 (c) andParagraph 13 (f)*	*Paragraph 22*		
	SOx emissions (EA01)	Not applicable	Limit: 20 µg/m^3 [9]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	NO_x emissions (EA02)	Not Applicable	30µg/m^3 [9]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	CO_2 emissions (EA03)	The project reduces CO_2 emissions since it reduces the amount of fossil fuel used. In case of "no project", stated amount of electricity would be generated from fossil fuels and cause air pollution.	Not Applicable	Not Applicable	Harmless The overall impact is positive with respect to the baseline alternativ e.	Not Applicable	Not Applicable	Not Applicable	Monthly measuring for electricity generation will be done by using electricity meters. Thus, emission reduction will be done using the actual generation values.	+1	In the baseline scenario (grid) some of the fossil fuel power plants may have emitted CO_2 emissions, which has been calculated by the combined margin emission factor as mentioned in the PSF. Therefore, emission reductions are expected to be reduced which will be regularly monitored and verified ex-post. There is not legal/regulatory limit for this aspect. The GHG emission reductions due to the installment of the project activity will be measured monthly.	The project will have positive impact by reducing measurable amount of CO_2 emissions

[9] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=12188&MevzuatTur=7&MevzuatTertip=5 (Annex I, Section B)

	CO emissions (EA04)	Not Applicable	10 mg/m^3 [9]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Suspended particulate matter (SPM) emissions (EA05)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Fly ash generation (EA06)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Non-Methane Volatile Organic Compounds (NMVOCs) (EA07)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Odor (EA08)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Noise Pollution (EA09)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
Environment - *Land*	*Solid waste Pollution from Plastics (EL-01)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Solid waste Pollution from Hazardous wastes(EL 02)	Waste formation that will occur as hazardous during the construction and operation phase of the activity is used tires, accumulators, cables and oil trap filters, etc. might be. In the management of hazardous waste, separation at the source, transportation, disposal, and similar	Solid Waste Management Regulation[10]	Not Applicable	Harmless This is harmless as the damaged/hazardous waste will be disposed of properly.	Not Applicable	Not Applicable	Not Applicable	Waste declaration forms are generated whenever required.	+1	Hazardous waste will be collected and sent for disposal with the licensed waste collection vehicle.	The impact of project activity on land would not be there and the generated operation and maintenance time waste is continuously monitored and cross checked by waste declaration form.

[10] https://www.resmigazete.gov.tr/eskiler/2015/04/20150402-2.htm

		processes										
	Solid waste Pollution from Bio-medical wastes (EL03)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Solid waste Pollution from E-wastes (EL04)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Solid waste Pollution from Batteries (EL05)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Solid waste Pollution from end of life products/ equipment (EL06)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury) (EL07)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified

	land use change (change from cropland /forest land to project land) (EL08)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
Environment - *Water*	*Reliability/ accessibility of water supply (EW01)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Water Consumption from ground and other sources (EW02)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Generation of wastewater (EW03)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Wastewater discharge without/with insufficient treatment (EW04)	The project does not cause any wastewater discharge without treatment.	Wastewater Control Regulation[11]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Wastewater removal records are generated.	+1	There is no wastewater discharge without treatment to Alakır River.	Verification team confirms that the only the treated water discharge into the river. For the same Project Owner continuously maintaining the wastewater removal records and thus the project has no harm to the water has been identified.
	Pollution of Surface, Ground and/or Bodies of water (EW05)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified

[11] https://www.mevzuat.gov.tr/File/GeneratePdf?mevzuatNo=7221&mevzuatTur=KurumVeKurulusYonetmeligi&mevzuatTertip=5

	Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
Environment – *Natural Resources*	*Conserving mineral resources (ENR01)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Protecting/ enhancing plant life (ENR02)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Protecting/ enhancing species diversity (ENR03)	Fish may be affected by the project activity. In addition, according to water utilization agreement the environmental flow that must be left from the plant is important for the aquatic life and fish life and it may affect the aquatic life if required amount is not released.	Minimum flow rates are determined by State and Hydraulic Works.	Not Applicable	Not Applicable	Harmful	Not Applicable	The fish passages are constructed.	Not Applicable	Not Applicable	With help of the mitigation measures taken, continuity of the fish species will be ensured. The climatic condition of the area is suitable for fish life. The environmental flow amount has been determined in the Project Identification Report and enough amount of water will be released to the river for sustain river aquatic life and fish life.[12]	It was accepted by the team that suitable measure have been implemented.
	Protecting/ enhancing forests (ENR04)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Protecting/ enhancing other depletable natural resources (ENR05)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Conserving energy (ENR06)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified

	Replacing fossil fuels with renewable sources of energy (ENR07)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Replacing ODS with non-ODS refrigerants (ENR08)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
Net Score:			**+3**									
Project Owner's Conclusion in PSF:			The Project Owner confirms that the Project Activity will not cause any net harm to Environment.									
GCC Project Verifier's Opinion:			The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to Environment.									

Appendix 6. Social Safeguards assessment

Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards							Project Owner's Conclusion		GCC project Verifier's Conclusion
		Description of Impact (*positive or negative*)	**Legal requirement /Limit, Corporate policies / Industrybest practice**	**Do-No-Harm Risk Assessment** (choose which ever is applicable)			**Risk Mitigation Action Plans (foraspects marked as Harmful)**	**Performance indicator for monitoring of impact.**	**Ex-ante scoring of environ mental impact**	**Explanation of the Conclusion**	**3rd Party Audit**
				Not Applicable	**Harmless**	**Harmful**	**Operational / Management Controls**	**Monitoring parameter and frequency of monitoring (as per scoring matrix Appendix-02)**	**Ex- Ante scoring of social impact of the project**	**Ex- Ante description and justificatio n/explanation of the scoring of social impact of the project**	**Verification Process Will the Project Activity cause any harm?**
Social Aspects on the identified categories[7] indicated below.	*Indicators for social impacts*	*Describe and identify actualand anticipated impacts on society and stakeholders, both positive or negative, from all source during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside theproject boundary, over which the project Owner(s) has/have control*	*Describe the applicable national regulatory requirements / legallimits or organizational policies or industry best practices related to the identified risks of social impacts*	*If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable***	*If social impacts exist, but are expected to be incompliance with applicable national regulatory requirements/ stricter voluntary corporate limits by way of plant design and operating principles then the Project Activity is unlikelyto cause any harm (is safe) and shall be indicated as* ***Harmless****), project having positive impact on society wrt. To*	*If negative social impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits then the Project Activity is likely to causeharm and shall be indicated as* ***Harmful***	*Describe the operational or management controls that can be implemented aswell as best practices, focusing on how to implement and operate the ProjectActivity, to reduce the risk of impacts that have been identified as* ***Harmful****.*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well. Monitoring parameters can be quantitative or qualitative in nature along with the data source*	*-1* *0* *+1*	*Confirm the score of the social impacts of the project with respect to the aspect and its monitored value in relation to legal/ regulato ry limits (if any) including basis of conclusion*	*Describe how the GCC Verifier has assessed that the impact of Project Activity on social aspects (based on monitored parameters, quantitative or qualitative) and in case of "harmful aspects how has the project owner adopted Risk Mitigation Action / management actions plans and policies to mitigate the risks of negative social impacts to levels that are unlikely to cause any harm.* *Also describe the positive impacts of*

											the project on the society as compared to the baseline alternative or BAU scenario.
					the BAU / baseline scenariomust also mark their aspect as ***"harmless"***						
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d)(ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragrap h 23*		
	Long-term jobs (> 10 year) created/ lost (SJ01)	The project activity leads long term to the employment generation.	Not Applicable	Not Applicable	Harmless There are no harmful impacts of the project activity as it leads to the employment generation.	Not Applicable	Not Applicable	Number of people employed by the project will be monitored through checking SSI records.	+1	The project will create new job opportunities	The project operation has created new job opportunities in the area. The number of persons employed would be monitored Under parameter Long Term Jobs

	New short-term jobs (< 1 year) created/ lost (SJ02)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Sources of income generation increased / reduced (SJ03)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04) *(human rights)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Social - *Health & Safety*	*Disease prevention (SHS01)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Occupational health hazards (SHS02)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Reducing / increasing accidents/Incidents/fatality (SHS03)	There has no accidents happened on the project site so far as all the precautionary measurements are being taken as the top most priority.	All trainings and precautions are completed according to the HSE Law	Not Applicable	Harmless	Not Applicable	Not Applicable	Not Applicable	The same can be justified from the training records.	0	Not Applicable
	Reducing / increasing crime (SHS04)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Reducing / increasing food wastage (SHS05)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified

	Reducing / increasing indoor air pollution (SHS06)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Efficiency of health services (SHS07)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Sanitation and waste management (SHS08)	Pproper sanitation is being maintained at the project site. Hence there are no health-related issues to the employees	Occupational Health And Safety Services Regulation[13]	Harmless	Not Applicable	Not Applicable	same can be justified from the attendance register.	0	Not Applicable	Not Applicable	No Risk Identified
	Other health and safety issues (SHS09)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Social - *Education*	*specialized training / education to local personnel (SE01)*	The project owner provides job related training for the special positions	Not Applicable	Not Applicable	Harmless There are no harmful impacts of the project activity as it leads to the employment generation and training.	Not Applicable	Not Applicable	The employee may be given job related training in order to increase the capability of them, if required. The same can be monitored via training records	+1	Occupational health and safety trainings have been provided to the employees.	The project operation has imparted various job related training records which will be monitored continuously under the parameter “Job Related Trainings”.
	Educational services improved or not (SE02)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Project-related knowledge dissemination effective or not (SE03)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Other educational issues (SE03)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

[13] https://www.mevzuat.gov.tr/File/GeneratePdf?mevzuatNo=16924&mevzuatTur=KurumVeKurulusYonetmeligi&mevzuatTertip=5

Social - *Welfare*	*Improving/ deteriorating working conditions (SW01)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Community and rural welfare (indigenous people and communities) *(SW02)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Poverty alleviation (more people above poverty level) (SW03)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Improving / deteriorating wealth distribution/ generation of income and assets (SW04)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Increased or / deteriorating municipal revenues (SW05)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Women's empowerment (SW06) *(human rights)*	There is no discrimination against the women at the project site	Not Applicable	Not Applicable	Harmless	Not Applicable	Not Applicable	Not Applicable	Employment records	0	No Risk Identified
	Reduced / increased traffic congestion (SW07)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Exploitation of Child labour *(human rights)* *(SW08)*	There are no child labor present at the project site. The project activity is completely against the child labour.	Regulation On Working Procedures And Principles Of Child And Youth	Not Applicable	Harmless	Not Applicable	The same can be confirmed/justified from the SSI records	0	There are no child labour workin at the project site.	Not Applicable	No Risk Identified

			Workers[14]								
	Minimum wage protection *(human rights) (SW09)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Abuse at work place.(with specific	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	reference to women and people with special disabilities / challenges) *(human rights) (SW10)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Other social welfare issues (SW11)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Avoidance of human trafficking and forced labour *(human rights)* *(SW12)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified

[14] https://www.mevzuat.gov.tr/File/GeneratePdf?mevzuatNo=5457&mevzuatTur=KurumVeKurulusYonetmeligi&mevzuatTertip=5

	Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs *(human rights)* *(CW13)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
	Provisions of resettlement and human settlement displacement *(human rights)* *(CW14)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No Risk Identified
Net Score:		**+2**									
Project Owner's Conclusion in PSF:		The Project Owner confirms that the Project Activity will not cause any net harm to society.									
GCC Project Verifier's Opinion:		The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to society.									

Appendix 7. United Nations Sustainable Development Goals assessment

UN-level SDGs	**UN-levelTarget**	**Declared Country-level SDG**	**Defining Project-level SDGs**				**GCC Project Verifier's Conclusion**	
			Project-level Indicators	Project-level Targets/Actions	Contribution of Project-level Actions to SDG Targets	Monitoring	**Verification Process**	**Are Goal/ Targets Likely to be Achieved?**
Describe UN SDG targets and indicators *See: https://unstats.un.org/sdgs/indicators/indicators-list/*	*Describe the UN-level target(s) and corresponding indicator no(s)*	*Has the host country declared the SDG to be a national priority? Indicate (Yes or No)*	*Define project-level indicators bysuitably modifyingand customizing UN/Country-level indicators to the project scope or creating a new indicator(s). Referto the previous column for guidance*	*Define project-level targets/actions in linewith the project level indicator chosen. Define the target date by which the Project Activity is expected to achievethe project-level SDG target(s).*	*Describe and justify howactions taken under the Project Activity are likelyto result in a direct positive effect that contributes to achieving the defined project-level SDG targets*	*Describe the monitoring approach and themonitoring parameters to beapplied for each project-level SDG indicator and its corresponding target, frequency of monitoring and data source*	*Describe how the GCC Verifier has verified the claims that the project is likely to achieve the identified Project level SDGs target(s*	*Describe whether the project-level SDG target(s) is likely to be achieved by the target date (Yes or no)*
Goal 1: End poverty in all its forms everywhere	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Goal 3. Ensure healthy lives and promote well-being for all at all ages	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	SDG Target 4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship Related indicator: Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	Yes	Number of the employees, by gender who received training services of any type via project during the crediting period	Project owner will endeavour towards ensuring to access to quality education for all women and men by undertaking education and training	Trainings will help in ensuring contribution towards quality education among women and men	Please check the training certificates	Since the continuous operation of the project from 2017, the project activity imparted various training programs which will be confirmed from training records maintained at the project site.	Yes
Goal 5. Achieve gender equality and empower all women and girls	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 6. Ensure availability and sustainable management of water and sanitation for all	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	SDG Target 7.2 “By 2030, increase substantially the share of renewable energy in the global energy mix” by the utilization of hydropower as a renewable energy source. Related indicator: 7.2.1 Renewable energy share in the total final energy consumption.	Yes	Increase the share of renewables in the total installed power capacity connected to the national grid.	11.95 GWh per year clean energy generation	Turkey's energy production mix. It provides 11.95 GWh annual clean energy to the grid.	The net electricity which will be supplied to the grid by the project activity will be monitored continuously through energy meter (main and check meter) and estimated annual generation has been provided in generation license of the project.	Project is a hydro power plant and has been in operation since October 2017 which was verified from the provisional/commissioning certificate/14/	Yes

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	SDG Target 8.5 "By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities and equal pay for work of equal value". Related indicator: 8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities	Yes	Generated job opportunity and income	Creates employment opportunity	8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities. Creating employment from project activity	The total number of persons which will be working in the plant would be calculated based on Social Security Institution Records	The parameter has been included in the parameters to be monitored and should be verifiable.	Yes
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	SDG Target 9.4 "By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities". Related indicator: 9.4.1 CO2 emission per unit of value added	Yes	Provides one clean and resilient energy generation facility	Project implementation is a 11.95 GWh resilient energy generation facility. Project activity eliminates 6,634 tCO_2e per year.	The project helps adaptation of clean energy technologies by implementing a hydro power project	The project implementation continues, and electricity is generated.	Hydro power plant has been in operation since 2017	Yes
Goal 10. Reduce inequality within and among countries	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	Target SDG Target 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management Indicator 11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)	Yes	Quantum of fine particulate matter avoided resulting from the project activity.	The project activity is expected to result in reduction of particulate matter.Estimated PM2.5 and PM10 values are 0.001 $\mu g/m^3$ and 0.003 $\mu g/m^3$ respectively.[15]	As known, fossil fuel emissions are secondary sources of PM2.5 and PM10 in the cities. Since the project reduces the use of fossil fuels, PM2.5 and PM10 formation will be reduced	Quantum of avoided particulate matter will be estimated as a product of quantum of electricity generated by the project activity and average emission of particulate matter from generation of electricity in fossil fuel-based power	Relevant monitoring parameter has been incorporated in the monitoring plan	Yes

[15] Please refer to ER Sheet of the project activity to see calculation details.

					accordingly. Hence, the project helps to improve air quality.	plant. Please refer to Section B.7.1 for monitoring details		
Goal 12. Ensure sustainable consumption and production patterns	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 13. Take urgent action to combat climate change and its impacts	SDG target 13.3. "Improve education, awareness raising and human and institutional capacity on climate change mitigation, adaption , impact reduction and early warning" indicator 13.3.2 , Number of countries that have communicated the strengthening of institutional , systemic and individual capacity building to implement , adaption, mitigation, and technology transfer, and development actions.	Yes	Eliminates 6,634 tCO_2e per year		Since the project uses hydro energy, there is no GHG emission related to the project activity it eliminates 6,634 tCO_2e per year. Reduce greenhouse gas emissions by 6,634 tCO_2e per year	Electricity produced by the renewable generating unit multiplied by an emission factor sourced by Ministry of Energy and Natural Resources in Turkey	Relevant Monitoring parameter has been incorporated in the monitoring plan	Yes
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

SUMMARY	**Targeted**	**Likely to be Achieved**
Total Number of SDGs	**6**	**6**
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF	**Diamond**	**Diamond**

DOCUMENT HISTORY

Version	Date	Comment
V 3.1	31/12/2020	▪ The name of GCC Program's emission units has been changed from "Approved Carbon Reductions" or ACRs to "Approved Carbon Credits" or ACCs.
V 3.0	23/08/2020	▪ Revised version released on approval by the Steering Committee as per the GCC Program Process; ▪ Revised version contains the following changes: ○ Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC); ○ Considered and addressed comments raised by the Steering Committee: ➢ during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and ➢ electronic consultations EC01-Round 04 (17.08.2020 – 22.08.2020). ▪ Feedback from the Technical Advisory Board (TAB) of ICAO on GCC submissions for approval under CORSIA[16];
V 2.0	25/06/2019	▪ Revised version released for approval by the GCC Steering Committee. ▪ This version contains details and information to be provided, consequent to the latest worldwide developments (e.g., CORSIA EUC).
v1.0	01/11/2016	▪ Initial version released for approval by the GCC Steering Committee under GCC Program Version 1

[16]See ICAO recommendation for conditional approval of GCC at https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/Excerpt_TAB_Report_Jan_2020_final.pdf

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