GLOBAL CARBON COUNCIL

Driving Climate Actions

Project Submission Form

V4.0- 2022

CONTENTS

COVER PAGE- Project Submission Form (PSF)	
BASIC INFORMATION	
Title of the Project Activity as per LON/LOA	Umutlu HEPP
PSF version number	07
Date of completion / Updating of this form	30/04/2024
Project Owner(s) as per LON/LOA (Shall be consistent with De-registered CDM Type B Projects)	GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş. GTE KARBON SÜRDÜRÜLEBİLİR ENERJİ EĞİTİM DANIŞMANLIK VE TİCARET A.Ş.
Country where the Project Activity is located	Türkiye
GPS coordinates of the project site(s)	**Latitude**: 40°45'37.73"N / 40.760481° / 4515318N **Longitude**: 36°26'29.47"E / 36.441518° / 284040E
Eligible GCC Project Type as per the Project Standard (Tick applicable project type)	☒ **Type A:** ☐ Type A1 ☒ Type A2 ☒ Sub-Type 1 ☐ Sub-Type 2 ☐ Sub-Type 3 ☐ Sub-Type 4 ☐ Type A3 ☐ **Type B – De-registered CDM Projects:**[1] ☐ Type B1

[1] Owners of Type B projects shall fill in the form provided in Appendix 7.

	☐ Type B2
Minimum compliance requirements	☒ Real and Measurable GHG Reductions ☒ National Sustainable Development Criteria (if any) ☒ Apply credible baseline and monitoring methodologies ☒ Additionality ☒ Local Stakeholder Consultation Process ☒ Global Stakeholder Consultation Process ☒ No GHG Double Counting ☒ Contributes to United Nations Sustainable Development Goal 13 (Climate Action)
Choose optional and additional requirements (Tick applicable label categories)	☒ Do-no-net-harm Safeguards to address Environmental Impacts ☒ Do-no-net-harm Safeguards to address Social Impacts ☒ Contributes to United Nations Sustainable Development Goals (in addition to Goal 13)
Applied methodologies including version No. (Shall be approved by the GCC or the CDM)	ACM0002 Grid-connected electricity generation from renewable sources, ver 21.0
GHG Sectoral scope(s) linked to the applied methodology(ies)	Scope 1 - Energy (renewable/non-renewable sources)

Applicable Rules and Requirements for Project Owners

(Tick applicable Rules and Requirements)

Rules and Requirements		Version
☒ ISO 14064-2		
☒ Applicable host country legal requirements /rules		
☒ GCC Rules and Requirements[2]	☒ Project Standard	3.1
	☐ Approved GCC Methodology (XXXXX)	
	☒ Program Definitions	3.1
	☒ Environment and Social Safeguards Standard	3.0
	☒ Project Sustainability Standard	3.1
	☒ Instructions in Project Submission Form (PSF)-template	4.0
	☒ Clarification No. 01	1.3
	☐ Clarification No. 02	
	☐ Clarification No. 03	
	☐ Clarification No. 04	
	☐ Clarification No. 05	
	☒ Standard on avoidance of double counting	1.0
	☒ Information Note- Default Cost of Equity for Annex I Countries of Kyoto Protocol	1.0
☒ CDM Rules[3]	☒ Approved CDM Methodology (ACM0002)	21.0
	☒ TOOL 1- Tool for the demonstration and assessment of additionality	07.0
	☐ TOOL 02- Combined tool to identify the baseline	

[2] GCC Program rules and requirements: http://www.globalcarboncouncil.com/resource-centre/
[3] CDM Program rules: https://cdm.unfccc.int/Reference/index.html

		scenario and demonstrate additionality	
		☒ TOOL 07- Tool to calculate the emission factor for an electricity system	07.0.0
		☐ TOOL 19- Demonstration of additionality of microscale project activities	
		☐ TOOL 21- Demonstration of additionality of small-scale project activities	
		☐ TOOL 23- Additionality of first-of-its-kind project activities	
		☒ TOOL 24- Common practice	03.1
		☒ TOOL 27- Investment analysis	12.0
		☐ TOOL 32- Positive lists of technologies	
		☐ Guidelines for objective demonstration and assessment of barriers	
		☐ Add rows if required	
Choose Third Party Project Verification by approved GCC Verifiers[4] (Tick applicable verification categories)	☒ GHG emission reductions (i.e., Approved Carbon Credits **(ACCs)**) ☒ Environmental No-net-harm Label (**E+**) ☒ Social No-net-harm Label (**S+**) ☒ United Nations Sustainable Development Goals (**SDG+**) ☐ Bronze SDG Label ☒ Silver SDG Label ☐ Gold SDG Label ☐ Platinum SDG Label ☐ Diamond SDG Label		

[4] **Note:** GCC Verifiers under the Individual Track are not eligible to conduct verifications for GCC Project Activities whose owners intend to supply carbon credits (ACCs) for use within CORSIA.

	☒ CORSIA requirements (**C**[+]) ☐ Host Country Attestation on Double counting
Declaration by the 'Authorized Project Owner[5] and focal point' (Tick all applicable statements[6])	The Project Owner(s) declares that: **Generic Requirements applicable to all Project Types:** ☒ We confirm that the Project Activity complies with the eligibility of the applicable project type (A1, A2, A3, B1 or B2) as stipulated by the Project Standard and relevant clarifications. ☒ We confirm that the Project Activity shall start or have started operations, and shall start or have started generating emission reductions, on or after 1 January 2016. ☒ We confirm that the Project Activity is eligible to be registered under the GCC program. We shall ensure the following for the Project Activity (tick at least one of the two options): ☒ No outcomes (e.g., emission reductions, environmental attributes) generated by the Project Activity under GCC will be claimed as carbon credits or environmental attributes under any other GHG/non-GHG[7] program, either for compliance or voluntary purposes, during the entire GCC crediting period; or ☒ If the project activity has been issued with carbon credits or environmental attributes of compensating nature[8] by any other GHG/ non-GHG program, either for compliance or voluntary purposes, the ACCs will be claimed only for the remaining crediting period (subject to a maximum of 10 years of crediting period including the periods under other programs and GCC program) for which carbon credits/ environmental attributes of compensating nature have not been issued by any other GHG/ non-GHG program. **Specific requirements applicable to respective Project Types:** ***For Project Type A1:***

[5] The Project Owner means the legal entity or organization that has overall control and responsibility for the Project Activity

[6] **Consequences in case of Non-compliance with declaration statements:**
If at any point in time non-compliance with the declared statements is established as a result of negligence, fraud or wilful misconduct of the GCC Project Owner/s the GCC project activity will be disqualified, and the registration of the proposed Project Activity will be rejected.

[7] Non-GHG programs could be such as I-REC facilitating reliable energy claims with Renewable Energy Certificate (REC) schemes

8 The environmental attributes of compensating nature are those which are used by captive users (e.g., corporates/industries) for offsetting their GHG emissions

	☐ For Project Type A1, we confirm that the Project Activity is NOT registered as a GHG Project Activity in any other GHG/non-GHG program or any other voluntary program and has not issued or will not issue credits under any other program. ***For Project Type A2 (Sub-Type 1):*** ☒ For Project Type A2 Sub-Type 1, we confirm that the Project Activity is NOT registered as a GHG Project Activity in any other GHG/non-GHG program or any other voluntary program and has not issued or will not issue credits under any other program. ***For Project Type A2 (Sub-Type 2 or Sub-Type 3):*** For Project Type A2 Sub-Type 2 or Project Type A2 Sub-Type 3, we confirm that for Project Activity, which has been registered with CDM or any GHG/non-GHG Program and we shall (tick at least one of the two options): ☐ Submit a proof for deregistration from CDM; or ☐ Submit a signed & stamped public undertaking, stating that the Project Owner will never submit any request for Issuance of ACCs or request for renewal of crediting period to CDM-EB or under article 6.4 or any authority after submission to GCC Program and shall formally inform CDM-EB or authority under article 6.4 or any authority after submission to GCC Program. ☐ For Project Type A2 Sub-Type 2 or Project Type A2 Sub-Type 3, we confirm that the Project Activity is NOT included as a component Project Activity (CPA) in any registered GHG Programme of Activities (PoA) or any other functionally equivalent grouped/aggregated activities under any GHG program (such as the CDM or any other voluntary program). ***For Project Type A2 (Sub-Type 4):*** For Project Type A2 Sub-Type 4, we confirm that the Project Activity has been included in a registered CDM-POA and we shall (tick at least one of the two options): ☐ Submit the proof for exclusion of CPA(s) from registered CDM-POA prior to the date of initial submission to the GCC Program; or ☐ Submit the proof of exclusion of CPA(s) from the registered CDM-PoA after the request for registration has been submitted to GCC Program but before the final decision is made by the GCC Steering Committee. ***For Project Type A3:*** ☐ For Project Type A3, we confirm that the Project Activity is NOT registered as a GHG Project Activity in any other GHG/non-GHG program or any other voluntary program and has not issued or will not issue credits under any other program. ***For Project Type B1 or B2:***

	For Project Type B1 or Project Type B2, we confirm that for Project Activity, which has been registered with CDM or any GHG/non-GHG Program and we shall (tick at least one of the two options): ☐ Submit a proof for deregistration from CDM; or ☐ Submit a signed & stamped public undertaking, stating that the Project Owner will never submit any request for Issuance of ACCs or request for renewal of crediting period to CDM-EB or under article 6.4 or any authority after submission to GCC Program and shall formally inform CDM-EB or authority under article 6.4 or any authority after submission to GCC Program. **Requirements to avoid double counting:** We intend to submit or have submitted a written attestation[9] (Host Country Letter of Authorization - HCLOA) from the host country's national focal point or focal point designee for CORSIA eligible units generated beyond 31 December 2020 at the following stages[10] (tick at least one of the three options): ☐ The initial submission for GSC; or ☐ Along with the submission for a request for registration (after Project Verification is completed); or ☐ Along with the submission for a request for the first or subsequent issuance of ACCs. **Project specific requirements:** ***CORSIA specific requirements:*** ☐ We confirm that bundled projects or grouped projects shall have registered crediting period starting on or after 1 Jan 2016 for the grouped/aggregated project as a whole. ☒ We confirm that the Project Activity meets all the requirement of the CORSIA Eligible Emissions Units[11] required for GCC projects and does not fall under the excluded unit types, methodologies, programme elements, and/or procedural classes. ☒ We confirm that the Project Activity aims to achieve at least Silver or higher SDG+ label (i.e., positively impact at least 3 or more United Nations Sustainability Development Goals). ☒ We confirm that the Project Activity will be implemented in a country which is UN member state[12].

9 In case of any change of Host Country Letter of Authorisation (HCLOA) the project owner shall inform the GCC operations team immediately

10 If the host country attestation is not submitted at the initial submission of GSC, the project can be tagged with an indicative CORSIA flag if it's confirmed to be submitted later. If the host country attestation is not submitted at the request for registration, the project can be tagged with an indicative CORSIA flag if at least the PSF and Verification Report confirms to submit this letter, at first issuance. If the host country attestation is not submitted at request for first issuance, the ACCs will not be tagged as CORSIA (C+) compliant if this letter is not submitted.

11 CORSIA Eligible Emissions Units containing approval and conditions for GCC Program: https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Emissions-Units.aspx

12 The list of UN member states countries can be found at https://www.un.org/en/about-us/member-states

	Provide details (if any) below for the boxes ticked above:
	The Project Owner(s) declares that: ☒ All the information provided in this document, including any supporting documents submitted to the GCC or its registry operator IHS Markit at any time, is true and correct. ☒ They understand that a failure by them to provide accurate information or data, or concealing facts and information, can be considered as negligence, fraud or willful misconduct. Therefore, they are aware that they are fully responsible for any liability that arises as a result of such actions. Provide details below for the boxes ticked above
Appendixes 1-9	Details about the Project Activity are provided in Appendixes 1 through 9 to this document.
Name, designation, date and signature of the Focal point (as per LON/LOA)	On behalf of GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş. Ersan Gülay General Manager of Energy Group  M. Kemal Demirkol Director  30/04/2024

1. PROJECT SUBMISSION FORM

Section A. Description of the Project Activity

A.1. Purpose and general description of the Project Activity

>> Umutlu HEPP which is a run of river type project on the Yeşilırmak River in Taşova district in Amasya Province, has been developed by GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş. The project aims to contribute to reducing national energy deficit and development of local industries as it allows the use of cheaper energy for industrialists and gain advantage in a competitive environment. GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş. has the legal ownership of the ACCs generated by this project activity as per LoA.

The purpose of the project is to generate clean energy by harnessing hydropower and providing the energy to the Turkish national grid. By implementing the project, investors also aim to reduce dependency to the fossil fuels thereby reducing the sources of environmental pollution. In order to achieve the highest possible power output and the emission reductions associated with it; the project owner invested in state-of-the-art turbines and all the necessary assessments were carried out before the implementation.

In this scope, GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş. planned to install 3 x 7.167 MWm (6.780 MWe) turbines in Mülkbükü town, Taşova district in Amasya Province with the purpose of contributing to the national economy the meeting the increased electricity demand. Project is designed to be run of river type[13].

The project is operational since April 2016. The project complies with the relevant regulations and laws in Türkiye. In line with Turkish environmental regulations, “Environmental Impact Assessment (EIA) Approval Letter” was approved by Ministry of Environment and Forestry in 31/05/2007. Then project was invested in 12/08/2008. On 26/08/2008, water use agreement was signed between GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş. and State Hydraulic Works (DSI). After the project started operation, EIA decision was changed, and new approval letter was approved in 31/10/2017.

The project is licensed on 30/10/2008 as 20.34 MWe. As per the license issued by Energy Market Regulatory Authority (EMRA) all legal rights of the project is given to GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş. for 49 years including pre-construction and construction periods.

The license of the project was purchased by GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş. from another company in 2010. Company name change amendment in the generation license as 18/01/2010. In the project, the location of the powerhouse was changed, and the project was re-designed. This process was continued 1 year. After 2-year expropriation and financing process, the construction site was established, and construction works started in 2013. First commissioning was made in April 2016 with the partial completion of the construction.

[13] Umutlu HEPP EIA Report, Section 5, pg 67

The project activity will generate greenhouse gas (GHG) emission reductions by avoiding CO2 emissions from electricity generation by fossil fuel power plants connected to Turkish National Power Grid. The average annual generated energy is expected to be 78,920 MWh according to the generation licence and the project will be able to deliver a reduction in emissions of around 43,816 tCO2e (tons of carbon dioxide equivalent) per annum and 438,160 tonnes of CO2 for the whole crediting period.

The project activity involves the installation of a Greenfield power plant. The baseline scenario is 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. Thus, the project replaces fossil fuel with clean and renewable energy for electricity generation.

Main goals of the Umutlu Hydro Power Plant Power Plant project include;

• Utilization of the hydro potential of Türkiye in order to meet increasing electricity demand and maintain energy security.
• Reduction of GHG emissions through increasing share of renewable resources.
• Contribution to economic development by creating direct and indirect job opportunities during construction and operation phases.
• Reduction of import dependency on fossil fuel weighed electricity sector and diversify generation mix through use of local resources.
• Contribution to sustainable development through supporting local community and local economy.

In terms of local benefits, the project mainly contributes to the reduction of local air pollutants and local employment

Milestone table of the project is presented below:

Table 1. Milestones of Umutlu HEPP

Milestone	Date
First EIA approval	31/05/2007
Water Use Agreement	12/08/2008
Generation licence	30/10/2008
Feasibility Study Report	2009
License Amendment for Company Name Change	18/01/2010[14]
First Connection Agreement	22/08/2013
Construction agreement*	09/04/2014
Turbine agreement	14/11/2014
First System Use Agreement	19/01/2016
First Index Protocol	04/02/2016

[14] Generation Licence, page 6/8, Table “Amendments to the license”, item 3: company name changed to “GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Limited Şirketi”

Power Purchase Agreement	26/02/2016
Commissioning of turbines T1 and T2**	08/04/2016
Commissioning of turbine T3	29/04/2016
Revised EIA approval	31/10/2017
Revised Connection Agreement[15]	14/08/2018
Revised System Use Agreement[16]	29/11/2018

**investment decision date*
***project start date*

In terms of local benefits, the project mainly contributes to the reduction of local air pollutants and local employment.

The project is expected to contribute 3 SDGs which are SDG 7, 8, and 13.

SDG 7 Energy: The project contributes SDG Target 7.2 "By 2030, increase substantially the share of renewable energy in the global energy mix" by the utilization of biomass as a renewable energy source.

SDG 8 Economic Growth: The project creates direct and indirect employment opportunities during construction and operation phases, so it contributes to 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".

SDG 13 Climate Change: The project produces clean renewable energy by diminishing CO_2 emissions. Therefore, it contributes SDG Target 13.3 "Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning".

The project boundary is considered as the National Electricity Grid of Türkiye according to applied tool. The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the power plant is connected.

A.2. Location of the Project Activity

>>

[15] The Connection Agreement dated 22/08/2013 has been revised in the General Provisions Section and Annex-5 Communication System section with the EMRA Board Decision dated 29/03/2018 and numbered 7760-1.
[16] The System Usage Agreement dated 19/01/2016 has been revised due to the disconnection of the facility from feeder number H6 in Old Erbaa TM and transferring it to the 1H-7 feeder equipped from 154 kV New Erbaa TM.

Table 2. Project Coordinates

Address and geodetic coordinates of the physical site of the Project Activity		
Physical address	**Latitude***	**Longitude***
Mülkbükü town, Taşova district, Amasya Province	40°45'37.73"N 40.7605° 4515318N	36°26'29.47"E 36.4415° 284040E

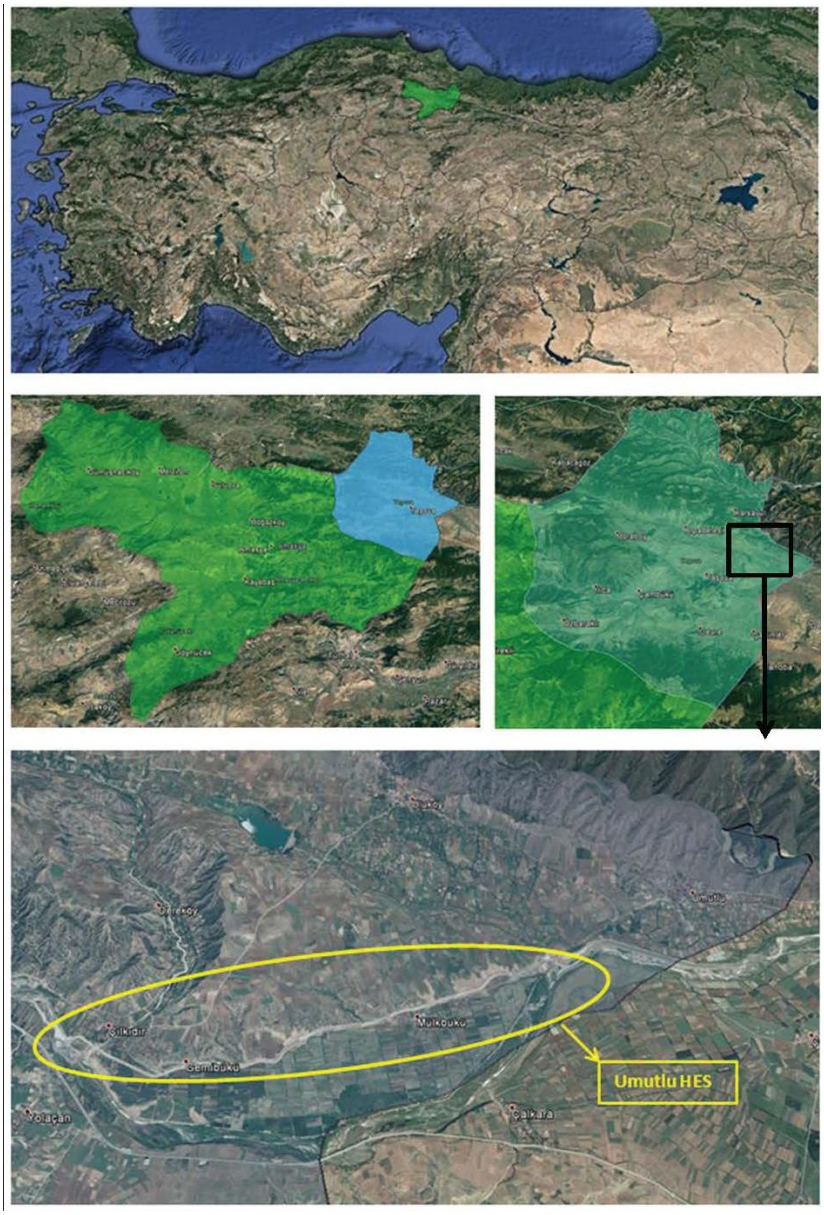

Figure 1. Project area

A.3. Technologies/measures

>> Umutlu HEPP has 3 turbines with a configuration of 3 x 6.780 MWe. The electrical output capacity will be limited to 20.34 MWe. Technical properties of the turbines are given below.

Table 3. Technical properties of the installed equipment

Turbines	
Type	Kaplan
Number of units	3
Brand	Global Hydro
Serial number	1448 / 1449 / 1450
Installed capacity (1 unit)	3 x 6.780 MWe
Hydraulic capacity (1 unit)	35.6 m^3/s
Rated speed	250 rpm
Average Lifetime	20 years
Generators	
Speed	250 rpm
Voltage between phases	6.3 kV
Frequency	50 Hz
Rated power factor	0.9
Number of generators	3
Rated capacity for each generator	8.2 MVA
Transformers	
Type	Step up
Number	3
Brand	Best Trafo
Voltage	33 kV
Capacity	3*8200 kVA
Average Lifetime	40-50 years

A total of 106.7 m^3/s water will be collected by the regulator constructed on Yeşilırmak river and will be carried to the forebay by means of open channels of total 7520 m length, where it will be lowered to the powerhouse by means of 3 x 52 m long penstock.
The turbines have been designed to operate under maximum gross head of 28.32 WCm. In addition, the turbines will operate under the following conditions:

Table 4. Headwater Elevations of Turbines

Maximum operational water level	El. 220.47 m.a.s.l.
Nominal operational water level	El 220.47 m.a.s.l.
Minimum water level	El 218.12 m.a.s.l.

Table 5. Tailrace Elevations of Turbines

Units in Operation	Elevations (m.a.s.l.)
One unit in operation at min. discharge of 8.9 m^3/s	195.80
One unit in operation at full discharge of 36.5 m^3/s	196.95
Two units in operation at full discharge of 71.2 m^3/s	197.65
Three units in operation at full discharge of 106.7 m^3/s	198.00

Table 6. Gross Heads of Turbines

Units in Operation	Gross Heads (m)
One unit in operation at min. discharge of 8.9 m^3/s	24.87
One unit in operation at full discharge of 36.5 m^3/s	23.52
Two units in operation at full discharge of 71.2 m^3/s	22.82
Three units in operation at full discharge of 106.7 m^3/s	20.12
Minimum gross head	20.12

Table 7. Operational Net Heads of Turbines

Units in Operation	Net Heads (m)
One unit in operation at min. discharge of 8.9 m^3/s	24.30
One unit in operation at full discharge of 36.5 m^3/s	23.50
Two units in operation at full discharge of 71.2 m^3/s	22.46
Three units in operation at full discharge of 106.7 m^3/s	20.10
Minimum net head	19.76

Each generator connected electrically to its individual transformers stepping up from generator voltage to the transmission voltage of 33 kV with 10.6 km transmission line. Electricity generated at project is fed to the national grid via 154/33 kV Erbaa TM OG substation. The project activity transfers environmentally safe and sound technology and know-how to the host country since such technologies are still in the phase of development and not yet common in Türkiye.

A.4. Project Owner(s)

Location/ Country	Project Owner(s)	Where applicable[17], indicate if the host country has provided approval (Yes/No)
Türkiye	GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş. GTE KARBON SÜRDÜRÜLEBİLİR ENERJİ EĞİTİM DANIŞMANLIK VE TİCARET A.Ş.	Yes

A.5. Declaration of intended use of Approved Carbon Credits (ACCs) generated by the

[17] For example, *Project Coordination Form* is to be filled-in by Project Owners for projects located in Qatar. A written attestation from the host country's national focal point or the focal point's designee, as required by CORSIA (Refer section A.5 of the PSF guidelines).

Project Activity

>> The Project Activity is expected to generate ACCs for a full 10-year crediting period and supply the credits to offset the following GHG emissions:

Period		Name of the Entities	Purpose and Quantity of ACCs to be supplied
From	To		
08/04/2016	07/04/2026	CORSIA	438,160 tCO2 to be used for CORSIA

ACCs from the project activity will be used to create additional revenue stream for the investment and for reducing the project financial risks and thus enabling the sustainability of the project.

Carbon credits (ACCs) from the Project Activity will not be double counted Project has not and will not apply for other types of environmental certificates including RECs.

A.6. Additional requirements for CORSIA

>>

Condition	Demonstration
(a) Comply with the Environment and Social Safeguards Standard 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+. Please refer to Section E of this document.	The project complies with Environment and Social Safeguards Standard to ensure that the Project Activity does not cause any net harm to the environment or society. These achievements are demonstrated by certification labels E+ and S+ and these are demonstrated in Section E.
(b) Comply with the Project Sustainability Standard to ensure that the Project Activity demonstrates the level of contribution towards achieving the United Nations Sustainability Development Goals (SDGs) and provides an opportunity to demonstrate this achievement by obtaining the additional SDG+ label (Bronze, Silver, Gold, Platinum, or Diamond).	The project complies with Project Sustainability Standard to ensure that the Project Activity demonstrates the level of contribution towards achieving the United Nations Sustainability Development Goals (SDGs). These achievements are demonstrated by SDG+ label, which is Silver for this project.
(c) Obtain and provide to the GCC and its Registry (operated by IHS Markit), a written attestation from the host country's national focal point or the focal point's designee, as required by CORSIA Emissions Unit Eligibility Criteria	Host country does not provide any attestation. There is no legislation for post 2020 period in Türkiye.

(paragraph 7 (c) of the Carbon Offset Credit Integrity Assessment Criteria) and Programme Application Form – Appendix A – Supplementary Information Form (refer to section 3.7.8. with respect to the Host Country Attestation on Double Counting), which shall be made publicly available prior to the use of units from the host country under CORSIA.	

The project activity targets to contribute environmental and social aspects and receive E+ and S+ no-net-harm labels. Moreover, the project targets three SDG goals which are 7, 8, and 13. Hence, the ACCs generated will likely be certified with the Silver label. Please see Sections E and F for details.
HCLOA letter will be submitted by PO to GCC at the time of issuance of project activity in line with para 16 of "Standard on Avoidance of Double Counting". V1.0 dated 09/03/2022.

As per the guidelines available in this regard, submission of Host Country Attestation (HCA) on Double Counting as and when required by CORSIA. For carbon credits issued from 1st Jan 2016 to 31st Dec 2020, HCA is not required for CORSIA labeled credits. Moreover, Türkiye does not have an emission cap or a regulation on emission trading. If new regulations are issued in the future, adjustments will be made accordingly, and the HCA will be provided during the first or subsequent verification when the issuance of carbon credit is considered beyond January 1st, 2021.

Section B. Application of selected methodology(ies)

B.1. Reference to methodology(ies) and tools applied in the project

>> The United Nations approved consolidated baseline methodology applicable to this project is ACM0002 "Consolidated methodology for grid-connected electricity generation from renewable sources", Version – 21.0[18].

ACM0002 refers to the following tools:

- Tool 01: Tool for the demonstration and assessment of additionality, Version 07.0.0[19]
- Tool 05: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation, Version 3.0[20]
- Tool 07: Tool to calculate the emission factor for an electricity system, Version 07.0[21]
- Tool 24: Common Practice, version 03.1[22]

[18] https://cdm.unfccc.int/UserManagement/FileStorage/ZPFJL01OU2RYC6N3HASIXV7K84QBG9
[19] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf
[20] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-05-v3.0.pdf
[21] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf
[22] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-24-v1.pdf

- Tool 27: Investment analysis, Version 12[23]

Also, GCC Clarification No. 01, Version 1.3[24] and Information Note- Default Cost of Equity for Annex I Countries of Kyoto Protocol, Version 1.0[25] is applicable for the project activity.

B.2. Applicability of methodology(ies) and tools applied in the project

>> Project meets the applicability criteria defined by the selected methodology, which is ACM0002, ver 21.0. The choice of methodology ACM0002, is justified as the project activity meets its applicability criteria. Umutlu HEPP is a large-scale hydro power type, greenfield, grid connected renewable electricity generation project.

No.	Applicability Conditions	The Project
1	This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plants/units; (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s)/unit(s).	Umutlu HEPP is a large-scale hydro power type, greenfield, grid connected renewable electricity generation project. So, the project meets the applicability condition.
2	In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Integrate BESS with a Greenfield power plant; (b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic1 or wind power plant(s)/unit(s); (c) Integrate a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s); (d) Integrate a BESS together with implementing a retrofit of (an) existing solar photovoltaic or wind power plant(s)/unit(s).	The project activity does not involve the integration of a BESS. Hence, this condition is N/A.
3	The project activity may include renewable energy power plant/unit of one of the following types: hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.	The project activity is installation of a new grid connected renewable energy power plant of the type of hydro power

[23] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v12.pdf
[24] https://www.globalcarboncouncil.com/wp-content/uploads/2022/09/Clarification-No.1-v1.3-.pdf
[25] https://www.globalcarboncouncil.com/wp-content/uploads/2023/11/Default-Cost-of-Equity-for-Annex-I-Countries-of-Kyoto-Protocol-V1.0.pdf

		plant.
4	In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	The project does not involve a capacity addition to an existing plant, a retrofit of an existing operating plant, a rehabilitation of an existing plant, a replacement of an existing plant. Hence, this condition is N/A.
5	In case of Greenfield project activities applicable under paragraph 5 (a), the project participants shall demonstrate that the BESS was an integral part of the design of the renewable energy project activity (e.g. by referring to feasibility studies or investment decision documents).	Paragraph 5 (a) is given in row "2" in this table. Hence, this condition is N/A.
6	The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only during exigencies 2 may the BESS be charged with electricity from the grid or a fossil fuel electricity generator. In such cases, the corresponding GHG emissions shall be accounted for as project emissions following the requirements under section 5.4.4. The charging using the grid or using fossil fuel electricity generator should not amount to more than 2 per cent of the electricity generated by the project renewable energy plant during a monitoring period. During the time periods (e.g. week(s), months(s)) when the BESS consumes more than 2 per cent of the electricity for charging, the project participant shall not be entitled to issuance of the certified emission reductions for the concerned periods of the monitoring period.	The project does not involve a BESS. Hence, this condition is N/A.
7	In case of hydro power plants, one of the following conditions shall apply: (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (7), is greater than 4 W/m^2; or (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (7), is greater than 4 W/m^2; or	The project is a run-of-river hydro power plant.

	(d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m^2, all of the following conditions shall apply: (i) The power density calculated using the total installed capacity of the integrated project, as per equation (8), is greater than 4 W/m2; (ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; (iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m2 shall be: a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed capacity of integrated hydro power project.	
8	In the case of integrated hydro power projects, project proponent shall: (a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or (b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum of five years prior to the implementation of the CDM project activity.	The project is not an integrated hydro power project. Hence, this condition is N/A.
9	The methodology is not applicable to: (a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; (b) Biomass fired power plants/units.	-The project does not involve switching from fossil fuel use to renewable energy at the site of the project activity.

		-The project is not a biomass fired power plant.
10	In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".	The project does not involve retrofits, rehabilitations, replacements or capacity additions. Hence, this condition is N/A.
11	In addition, the applicability conditions included in the tools referred to below apply.[26]	Given below.

As per ACM0002 methodology Section 2.2.9, the applicability conditions included in the tools used shall also be discussed.

Applicability as per "Tool 05: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation"

No.	Applicability Conditions	The Project
1	If emissions are calculated for electricity consumption, the tool is only applicable if one out of the following three scenarios applies to the sources of electricity consumption: (a) Scenario A: Electricity consumption from the grid. The electricity is purchased from the grid only, and either no captive power plant(s) is/are installed at the site of electricity consumption or, if any captive power plant exists on site, it is either not operating or it is not physically able to provide electricity to the electricity consumer; (b) Scenario B: Electricity consumption from (an) off-grid fossil fuel fired captive power plant(s). One or more fossil fuel fired captive power plants are installed at the site of the electricity consumer and supply the consumer with electricity. The captive power plant(s) is/are not connected to the electricity grid; or (c) Scenario C: Electricity consumption from the grid and (a) fossil fuel fired captive power plant(s). One or more fossil fuel fired captive power plants operate at the site of the electricity consumer. The captive power plant(s) can provide electricity to the electricity consumer. The captive power plant(s) is/are also connected to the electricity grid. Hence, the electricity consumer can be provided with electricity from the captive	Electricity consumption is from the grid, which makes the applicability condition met.

[26] The condition in "TOOL02: Combined tool to identify the baseline scenario and demonstrate additionality" that all potential alternative scenarios to the proposed project activity must be available options to project participants; does not apply to this methodology, as this methodology only refers to some steps of this tool. https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-02-v7.0.pdf

	power plant(s) and the grid.	
2	This tool can be referred to in methodologies to provide procedures to monitor amount of electricity generated in the project scenario, only if one out of the following three project scenarios applies to the recipient of the electricity generated: (a) Scenario I: Electricity is supplied to the grid; (b) Scenario II: Electricity is supplied to consumers/electricity consuming facilities; or (c) Scenario III: Electricity is supplied to the grid and consumers/electricity consuming facilities.	The project activity supplies electricity to a grid. Hence, this condition is met.
3	This tool is not applicable in cases where captive renewable power generation technologies are installed to provide electricity in the project activity, in the baseline scenario or to sources of leakage. The tool only accounts for CO2 emissions.	There are no captive renewable power generation technologies installed in the baseline scenario or to sources of leakage. Hence, this tool is applicable.

Applicability as per “Tool 07: Tool to calculate the emission factor for an electricity system, version 07.0”

No.	Applicability Conditions	The Project
1	This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects).	The project activity supplies electricity to a grid. Hence, this condition is met.
2	Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are available to the project participants, i.e. option IIa and option IIb. If option IIa is chosen, the conditions specified in “Appendix 1: Procedures related to off-grid power generation” should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	CO_2 emission factor for the displacement of electricity generated by power plants in an electricity system is determined by calculating the “combined margin” emission factor (CM) of the electricity grid considering only grid-connected plants[27].
3	In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I	The project electricity system is not located

[27] Turkish National Electricity Grid Emission Factor Data Sheet dated 20/09/2022

	country.	partially or totally in an Annex I country. Hence, this condition is N/A.
4	Under this tool, the value applied to the CO_2 emission factor of biofuels is zero.	The value applied to the CO_2 emission factor of biofuels is zero[28].

Applicability as per "Tool 01: Tool for the demonstration and assessment of additionality, version 07.0.0"

No.	Applicability Conditions	The Project
1	The use of the "Tool for the demonstration and assessment of additionality" is not mandatory for project participants when proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved methodologies using the additionality tool.	Tool for the demonstration and assessment of additionality is applied in this project since there is no new methodologies proposed. Hence, this condition is N/A.
2	Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.	The additionality tool is applied using this methodology.

Applicability as per "Tool 24: Common practice, version 03.1"

No.	Applicability Conditions	The Project
1	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", or baseline and monitoring methodologies that use the common practice test for the demonstration of additionality	This project activity applies the methodological tool "Tool for the demonstration and assessment of additionality". Hence, this condition is met.
2	In case the applied approved baseline and monitoring methodology defines approaches for the conduction of the common practice test that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail.	Common practice analysis is provided in section B.5.

Applicability as per "Tool 27: Investment Analysis, version 12"

No.	Applicability Conditions	The Project
1	This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and	This project activity applies the

28 https://enerji.gov.tr/Media/Dizin/EVCED/tr/%C3%87evreVe%C4%B0klim/%C4%B0klimDe%C4%9Fi%C5%9Fikli%C4%9Fi/TUESEmisyonFktr/Belgeler/Bform2020.pdf

	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 monitoring methodologies that use the investment analysis for the demonstration of additionality and/or the identification of the baseline scenario.	methodological tool "Tool for the demonstration and assessment of additionality". Hence, this condition is met.
2	In case the applied approved baseline and monitoring methodology contains requirements for the investment analysis that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail.	Investment analysis is provided in section B.5.

Applicability as per "Default Cost of Equity for Annex I Countries", Version 1.0"

No.	Applicability Conditions	The Project
1	This information note is applicable to project activities that apply the CDM methodological tools "Tool for the demonstration and assessment of additionality" (CDM Tool 01), "Combined tool to identify the baseline scenario and demonstrate additionality" (CDM Tool 02), "Demonstration of additionality of small-scale project activities"(CDM Tool 21), "Demonstration of additionality of microscale project activities"(CDM Tool 19) and or tools and guidelines required in applied baseline and monitoring methodologies that use investment analysis for the demonstration of additionality and/or the identification of the baseline scenario.	This project is a project activity that uses Tool 01. This project uses investment analysis for the demonstration of additionality. Therefore, this document is applicable to this project.
2	This document provides information/guidance, supplemental to CDM Tool 27 (version 11.0 and 12.0), to project owners and verifiers for projects located in Annex I Countries and using investment analysis for demonstration of additionality. The Project Owners/Verifiers shall always apply this document together with the CDM Tool 27 (version 11.0 or 12.0). This information note will be revised to comply with any future revisions of CDM Tool 27.	This project uses CDM Tool 27 version 12.0. Türkiye is listed in the GCC document. Therefore, this document is applicable to this project.
3	It is not mandatory to use the default cost of equity values provided in this document and the project owners can calculate the cost of equity as per applicable versions of CDM Tool 27.	This document is used by the project to calculate cost of equity of the project.

Applicability as per "GCC Clarification No. 01, Version 3.1"

"The amendments and clarifications contained in this document shall enter into force on the day of its initial publication (22/12/2021) on the GCC website. The clarifications provided in this document shall always be read in conjunction with the GCC regulatory documents including Project Standard, Verification Standard and Project Process. The requirements contained in this document is mandatory and applicable to all projects which have not submitted request for registration to the GCC Program."

This project has not been submitted request for registration to the GCC Program yet, so the Clarification document is applicable.

B.3. Project boundary, sources and greenhouse gases (GHGs)

The project boundary is considered as the National Electricity Grid of Türkiye according to applied methodology. The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the power plant is connected to.

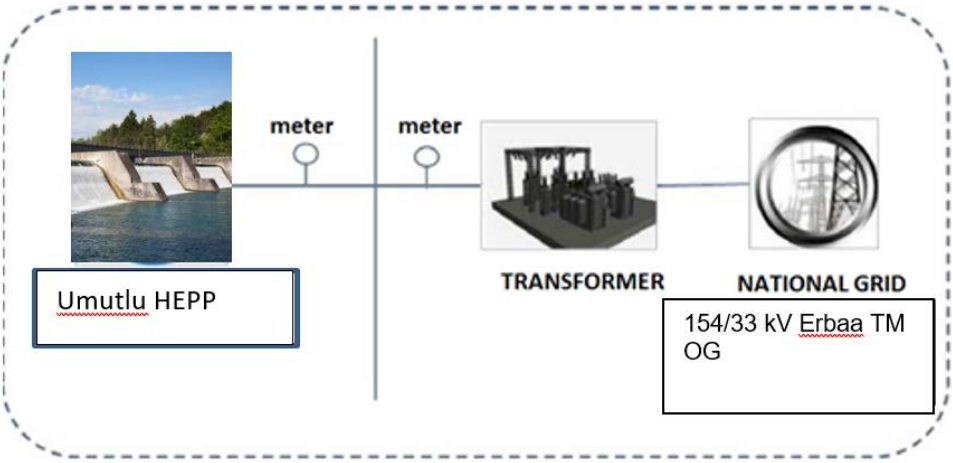

Figure 2. Project boundary

The project does not involve any other emissions sources not foreseen by the methodologies. The table below provides an overview of the emissions sources included or excluded from the project boundary for determination of baseline and project emissions.

Source		GHG	Included?	Justification/Explanation
Baseline	Electricity Generation	CO_2	Yes	Main emission source
		CH_4	No	Minor emission source. Excluded for simplification
		N_2O	No	Minor emission source. Excluded for simplification
Project Activity	For geothermal power plants, fugitive emissions of CH_4 and CO_2 from non-condensable gases contained in geothermal steam	CO_2	No	Not Applicable. Project is not a geothermal power plant
		CH_4	No	Not Applicable. Project is not a geothermal power plant
		N_2O	No	Not Applicable. Project is not a geothermal power plant
	CO_2 emissions from combustion of fossil fuels for electricity generation in solar thermal power plants and geothermal power plants.	CO_2	No	Not Applicable. Project is a hydro power plant.
		CH_4	No	Not Applicable. Project is a hydro power plant.
		N_2O	No	Not Applicable. Project is a hydro power plant.
	For hydro power plants, emissions of CH_4 from the reservoir	CO_2	No	Minor emission source. Excluded for simplification.
		CH_4	No	Main emission source. Included as a significant source
		N_2O	No	Minor emission source. Excluded for simplification
	Emissions from charging of a BESS using power from the grid or from fossil fuel electricity generators.	CO_2	No	Not Applicable. Project does not involve a BESS.
		CH_4	No	Not Applicable. Project does not involve a BESS.
		N_2O	No	Not Applicable. Project does not involve a BESS.

B.4. Establishment and description of the baseline scenario

>> This project follows an approved small-scale UNFCCC methodology which is ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, Version 21.0. Selected methodology has been applied together with the tools;

- Tool 01: Tool for the demonstration and assessment of additionality, Version 07.0.0[29]
- Tool 05: Baseline, project and/or leakage emissions from electricity consumption
- and monitoring of electricity generation, Version 3.0[30]
- Tool 07: Tool to calculate the emission factor for an electricity system, Version 07.0[31]
- Tool 24: Common Practice, version 03.1[32]
- Tool 27: Investment analysis, Version 12[33]

According to the methodology, “If the project activity is the installation of a Greenfield power plant, the baseline scenario is electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in “TOOL07: Tool to calculate the emission factor for an electricity system”.

Turkish electricity generation is mainly composed of thermal power plants and the share of renewable resources; especially hydroelectric power plants have decreased significantly in recent years. Since Türkiye is an advanced developing country, there is an increasing demand for electricity which is fully expected to continue in the foreseeable future (Figure below).

The trend in Türkiye to date and given historically slow development of alternative energy resources is to build an increasing number of thermal power plants in the future to satisfy the annual growth in energy consumption demand. Türkiye as an advanced developing nation has looked at dealing with energy security by developing and constructing high-capacity coal and natural gas power plants[34]. The development of thermal power plants has been also encouraged by the large natural resource availability in Türkiye, especially the abundance of economically accessible lignite[35].

In the absence of the proposed project activity, the same amount of electricity is required to be supplied via either the current power plants or by increasing the number of thermal power plants thus increasing GHG emissions.

[29] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf
[30] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-05-v3.0.pdf
[31] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf
[32] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-24-v1.pdf
[33] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v12.pdf
[34] https://www.teias.gov.tr/turkiye-elektrik-uretim-iletim-istatistikleri
[35] https://www.iea.org/reports/turkey-2021

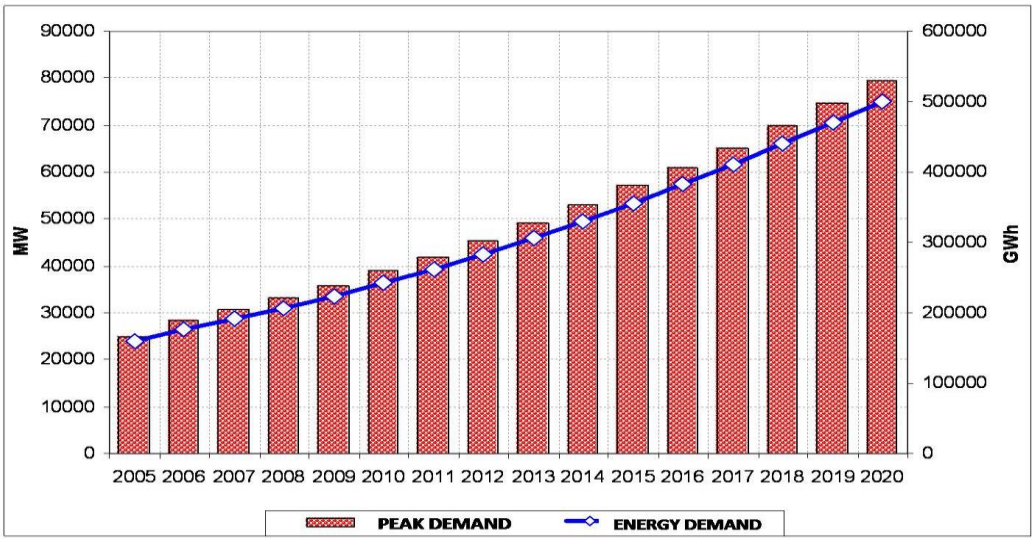

Figure 3. Peak Load and consumption projection for Turkish electricity system between 2005-2020[36]

B.5. Demonstration of additionality

>> The additionality of a GCC Project shall be demonstrated by applying the following approach, consisting of two components:

(i) A Legal Requirement Test; and
(ii) An Additionality Test either based on a Positive List test or a projects-specific additionality test.

(a) The project is not enforced by law. During the implementation of the project activity and establishing the baseline scenario the relevant national and/or sectoral policies, regulations and circumstances are taken into account. Since voluntary commitments/agreements within a sector or by an entity do not constitute the legal requirement, the project is additional as per paragraph 46; "A project passes the legal requirement test when 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. Voluntary commitments/agreements within a sector or by an entity do not constitute the legal requirements." Project is implemented I compliance with local environmental regulations including EIA legislation which requires assessment and clearance of all potential environmental impacts during construction and operation phases of the project, compared to baseline scenario. For the proposed project, EIA has been carried out in line with all regulations and in consultation with local stakeholders and relevant public agencies. As a result, EIA positive decision has been awarded for the project activity. In addition to local regulations/requirements, the project will also apply for E+, S+ and SDG+ labels which requires monitoring of all parameters as given in section E.

[36] https://www.emo.org.tr/genel/bizden_detay.php?kod=51061&tipi=41&sube=0

- Electricity Market Law[37]
- Regulation on Electricity Market License[38]
- Regulation on Electricity Market Connection and System Usage[39]
- Regulation on Environmental Impact Assessment[40]
- Law on the Use of Renewable Energy Sources for Electric Energy Generation[41]
- Environment Law[42]

- ✓ Generation license was received on 30/10/2008 with the decision number EÜ/1820-14/1292 issued by EPDK (EMRA).
- ✓ Connection agreement was made on 22/08/2013 issued by TEİAŞ.
- ✓ System use agreement was made on 19/01/2016 issued by TEİAŞ.
- ✓ Water use agreement was made on 26/08/2008 issued by DSİ (State Hydraulic Works).
- ✓ Approval from environmental authority was received on 31/05/2007 with the decision number issued by Ministry of Environment and Forestry (new institution is Ministry of Environment, Urbanization and Climate Change).

(b) The project is not on the Positive List, hence, additionality is presented in this section.

Specific Eligibility Criteria for Type A Projects

Since the project is A2 type, this section in the GCC Project Standard is applicable.

For Type A projects (both A1 and A2), as stipulated in section 44 above, the Project Owner shall demonstrate that the Project Activity:

(a) Is not required by a legal mandate and does not implement a legally enforced mandate (government regulation or law);

This project is not required by a legal mandate and this project does not implement a legally enforced mandate.

(b) Complies with all applicable host-country legal requirements with compliance focused at project level scope. The Project Owners shall ensure compliance with legal requirements by demonstrating that the project has either acquired the necessary licenses for their implementation and operation or provide an undertaking that these approvals and the licenses are under process and shall be available prior to start of commercial operations of the project;

This project complies with all applicable host-country legal requirements with compliance focused at project level scope. As per footnote 6 of the Project Standard;

[37] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=6446&MevzuatTur=1&MevzuatTertip=5
[38] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=18985&MevzuatTur=7&MevzuatTertip=5
[39] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=19357&MevzuatTur=7&MevzuatTertip=5
[40] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=39647&MevzuatTur=7&MevzuatTertip=5
[41] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=5346&MevzuatTur=1&MevzuatTertip=5
[42] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=2872&MevzuatTur=1&MevzuatTertip=5

- The Project Owner is a registered legal entity in the host country Türkiye, with the company registration number, 3880626075.
- Generation license was received on 30/10/2008 with the decision number EÜ/1820-14/1292 issued by EPDK (EMRA).
- Connection agreement was made on 22/08/2013 issued by TEİAŞ.
- System use agreement was made on 19/01/2016 issued by TEİAŞ.
- Water use agreement was made on 26/08/2008 issued by DSİ (State Hydraulic Works).
- Approval from environmental authority was received on 31/05/2007 with the decision number issued by Ministry of Environment and Forestry (new institution is Ministry of Environment, Urbanization and Climate Change).
- Commercial operation partially started first on 08/04/2016 with the first commissioning document (provisional acceptance document) issued by Ministry of Energy and Natural Resources of Türkiye.
- As the dates above prove, these documents were already available prior to the start date of commercial operation of the project.

(c) Delivers real, measurable and additional emission reductions compared to its baseline; and

This project delivers real, measurable and additional emission reductions.

(d) Applies an approved CDM or GCC Baseline and Monitoring Methodology.

This project applies CDM methodology ACM0002, v21.0.

Specify the methodology or activity requirement or product requirement that establish deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).	This project follows an approved large scale UNFCCC methodology which is ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, Version 21.0. Selected methodology has been applied together with the “tool to calculate the emission factor for an electricity system, version 07.0” and “tool for assessment and demonstration of additionality, version 07.0.0”. These are the latest version of the methodology and related additionality & calculation tool.
Describe how the proposed project meets the criteria for deemed additionality.	1- Project without carbon revenue is not financially attractive as discussed in investment analysis section below (benchmark and sensitivity analysis). 2- Continuation of the current situation-supply of equal amount of electricity by the newly built grid connected power plants. Continuation of the current situation is not considered as a realistic alternative due to increasing electricity demand therefore new power plants should be constructed which includes mainly thermal power plants. Implementation of the project is additional to the baseline scenario which is an alternative 2 above and therefore reduces the emissions. 3- The following applicable mandatory laws and regulations have been identified: - Electricity Market Law - Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electricity Energy - Energy Efficiency Law - Forest Law - Environment Law 4- In accordance with common practice analysis there is no plants similar to the proposed project and built without carbon revenue, the proposed type of project should not be considered as a common practice in Türkiye. Hence, project is additional in this aspect.

Step 1 - Identification of alternatives to the project activity consistent with current laws and regulations

***Sub-step 1a* - Define alternatives to the project activity:**

The most realistic and reliable alternatives to the project activity are:

1. Proposed project is not undertaken as a VER or ACC project activity
2. Continuation of the current situation-supply of equal amount of electricity by the newly built grid connected power plants

The first alternative, which is the implementation of the project without carbon revenue is not financially attractive as discussed in investment analysis section below. The Second alternative

(Scenario 2) is the baseline scenario and implementation of the proposed project as a VER or ACC activity would be additional to this scenario. Continuation of the current situation is not considered as a realistic alternative due to increasing electricity demand therefore new power plants should be constructed which includes mainly thermal power plants. Implementation of the project is additional to the baseline scenario which is alternative 2 above and therefore reduces the emissions.

Outcome of Step 1a

Continuation of the current situation is not considered as a realistic alternative due to increasing electricity demand therefore new power plants should be constructed which includes mainly thermal power plants. Implementation of the project is additional to the baseline scenario which is an alternative 2 above and therefore reduces the emissions.

Sub-step 1b. Consistency with mandatory laws and regulation

The following applicable mandatory laws and regulations have been identified:

1. Electricity Market Law[43]
2. Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electricity Energy[44]
3. Energy Efficiency Law [45]
4. Forest Law[46]
5. Environment Law[47]

The resultant alternatives to the project as outlined in Step (1a) are in compliance with the applicable laws and regulations.

Outcome of Step 1b

Mandatory legislation and regulations for each alternative are taken into account in sub-step 1b. Based on the above analysis, the proposed project activity is not the only alternative amongst the project activities that is in compliance with mandatory regulations. Therefore, the proposed ACC project activity is considered as additional.

Step 2 - Investment analysis

The investment analysis has been done in order to make an economic and financial evaluation of the project. No public funding or ODA are available in Türkiye for finance of this type of projects. For investment analysis, loan conditions have been determined considering the average market rates/term sheets signed with the banks.

[43] Law number 4628, enactment date 03/03/2001
http://www.teias.gov.tr/eBulten/makaleler/2009/okulyeni2/elektrik/elektrik_piyasalari_kanunu.pdf
[44] Law number 5346, enactment date 18/05/2005 http://www.mevzuat.gov.tr/MevzuatMetin/1.5.5346.pdf
[45] Law number 5627, enactment date 02/05/2007
http://www.eie.gov.tr/verimlilik/document/EnVerKanunu_Mayis2011.pdf
[46] Law number 6831, enactment date 31/08/1956
[47] Law number 2872, Published in official gazette No. 18132 on 11/08/1983

Investment decision date has been determined to be the date of construction agreement, 09/04/2014, and the period of assessment including IRR and equity IRR calculations have been chosen accordingly.

***Sub-step 2a* - Determine appropriate analysis method**

There are three options for the determination of analysis method which are:

- Simple Cost Analysis
- Investment Comparison Analysis and
- Benchmark Analysis

Since Project generates economic benefits from sales of electricity, the simple cost analysis is not applicable. Also, since the baseline of the project is generation of electricity by the grid, no alternative investment is considered at issue. So, it has been decided to use benchmark analysis for evaluation of the project investment.

Sub-step 2b: Option III. Apply benchmark analysis

For benchmark analysis, "Default Cost of Equity for Annex I Countries", version 1.0[48] document published by GCC is used. Since this project uses CDM Tool 27 version 12.0, Table 2 in the Default Cost of Equity for Annex I Countries document is used. This project is categorized in Group 1 (Energy Industries) projects mentioned in paragraph 15 of the document. As para 18 of the document "*The default cost of equity values in Table 1 and Table 2 are calculated after taxes and are expressed in percentages in real terms.*".

Therefore, the post-tax equity IRR benchmark for this project is 14.39%.

As per para. 15 of Tool 27, this benchmark is applicable as follows:

Condition	Justification
The applied benchmark shall be appropriate to the type of IRR calculated. 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. The DOE shall validate that the benchmarks used are applicable to the project activity and the type of IRR calculation presented.	The applied benchmark is for "Equity IRR" and in the Investment Analysis Excel Spreadsheet, "Equity IRR" is calculated for this project. Required/expected returns on equity is provided by "Default Cost of Equity for Annex I Countries, version 1.0" document of GCC, therefore, this benchmark is appropriate.

[48] https://www.globalcarboncouncil.com/wp-content/uploads/2023/11/Default-Cost-of-Equity-for-Annex-I-Countries-of-Kyoto-Protocol-V1.0.pdf

Sub-step 2c. Calculation and comparison of financial indicators

Table 7. Main financial parameters used for investment analysis

Parameters	Unit	Data Value
Installed Capacity[49]	MWm/MWe	21.50/20.34
Grid Connected output[50]	MWh	78,920
Total Estimated Capital Investment[51]	Thousand $	~45,371
Total Estimated Operational Cost[52]	Thousand $	~4,844
Equipment Depreciation[53]	year	15
Construction Depreciation[54]	year	40
Feed in Tariff/Market price after 10th years[55],[56]	$ Cents/kWh	7.3/7.9
Domestic Equipment Incentive[57]	$ Cents/kWh	0.85
Corporate Tax[58]	%	20
Equity Ratio	%	100
Expected ACC price[59]	€/ tCO_2e	3
Transmission Loss Factor[60]	%	2.53

Investment cost and operational cost are considered from the Feasibility Report. Feasibility Report has been prepared in 2009 and the license has been amended in 2010. Between 2010-2013, PO has worked on other permissions (expropriation, procurement, finance, etc.). Since the report demonstrates the CAPEX and OPEX figures in US dollars, they are deemed valid until the investment decision date. Electricity tariff has been used as $7.3 Cent/kWh for the first 10 years. To estimate the electricity sales price after 10th year of investment, an average of the market clearance prices of past three years (2011, 2012, 2013) were taken according to the EPIAS historical records[61]. In addition, domestic equipment incentive was added for the first five years as 0.85 USD/MWh for the project as indicated in the 2020 Final Renewable Energy Sources List of Türkiye, making the electricity tariff $8.15 Cent/kWh. The calculation has been provided in the IRR Excel Spreadsheet. Annual generation has been taken as 78,920 MWh as indicated in generation license. In compliance with the EB 48 Annex 11 Guidelines for the Reporting and Validation of Plant Load Factors Article 3, the plant load factor is approved by the government body State Hydraulic Works according to the report dated November 2009.

[49] Generation License
[50] Generation License
[51] Feasibility Report Section 9 Economical Analysis, 9.2 Investment Cost and Expenses, Table 9.1
[52] Feasibility Report Section 9 Economical Analysis, 9.2 Investment Cost and Expenses, Table 9.2
[53] https://www.mevzuat.gov.tr/anasayfa/MevzuatFihristDetayIframe?MevzuatTur=9&MevzuatNo=10941&MevzuatTertip=5
[54] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=6120&MevzuatTur=9&MevzuatTertip=5
[55] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=5346&MevzuatTur=1&MevzuatTertip=5
[56] https://seffaflik.epias.com.tr/transparency/piyasalar/gop/ptf.xhtml
[57] https://epdk.gov.tr/Detay/DownloadDocument?id=WiveL1QXzdA=
[58] https://www.gib.gov.tr/yardim-ve-kaynaklar/yararli-bilgiler/gecici-vergi-oranlari
[59] State of Voluntary Carbon Markets Report 2017 (as the average voluntary offset price of 2017)
[60] https://webapi.teias.gov.tr/file/512cbf1d-0ca3-4492-b901-3722c7b682f7?download
[61] https://seffaflik.epias.com.tr/transparency/piyasalar/gop/ptf.xhtml

VAT and custom taxes are not included as cost in the IRR. VAT is not always fully exempted as there are domestic services, construction, etc. Hence in practice, VAT is paid for some portion and deducted from income after operation. Land is leased and will be delivered to the government at the end of license period at no cost.

IRR is calculated for 20 years (1 year construction + 19 years operation period). Operational lifetime (license period) and technical lifetime are different. Technical lifetime of equipment is shorter. As per the investment analysis tool, technical lifetime should be considered and if a shorter period is chosen, fair value of the assets should be included. 20 years have been chosen and fair value (residual value) has been included at the end of the analysis period (19th year of operation in the cash flow), in compliance with the Tool 27.

The depreciation years for equipment were considered as 15 years and for the construction, it was considered as 40 years, as provided in current depreciation list according to Turkish Regulations. Corporate tax percentage was taken as 20% since post-tax equity IRR is calculated[62]. No bank loan was used. Transmission loss value (2.53%) is considered for the latest year available at the time of investment decision, from the statistics of TEIAS, "Annual Development of Electricity Generation-Consumption and Losses in Türkiye"[63]. Please see the investment analysis Excel Spreadsheet for detailed explanations of the input values for the analysis.

Internal Rate of Return (IRR) of the Umutlu HEPP has been calculated as 1.98% based on the parameters given above without considering the carbon revenue. Project does not use any ODA or government incentive. Electricity tariff has been used as $8.15 Cent/kWh for first 5 years, $7.3 Cent/kWh after 5 years and $7.9 Cent/kWh for last 10 years. Within the scope of the Renewable Energy Resources Support Mechanism, the price specified in the law, which is constant in the first 10 years, has been taken into consideration. After the first 10 years, an average of the market clearing prices of the past years has been taken to estimate the electricity price.

Sub-step 2d - Sensitivity Analysis

Sensitivity analysis was carried out for three main parameters identified for the first phase of the project. Since the investment cost of the project is not changed, only impact of change in tariff and operating cost has been included in sensitivity analysis.

- Investment Cost
- Operating Cost
- Electricity Sales revenue

For a range of ± 15% fluctuations in parameters above, table below has been obtained:

Table 8. Sensitivity analysis for Umutlu HEPP Project (without carbon revenue)

Fluctuation	-15	-10	-5	0	+5	+10	+15
Investment Cost	3.50%	2.95%	2.44%	1.98%	1.54%	1.14%	0.76%
Operating Cost	3.47%	2.98%	2.48%	1.98%	1.46%	0.93%	0.39%

[62] https://www.gib.gov.tr/yardim-ve-kaynaklar/yararli-bilgiler/gecici-vergi-oranlari
[63] TEIAS statistics, https://webapi.teias.gov.tr/file/512cbf1d-0ca3-4492-b901-3722c7b682f7?download

Electricity Income	0.82%	1.19%	1.58%	1.98%	2.38%	2.79%	3.22%

Outcome of Step 2:
The investment and sensitivity analysis shows that the ACC revenues will improve the financial indicators of the Project remarkably. Considering that figures above are based on a higher price rather than the government guaranteed floor price, optimistic estimations for yearly generation and that those figures do not reflect the risk for investment, role of carbon income is a most significant number to enable the project to proceed.

According to local regulations, electricity price is determined daily according to EPIAS as defined in the regulations and there exists three tariffs during day, peak and night hours. Thermal power plants and HEPPs with storage facilities have flexibility to schedule their generation at peak hours when the tariff is high. According to EPIAS figures, electricity tariff fluctuated between 4.3 $c/kWh and 8.6 $c/kWh between 01/04/2014 and 01/02/2016. The value does not provide any guarantee about the actual selling price as the control on generation period and tariff is limited and it may not be possible to generate and sell electricity during peak tariff periods. Also, considering that fluctuation in water resources is high and fact that a part of the electricity can be sold through bilateral agreements to free consumers with a discount rate over market price, guarantee price has been taken as reference in investment analysis which also provides input for evaluation of financing institutions.

Another important parameter affecting equity IRR is investment cost. While conducting IRR calculations, realized costs were also considered for comparison since the plant has already been commissioned. Actual investment cost turned out to be slightly higher than the estimated figures, which makes financial analysis even more conservative. There is no chance of expecting a decrease in the investment cost thereafter. Operating costs can also affect the equity IRR. However, its impact is not significant and does not cause any significant change in equity IRR and the fluctuation percentage to reach the benchmark is very high and not likely. Actual operational cost according to 2016 cost of sales declaration is lower than the OPEX estimations. Electricity income based on gross sales is also demonstrated in the IRR Excel Spreadsheet. Electricity generated at the plant between the years 2019 and 2023 has been given in the “Actual Values” sheet of IRR calculations from the EPIAS records[64]. It turns out that the actual generation in each year is far below the estimated annual generation, which is 78,920 MWh/year. Average annual generation from 2019 to 2023 is calculated as 41,573.92 MWh/year. When compared to the annual estimated generation given in the generation license, the actual generation is 47% lower than the estimation. Thus, revenue due to electricity sales makes this investment not attractive for the project owner and the need for carbon credit sales is proven. All these parameters are estimated with enough margin to yield a realistic equity IRR and actual costs and generation show that the approach is conservative.

Sensitivity analysis parameters have been compared with another GCC verified project’s “S00002” as well. In Step 4. Common Practice Analysis, the applicable output range is +/-50% of the design capacity of the proposed project activity. Considering that, aforementioned hydro power project with an installed capacity of 13.23 MWe, situated in Türkiye, has been chosen. In publicly available PSF, capital investment is mentioned as 30.229 million $, which corresponds to 2.285 million $ per MW while project cost per MW for Umutlu HEPP is estimated as 2.230 million $. Although, it is not reasonable to directly compare costs per MW without considering the base investments, the result shows that similar projects have similar capital costs and there is not over or underestimation.

[64] https://seffaflik.epias.com.tr/electricity/electricity-generation/ex-post-generation/injection-quantity

Operational cost is recorded as 411 thousand $, which is 31,066 $ per MW for the mentioned project, on the other hand, it is estimated as 238,142 $ per MW for Umutlu HEPP. Although it is estimated way higher than the compared project, realized OPEX shows that the estimation is still acceptable due to the low electricity generation. Based on the estimated values of the approved project and relative design capacities, it is possible to say that the financial analysis conducted for Umutlu HEPP is similar and compatible with the country's conditions. Since both projects benefit from the feed in tariff price as 7.3 Cents per kWh, there is no difference regarding the first ten years. After the 10th year, market price has been estimated as 6.5 Cents per kWh, which is nearly 18% lower than that of Umutlu HEPP estimation. As a result, it can be seen that conservative estimates are made when comparing Umutlu HEPP with other GHG mechanism projects.

Sensitivity analysis has also been carried out to cover the variation in input values to the extent that 'equity IRR' crosses the benchmark which is presented in the investment analysis excel spreadsheet. A fluctuation of around -65% exceeds the benchmark for investment cost, making it 15.88 million $. Estimated CAPEX was 45.37 million $. Since the investment has already been realized as 46.5 million $[65], estimated value seems to be quite accurate.

For the operation cost, -160% fluctuation exceeds the benchmark resulting a negative cost. This is not viable at all. Actual OPEX is 2.1 million dollars in 2016[66] whereas it is estimated as 4.8 million dollars. Although, the estimation is higher than the realized figures, IRR turned out to be much lower when actual costs were incorporated to the cashflow as -1.98%.

Lastly, a fluctuation of 130% exceeds the benchmark for electricity income with a value of 16.79 Cents per kWh. This deflection is way too higher than the limits of sensitivity analysis. Considering that the actual income was 1.6 million dollars in 2021[67], the calculated result of 6.3 million dollars in IRR calculations with a sales price of 7.3 Cents per kWh is quite conservative since the benchmark is not exceed in both cases. Overall, there was very low probability where a scenario would result in the project activity passing the benchmark or becoming the most financially attractive alternative. Since the agreements have been made and costs are realized, it can also be confirmed that these scenarios were not realistic, and costs are realized almost as estimated for all parameters.

Based on the above information, it is seen that project is not the most attractive option. Therefore, the project is considered as additional to the baseline scenario.

Step 3. Barrier analysis

This step is not applied as per the tool.

Step 4. Common Practice Analysis

According to the "Tool for the demonstration and assessment of additionality", Version 07.0.0", the common practice shall provide an analysis of any other activities that are similar to the Project Activity. Projects are considered similar if they are in the same country/region and/or rely on a broadly similar technology, are of a similar scale, and take place in a comparable environment with respect to regulatory framework, investment climate, access to technology, access to financing etc.

[65] Corporate Tax Declaration of 2015 & 2016 (approved on 27/04/2016 & 28/04/2017, respectively)
[66] Corporate Tax Declaration of 2016 (approved on 28/04/2017)
[67] Corporate Tax Declaration of 2016 (approved on 28/04/2017)

Guidelines on Common Practice version 03.1[68] has been followed.

Step 1: calculate applicable output range as +/-50% of the design output or capacity of the proposed project activity.

The total capacity of the proposed project is 20.34 MWe. Therefore, the applicable output range is from 10 MWe to 31 MWe.

Step 2: identify similar projects (both CDM and non-CDM) which fulfil all of the following conditions:
(a)The projects are located in the applicable geographical area;
(b)The projects apply the same measure as the proposed project activity;
(c)The projects use the same energy source/fuel and feedstock as the proposed project activity, if a technology switch measure is implemented by the proposed project activity;
(d)The plants in which the projects are implemented produce goods or services with comparable quality, properties and applications areas (e.g. clinker) as the proposed project plant;
(e)The capacity or output of the projects is within the applicable capacity or output range calculated in Step 1;
(f) The projects started commercial operation before the project design document is published for global stakeholder consultation or before the start date of proposed project activity, whichever is earlier for the proposed project activity.

Applicable geographical area has been selected as the whole host country (Türkiye) as per paragraph 1 of Guidelines on Common Practice version 03.1. Projects which apply the same measure as the proposed project have been determined and all renewable energy projects are selected as the similar type of projects. All of the selected plants deliver the same service which is the electricity generation. Applicable output range has been determined and all of the power plants are taken from the latest available time as of investment decision date (April 2014). General Directorate of Energy Affairs and EMRA Electricity Production License Database[69] have been used as a main resource. Therefore, all of the compared power plants have been operational before the implementation of the project activity.

Renewable energy power plants which are in the applicable range of Umutlu HEPP (i.e. 10 MW to 31 MW) and started operations before 09/04/2014 are given below (counted as 80).

Table 8. Operational renewable energy projects

Plant Name	Source Type	Installed Capacity (MWe)
Sırakonaklar HES	Hydropower	18.000
Adacami HES	Hydropower	29.304
Fındık Reg. ve HES	Hydropower	19.750
Gökkaya Barajı ve HES	Hydropower	28.540
Himmetli Reg ve HES	Hydropower	26.980
Feke I HES	Hydropower	29.400
Akbaş HES	Hydropower	12.502
Günder HES	Hydropower	28.220
Köprübaşı Reg. Ve HES	Hydropower	14.660

[68] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-24-v1.pdf
[69] https://lisans.epdk.gov.tr/epvys-web/faces/pages/lisans/elektrikUretim/elektrikUretimOzetSorgula.xhtml

Kıy HES	Hydropower	23.800
Diyoban HES	Hydropower	19.040
Avcılar HES	Hydropower	16.743
Kale HES	Hydropower	29.250
Güneşli II HES	Hydropower	12.380
Yıldırım HES	Hydropower	10.677
Tuzlaköy-Serge Reg. Ve HES	Hydropower	16.660
Boğazköy Barajı ve HES	Hydropower	10.000
Devecikonağı Barajı ve HES	Hydropower	28.028
Mavi Reg. ve HES	Hydropower	11.390
Çarşamba HES	Hydropower	11.310
Ören Regülatörü ve HES	Hydropower	26.576
Çermikler Barajı ve HES	Hydropower	25.000
Alabalık Reg. ve HES	Hydropower	16.320
Kürce Reg. Ve HES	Hydropower	12.046
Pirinçli Reg. ve HES	Hydropower	18.680
Akkent Çalkuyucak HES	Hydropower	13.813
Duru Reg. ve HES	Hydropower	10.120
Eğlence II HES	Hydropower	27.200
Kavakçalı HES	Hydropower	11.143
Papart Regülatörü ve HES	Hydropower	26.600
Merekler Reg. ve Algölü HES	Hydropower	11.157
Kuşaklı HES	Hydropower	20.000
Kalecik HES	Hydropower	19.109
Çiğdem Reg. ve HES	Hydropower	17.700
Boztepe HES	Hydropower	18.150
Akköy-Espiye HES	Hydropower	13.368
Arca HES	Hydropower	16.350
Avanos Regülatörü ve Cemel HES	Hydropower	20.400
Çobanlı HES	Hydropower	19.030
Sena HES	Hydropower	21.436
Üçharmanlar Reg. ve HES	Hydropower	16.640
Karasu IV-2 HES	Hydropower	10.350
Güzeloluk HES	Hydropower	13.580
Yazyurdu Reg. ve HES	Hydropower	14.900
Ayancık HES	Hydropower	15.600
Değirmen Reg. ve HES	Hydropower	13.000
Torlar HES	Hydropower	14.834
Kale Reg. ve HES	Hydropower	17.100
Sayan Regulatörü ve HES	Hydropower	14.896
Doğankaya HES	Hydropower	20.550
Yüce HES	Hydropower	10.566
Baran Reg. ve HES	Hydropower	21.275
Bangal Reg. ve Kuşluk HES	Hydropower	17.000
Ortaçağ Regülatörü ve HES	Hydropower	12.944
Yedisu HES	Hydropower	22.710
Kırıkdağ HES	Hydropower	16.860
Koçak Regülatörü ve HES	Hydropower	25.452
Yaprak HES	Hydropower	24.280
Saf I HES	Hydropower	18.725
Sırımtaş HES	Hydropower	27.234

Kalealtı II HES	Hydropower	13.814
Kemerçayır Regülatörü ve HES	Hydropower	15.498
Üçhanlar Regülatörü ve HES	Hydropower	11.939
Gökgedik Regülatörü ve HES	Hydropower	24.266
Tuğra Reg. ve HES	Hydropower	18.500
Aksu (Yankol) HES	Hydropower	27.272
Yeşilırmak I Reg. ve HES	Hydropower	14.250
Araklı-I Reg. Ve HES	Hydropower	14.911
Söke-Çatalbük RES	Wind	30.000
Mordoğan RES	Wind	30.750
Şenköy RES	Wind	29.794
Karadağ RES	Wind	10.000
Bozyaka RES	Wind	19.700
Madranbaba RES	Wind	19.500
Günaydın RES	Wind	20.000
Sincik RES	Wind	25.000
Şenbük RES	Wind	27.000
Gümüşköy JES	Geothermal	13.200
Deniz (Maren II) JES	Geothermal	24.000
Kömürcüoda Çöp Gazı Santralı	Biomass	19.810

Step 3: within the projects identified in Step 2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number N_{all}

Therefore;

$N_{all} = 14$

Step 4: within similar projects identified in Step 3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number N_{diff}

Characteristics and scales of the power plants are indicated in the Common Practice Excel Spreadsheet. Small scale plants are excluded as well as reservoir type hydropower plants. In addition, one of the projects has a different investment model. Thus, there are 12 different scale and different to the technology projects, which makes $N_{diff} = 12$

Step 5: calculate factor $F = 1-N_{diff}/N_{all}$ representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology similar to the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity.

$F = 1-N_{diff}/N_{all} = 1-(12/14) = 0.14 (\leq 0.2)$
$N_{all} - N_{diff} = 14-12 = 2 (\leq 3)$

According to “Tool for Common practice”, Version 03.1, if the factor F is greater than 0.2 and $N_{all} - N_{diff}$ is greater than 3, then the proposed project is a “common practice”.

For the proposed project, $F = 0.14$ and $N_{all} - N_{diff} = 2$, therefore, the proposed project is not a common practice within the applicable geographical area. The proposed project is additional.

Given the fact that all there is no plants similar to the proposed project and built without carbon revenue, the proposed type of project should not be considered as a common practice in Türkiye.

B.6. Estimation of emission reductions

B.6.1. Explanation of methodological choices

Emission Factor

EF_y = Emission factor calculated according to selected methodology (Nationally accepted emission factor has been used. Republic of Türkiye Ministry of Energy and Natural Resources[70] has released the emission factor as 0.5552 tCO_2/MWh. The datasheet has been given in Appendix 10.)

In calculating this emission factor, the Clean Development Mechanism Tool 07-V07.0 of the Intergovernmental Panel on Climate Change (IPCC) was used. It should be noted that, off-grid plants are not included in the calculation of EF, published by Ministry of Energy and Resources in 2022 as the data set is provided by TEIAS which is the governmental body for the distribution of grid-connected energy generating power plants.

Baseline Emission

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

Where:

BE_y = Baseline emissions in year y (t CO_2/yr)

$EG_{PJ,y}$ = 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 (MWh/yr)

$EF_{grid,CM,y}$= Emission factor calculated according to selected methodology (released by Republic of Türkiye Ministry of Energy and Natural Resources)[71]

According to ACM0002 para 49, if the project activity is the installation of a Greenfield power plant with or without the BESS, then the following equation applies:

$$EG_{PJ,y} = EG_{facility,y}$$

Where:

[70] Turkish National Electricity Grid Emission Factor Data Sheet dated 20/09/2022
[71] Turkish National Electricity Grid Emission Factor Data Sheet dated 20/09/2022

$EG_{PJ,y}$ = 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 (MWh/yr)

$EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

Project Emissions

These emissions shall be accounted for as project emissions by using the following equation:

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

Where:

PE_y = Project emissions in year y (tCO_2e/yr)

$PE_{FF,y}$ = Project emissions from fossil fuel consumption in year y (tCO_2e/yr)

$PE_{GP,y}$ = Project emissions from the operation of geothermal power plants due to the release of non-condensable gases in year y (tCO_2e/yr)

$PE_{HP,y}$ = Project emissions from water reservoirs of hydro power plants in year y (tCO_2e/yr)

$PE_{BESS,y}$ = Project emissions from charging of a BESS using electricity from the grid or from fossil fuel electricity generators (tCO_2e/yr)

According to the applied methodology: “For all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected.” $PE_{EF,y}$ is taken as zero. Since the project does not include operation of geothermal power plants, $PE_{GP,y}$ is not applicable as per ACM0002: Grid-connected electricity generation from renewable sources, v21.0, para 61. This is a run of river-based project, so Power Density (PD) calculation is not applicable for this type of project. Thus, $PE_{HP,y}$ is neglected as well. Project activity does not involve a BESS. Thus, $PE_{BESS,y}$ is not applicable.

Therefore,

$$PE_y = PE_{EF,y} + PE_{GP,y} + PE_{HP,y} + PE_{BESS,y}$$
$$PE_y = 0 + 0 + 0 + 0$$
$$PE_y = 0$$

Leakage Emissions:

The energy generating equipment is not transferred from or to another activity. Therefore, leakage is also considered as “0”.

$$LE_y = 0$$

Emission Reductions:

Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y = Emission reductions in year y (tCO_2e/yr)

BE_y = Baseline emissions in year y (tCO_2e/yr)

PE_y = Project emissions in year y (tCO_2e/yr)

LE_y = Leakage emissions in year y (tCO_2e/yr)

Since $PE_y = 0$, $LE_y = 0$

$$ER_y = BE_y$$

B.6.2. Data and parameters fixed *ex ante*

Data / Parameter Table 1.

Data / Parameter:	$EF_{grid,CM,y}$
Methodology reference	ACM0002
Data unit	tCO_2/MWh
Description	Combined margin CO_2 emission factor for the project electricity system in year y
Measured/calculated /default	Calculated/default
Data source	The Ministry of Energy and Natural Resources[72]
Value(s) of monitored parameter	The applied Combined margin for the project is 0.5552 tCO_2/MWh. (released by Republic of Türkiye Ministry of Energy and Natural Resources)
Measurement/ Monitoring equipment (if applicable)	N/A Type of meter: Location of meter: Accuracy of meter: Serial number of meters:
Calculation method (if applicable)	”Tool to calculate the emission factor for an electricity system”
QA/QC procedures	Turkish National Electricity Grid Emission Factor Data Sheet which is released by the Ministry of Energy and Natural Resources dated 20/09/2022 has been used. This data sheet was the latest available, most up-to-date document at the time of PSF submission for GSC.
Purpose of data	To calculate baseline emission
Additional comments	SDG 13 Climate Action (Take urgent action to combat climate change and its impacts)

[72] Turkish National Electricity Grid Emission Factor Data Sheet dated 20/09/2022

	13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions development

B.6.3. Ex-ante calculation of emission reductions

>> Ex-ante emission reductions (ERy) are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:
ER_y = Emission reductions in year y (tCO_2e/yr)
BE_y = Baseline emissions in year y (tCO_2e/yr)
PE_y = Project emissions in year y (tCO_2e/yr)
LE_y = Leakage emissions in year y (tCO_2e/yr)

Baseline emissions

Baseline emission is calculated according to the formula:

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

Where:
$EG_{PJ,y}$ = Net electricity delivered to the grid by the project activity in year y excluding transmission losses of the grid
$EF_{grid,CM,y}$ = Emission factor calculated according to selected methodology (Combined margin value was calculated by using nationally accepted emission factors. Turkish National Electricity Grid Emission Factor Data Sheet which is released by the Ministry of Energy and Natural Resources has been used. This data sheet dated 20/09/2022 was the latest available, most up-to-date document at the time of PSF submission for GSC.)

According to ACM0002 para 49, if the project activity is the installation of a Greenfield power plant with or without the BESS, then the following equation applies:

$$EG_{PJ,y} = EG_{facility,y}$$

Combined margin is calculated as follows:
CM = (OM x 0.50) + (BM x 0.50)
(0.7424 x 0.50) + (0.3680 x 0.50) = 0.5552 tCO_2/MWh

BE_y = 78,920 MWh × 0.5552 tCO2e/MWh = 43,816 tCO2e

Project emissions

According to the applied methodology: “For all renewable energy power generation project activities,

emissions due to the use of fossil fuels for the backup generator can be neglected." $PE_{EF,y}$ is taken as zero. Since the project does not include operation of geothermal power plants, $PE_{GP,y}$ is not applicable as per ACM0002: Grid-connected electricity generation from renewable sources, v21.0, para 61. This is a run of river-based project, so Power Density (PD) calculation is not applicable for this type of project. Thus, $PE_{HP,y}$ is neglected as well. Project activity does not involve a BESS. Thus, $PE_{BESS,y}$ is not applicable.

Therefore,

PE_y = 0

Leakage

The energy generating equipment is not transferred from or to another activity. Therefore, leakage is also considered as "0".
LE_y= 0

As a result, Total Emission Reduction is:
$ER_y = BE_y$

B.6.4. Summary of ex ante estimates of emission reductions

Year	Baseline emissions (t CO_2e)	Project emissions (t CO_2e)	Leakage (t CO_2e)	Emission reductions (t CO_2e)
2016 (08/04/2016 - 31/12/2016)	32,172	0	0	32,172
2017	43,816	0	0	43,816
2018	43,816	0	0	43,816
2019	43,816	0	0	43,816
2020	43,816	0	0	43,816
2021	43,816	0	0	43,816
2022	43,816	0	0	43,816
2023	43,816	0	0	43,816
2024	43,816	0	0	43,816
2025	43,816	0	0	43,816
2026 (01/01/2026- 07/04/2026)	11,644	0	0	11,644
Total	438,160	0	0	438,160
Total number of crediting years	10 years			
Annual average over	43,816	0	0	43,816

the crediting period				

B.7. Monitoring plan

B.7.1. Data and parameters to be monitored *ex-post*

Data / Parameter Table 2.

Data / Parameter:	$EG_{facility,y}$
Methodology reference	ACM0002
Data unit	MWh
Description	Net Electricity generated and delivered to the grid by the power plant in year y
Measured/calculated /default	Measured
Data source	Electricity meter readings on-site
Value(s) of monitored parameter applied with basis	Estimated annual generation forming the basis for emission reduction calculation is 78,920 MWh as indicated in generation licence
Measurement/ Monitoring equipment	
Frequency of Measuring/reading	Continuous measurement
Recording frequency	Monthly recording
Calculation method (if applicable)	EGy calculation is used by EPIAS (which is one of the TEIAS association) records and which are more conservative than the site records. Generation is recorded via remote reading system. The values are cross-check with the on-site meter records. Generation data is recorded by two metering devices continuously. These records provide the data for the monthly invoicing to TEIAS. Generation is recorded via remote reading system. The quantity of

Type of meter(s)	SL 7000	SL 7000
Location of meter(s)	Transmission center of TEAIS	Transmission center of TEAIS
Accuracy of meter(s)	0.5	0.5
Serial number of meter(s)	73032457	73032456
Calibration frequency	10 years	10 years
Date of Calibration/ validity	04/02/2016	04/02/2016
Reference No. of Calibration Certificates	N/A	N/A
Calibration Status	Calibrated	Calibrated

	electricity supplied by the project plant/unit to the grid (ISVM) and the quantity of electricity delivered to the project plant/unit from the grid (UECM) are measured. Net generation is calculated via subtracting energy delivered by the project activity to the grid for internal consumption from electricity fed to the grid.
QA/QC procedures	Calibration of the meters are valid for 10 years based on related regulation.[73] Maintenance and calibration of the metering devices are made by TEIAS. If there is a significant difference between the readings of two devices, maintenance and tests of the metering devices and the associated equipment are done before waiting for the periodical maintenance. The meters should comply with EPDK regulations which define the accuracy class of the meters. The meters are tested every two years by the distribution company (TEIAS), according to the System Use Agreement between the PO and TEIAS. They are done whenever the distribution company decides to do it. The PO cannot interfere with TEIAS's schedule.
Purpose of data	To calculate the baseline emission value To assess the contribution of SDG 7 Affordable and Clean Energy / 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix by the utilization of biomass as a renewable energy source
Additional comments	-

For Parameters to be monitored for E+/S+ assessments and SDG labels (positive impacts)

Data / Parameter:	**CO_2 Emissions**
Purpose:	Reduction of CO_2 emissions due to implementation of project activity that would otherwise be emitted by thermal power plants
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	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.

73 https://www.mevzuat.gov.tr/anasayfa/MevzuatFihristDetayIframe?MevzuatTur=7&MevzuatNo=6381&MevzuatTertip=5

Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	<table><tr><td colspan="2"></td></tr><tr><td>Parameter to be monitored</td><td>Electricity generation (MWh) (EPIAS records)</td></tr><tr><td>Frequency of monitoring</td><td>Continuous reading, monthly recording</td></tr><tr><td>Legal /regulatory / corporate limits (if any)</td><td>There is no legal requirement/limit for this parameter.</td></tr><tr><td>QA/QC</td><td>The net electricity supplied by the Project will be continuously measured and recorded by EPIAS; and will be kept by the Project Owner</td></tr></table>
Remarks	To assess the contribution SDG 13 Climate Action / 13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions To assess the contribution to Environment and Social Safeguards Standard, V3.0

Data / Parameter:	**Long-term jobs (> 1 year) created/ lost**
Purpose:	Creating new employment opportunities
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project creates 15 long term job opportunities during operation.
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	<table><tr><td colspan="2"></td></tr><tr><td>Parameter to be monitored</td><td>Number of recruited staff during operation (social security records)</td></tr><tr><td>Frequency of monitoring</td><td>Annually</td></tr><tr><td>Legal /regulatory / corporate limits (if any)</td><td>All employment is done according to the national employment regulations (Labor Law published in Official Gazette dated 10/06/2003 numbered 25134, with law number 4857). All employees have social security. There is no legal requirement/limit for this parameter.</td></tr><tr><td>QA/QC</td><td>The training programs help increase the efficiency of the workforce and provides employees skilled at their job. This not only helps the company but to self-improvement of individual employees.</td></tr></table>

Remarks	To assess the contribution to SDG 8 Economic Growth - 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”. To assess the contribution to Environment and Social Safeguards Standard, V3.0

Data / Parameter:	**New short-term jobs (< 1 year) created/ lost**
Purpose:	Creating short-term employment opportunities temporarily for construction and operation period
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project creates short term job opportunities during construction and operation on temporary basis.
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG	<table><tr><td colspan="2"></td></tr><tr><td>Parameter to be monitored</td><td>Number of recruited staff (social security records)</td></tr><tr><td>Frequency of monitoring</td><td>At each monitoring period</td></tr><tr><td>Legal /regulatory / corporate limits (if any)</td><td>All employment is done according to the national employment regulations (Labor Law published in Official Gazette dated 10/06/2003 numbered 25134, with law number 4857). All employees have social security. There is no legal requirement/limit for this parameter.</td></tr><tr><td>QA/QC</td><td>-</td></tr></table>
Remarks	To assess the contribution to Environment and Social Safeguards Standard, V3.0

Data / Parameter:	**Job related training imparted or not**
Purpose:	Increasing the quality of employment
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	Regular training on maintenance, electric power plants trainings will be provided to staff those responsible for operation, maintenance and repair of the turbines.

Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	<table><tr><td colspan="2"></td></tr><tr><td>Parameter to be monitored</td><td>Number of trainings provided (training records/attendee lists/certificates)</td></tr><tr><td>Frequency of monitoring</td><td>At each monitoring period</td></tr><tr><td>Legal /regulatory / corporate limits (if any)</td><td>There is no legal requirement/limit for this parameter.</td></tr><tr><td>QA/QC</td><td>Training records will be checked to ensure that required trainings are given.</td></tr></table>
Remarks	To assess the contribution to Environment and Social Safeguards Standard, V3.0

Data / Parameter:	**Reducing / increasing accidents**
Purpose:	Ensuring trainings will be given to the staff for the positions created during construction & operation phases (i.e., H&S, Working at Heights, Hygiene Certificate, First Aid, Fire Awareness, Manual handling, etc. if necessary) To assess the contribution to Environment and Social Safeguards Standard, V3.0
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	There may be occupational accidents at the site.
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	<table><tr><td colspan="2"></td></tr><tr><td>Parameter to be monitored</td><td>Accidents (Training certificates of employees, Records of incidents/accidents (if any))</td></tr><tr><td>Frequency of monitoring</td><td>Annually</td></tr><tr><td>Legal /regulatory / corporate limits (if any)</td><td>All trainings and precautions will be done according to the Occupational Health and Safety Law published in Official Gazette dated 30/06/2012 numbered 28339, with law number 6331. There is no legal requirement/limit for this parameter.</td></tr><tr><td>QA/QC</td><td>The training programs help increase the efficiency of the workforce and provides employees skilled at their job. This not only helps the company but to self-improvement of individual employees. HSE training will be provided to all personnel once annually.</td></tr></table>
Remarks	To assess the contribution to Environment and Social Safeguards Standard, V3.0

B.7.2. Data and parameters to be monitored for E+/S+ assessments (negative impacts)

Data / Parameter:	**Solid waste Pollution from Hazardous wastes**
Purpose:	To handle waste pollution caused due to hazardous wastes from the project activity To assess the contribution to Environment and Social Safeguards Standard, V3.0
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	Waste oil might be generated during maintenance works of the equipment.
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	

Parameter to be monitored	Count of the wastes (waste declaration forms/waste transfer records)
Frequency of monitoring	Annually
Legal /regulatory / corporate limits (if any)	Regulation on Waste Management published in Official Gazette dated 02/04/2015 numbered 29314, with regulation number 20644. Regulation on Waste Oil Management published in Official Gazette dated 21/12/2019 numbered 30985, with regulation number 34051.
QA/QC	In any case of hazardous waste generated, they will be stored and handled according to the national laws and regulations.

Program of Risk Management Actions to mitigate risk related to aspect (if any for aspects assessed to be harmful)

S.No.	Action and targets	Responsibility	Resource Requirement	Target to be Achieved by *(08/04/2016)*	Key Performance Indicators (KPI)	Targets achieved on *(08/04/2016)*
1	Hazardous waste generated will be stored and handled according to the national laws and regulations	GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş.	Waste declarations and abatement records	As per Regulation on Waste Management, Regulation on Waste Oil Management	Hazardous waste treated according to the national laws and regulations	Since 08/04/2016 (operation start date)
2						
3						
4						
5						
6						
Date of Closing the Program:						

Data / Parameter:	**Solid waste Pollution from E-wastes**
Purpose:	To handle waste pollution caused due to e-wastes and end-of-life products/equipment from the project activity To assess the contribution to Environment and Social Safeguards Standard, V3.0
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	There is a possibility that a very small amount of e-wastes may be generated during maintenance operations etc. However, it is quite unlikely due to the up-to-date technology and quality of the turbines and other equipment. Since the maintenance and repairs of the vehicles to be used within the scope of the activity will be carried out at authorized service centers, the formation of e-waste is not expected.
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG	

Parameter to be monitored	Count of the wastes (waste declaration forms/waste transfer records)
Frequency of monitoring	Annually
Legal /regulatory / corporate limits (if any)	Regulation on Waste Management, Regulation on the Management of Waste Electrical and Electronic Equipment
QA/QC	In any case of e-waste generated, they will be stored and handled according to the national laws and regulations.

Program of Risk Management Actions to mitigate risk related to aspect (if any for aspects assessed to be harmful)

S.No.	Action and targets	Responsibility	Resource Requirement	Target to be Achieved by *(08/04/2016)*	Key Performance Indicators (KPI)	Targets achieved on *(08/04/2016)*
1	E-waste generated will be stored and handled according to the national laws and regulations	GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş.	Waste declarations and abatement records	Regulation on Waste Management, Regulation on the Management of Waste Electrical and Electronic Equipment	E-waste treated according to the national laws and regulations	Since 08/04/2016 (operation start date)
2						
3						
4						
5						
6						
Date of Closing the Program:						

Data / Parameter:	**Solid waste Pollution from Batteries**
Purpose:	To handle waste pollution caused due to batteries from the project activity To assess the contribution to Environment and Social Safeguards Standard, V3.0
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	No battery pollution is expected from the project activity. If any waste battery is generated, they will be handled according to national regulations.
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG	

Parameter to be monitored	Count of the wastes (waste declaration forms/waste transfer records)
Frequency of monitoring	Annually
Legal /regulatory / corporate limits (if any)	Regulation on Waste Management, Regulation on the Management of Waste Electrical and Electronic Equipment, and Regulation on Control of Battery and Accumulator Wastes
QA/QC	In any case of waste batteries generated, they will be stored and handled according to the national laws and regulations.

Program of Risk Management Actions to mitigate risk related to aspect (if any for aspects assessed to be harmful)

S.No.	Action and targets	Responsibility	Resource Requirement	Target to be Achieved by *(08/04/2016)*	Key Performance Indicators (KPI)	Targets achieved on *(08/04/2016)*
1	Battery waste generated will be stored and handled according to the national laws and regulations	GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş.	Waste declarations and abatement records	Regulation on Waste Management, Regulation on the Management of Waste Electrical and Electronic Equipment, and Regulation on Control of Battery and Accumulator Wastes	Battery waste treated according to the national laws and regulations	Since 08/04/2016 (operation start date)
2						
3						
4						
5						
6						
Date of Closing the Program:						

Data / Parameter:	**Generation of wastewater**
Purpose:	To handle pollution caused due to wastewater from the project activity To assess the contribution to Environment and Social Safeguards Standard, V3.0
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	Wastewater due to domestic consumption

Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	

Parameter to be monitored	Appropriate disposal of wastewater (septic discharge records/wastewater collection records/wastewater transfer records)
Frequency of monitoring	Annually
Legal /regulatory / corporate limits (if any)	Regulation on Water Pollution Control (Official Gazette Date: 31/12/2004, Official Gazette Number: 25687)
QA/QC	In any case of wastewater generated, will be stored, and handled according to the national laws and regulations.

Program of Risk Management Actions to mitigate risk related to aspect (if any for aspects assessed to be harmful)

S.No.	Action and targets	Responsibility	Resource Requirement	Target to be Achieved by *(08/04/2016)*	Key Performance Indicators (KPI)	Targets achieved on *(08/04/2016)*
1	Wastewater generated will be handled according to the national laws and regulations	GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş.	Sewage collection records	Regulation on Water Pollution Control	Wastewater treated according to the national laws and regulations	Since 08/04/2016 (operation start date)
2						
3						
4						
5						
6						
Date of Closing the Program:						

Data / Parameter:	**Protecting/enhancing species diversity**
Purpose:	Ensuring that the project creates no disturbance to the regional habitat and monitoring the amount of lifeline water in line with the State Hydraulic Works guidelines To assess the contribution to Environment and Social Safeguards Standard, V3.0
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	Fish may be present within the area. Water Utilization Rights Protocol was published by State Water Works (DSİ). According to this protocol, minimum flow rates are determined by State Hydraulic Works.

<table>
<tr><td>Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG</td><td>
<table>
<tr><td>Parameter to be monitored</td><td>Amount of lifeline water (lifeline water records/site pictures)</td></tr>
<tr><td>Frequency of monitoring</td><td>At each monitoring period</td></tr>
<tr><td>Legal /regulatory / corporate limits (if any)</td><td>Water Utilization Rights Protocol by General Directorate of State Hydraulic Works (DSI)</td></tr>
<tr><td>QA/QC</td><td>Site visiting and pictures of the fish passage. Lifeline water records.</td></tr>
</table>
</td></tr>
<tr><td>Program of Risk Management Actions to mitigate risk related to aspect (if any for aspects assessed to be harmful)</td><td>
<table>
<tr><th>S.No.</th><th>Action and targets</th><th>Responsibility</th><th>Resource Requirement</th><th>Target to be Achieved by (08/04/2016)</th><th>Key Performance Indicators (KPI)</th><th>Targets achieved on (08/04/2016)</th></tr>
<tr><td>1</td><td>Amount of lifeline water will be monitored in line with the State Hydraulic Works guidelines</td><td>GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş.</td><td>Fish passage and lifeline water records</td><td>Water Utilization Rights Protocol by General Directorate of State Hydraulic Works (DSI)</td><td>Minimum flow rate is maintained according to the national laws and regulations</td><td>Since 08/04/2016 (operation start date)</td></tr>
<tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="7"></td></tr>
<tr><td colspan="3">Date of Closing the Program:</td><td></td><td colspan="3"></td></tr>
<tr><td colspan="7"></td></tr>
</table>
</td></tr>
</table>

B.7.3. Sampling plan

>> N/A

B.7.4. Other elements of the monitoring plan

>> Monitoring is a key procedure to verify the real and measurable emission reductions from the proposed project. To guarantee the proposed project’s real, measurable and long-term GHG emission reductions, the monitoring plan is established.

Net electricity generation is measured and recorded via meters sealed by TEIAS for billing purposes. Therefore, no new additional protocol is needed for monitoring emission reduction. The Power Plant Manager is responsible for gathering all relevant data and keeping the records.

Generation data collected during crediting period is submitted to GTE who is responsible for calculating the emission reduction subject to verification: Generation data is used to prepare monitoring reports which are used to determine the vintage from the project activity.

Verification Team Members is expected to include the following staff:

Plant Manager: Responsibility for running the plant and compliance with monitoring plan
Accounting Manager: Responsible for keeping data about generation and consumption. and
GTE: Responsible for emission reduction calculations, preparing monitoring report and periodical verification process.

Installation of meter and data monitoring are carried out according to the regulations by TEIAS. Two metering devices (one of them used as spare) are used for monitoring the electricity generated by the power plant. Readings are done using main metering devices and spare metering device is used for comparison only. Data from metering devices is recorded by TEIAS monthly (through remote reading).

Two calibrated meters backup each other. Maintenance and calibration of the metering devices are made by TEIAS. If there is a significant difference between the readings of two devices, maintenance and tests of the metering devices and the associated equipment are done before waiting for the periodical maintenance. The meters should comply with EPDK regulations which define the accuracy class of the meters as 0.2 or 0.5 depending on the capacity of the circuit[74]. EPIAS records will be taken into consideration while calculating net electricity generation by the plant. ISVM (Electricity fed to the grid) and UECM (Electricity consumed from the grid) data given in the EPIAS records are used for emission reduction calculations. Meters at the site will be used for crosscheck.

All data is kept for at least two years after the end of the crediting period or until the last issuance of ACCs for the project activity, whichever is later for QA/QC purposes.

Calibration of the metering devices is made by TEIAS and sealed before the commissioning of the power plant. The meters are calibrated by TEIAS when there is an inconsistency between two devices. The meters are periodically tested. If the tests are positive, it means that the meters have been working properly and calibration is not needed.

[74] https://www.epdk.gov.tr/Detay/DownloadDocument?id=+6B2PMv4N4A=

Table 10. Information on Meters

	Main Meter	Spare Meter
Brand	ITRON	ITRON
Type of meter	SL 7000	SL 7000
Class	0.5 (clc)	0.5 (clc)
Serial number of meter	73032457	73032456
Calibration frequency	10 years	10 years
Date of First Index	04/02/2016	04/02/2016
Date of Tests	14/11/2017 31/10/2019 20/06/2021	14/11/2017 31/10/2019 20/06/2021

Section C. Start date, crediting period type and duration

C.1. Start date of the Project Activity

>> Start date of the project activity is 08/04/2016, which is the commissioning date of the plant.

C.2. Expected operational lifetime of the Project Activity

>> The operational lifetime of the project is about 49 years as per the license issued. Lifetime of the project activity is also confirmed as 49 years licensed in System Usage Agreement Annex-1 signed with TEİAŞ.

C.3. Crediting period of the Project Activity

C.3.1. Start and end date of the crediting period

>> Start date of crediting period is 08/04/2016, after the first provisional acceptance of turbines T1 and T2. End date of crediting period is 07/04/2026. The crediting period is fixed as 10 years, starting from 08/04/2016.

C.3.2. Duration of crediting period

>> The crediting period is fixed as 10 years. The first crediting period is between 08/04/2016 – 07/04/2026.

Section D. Environmental impacts

D.1. Analysis of environmental impacts

>> An environmental impact assessment dated in 2017 was prepared in order to assess the environmental impacts of the project activity. The report has been prepared in accordance with Türkiye's national standards. Main provisions in the EIA report was;

- Wastewater
- Solid waste, packaging waste, oil
- Noise
- Minimum flow for natural habitat
- Biodiversity
- Land use & reclamation
- Grievance mechanism

For all identified impacts, measures and responsible parties have been identified and stated in table V3.1 of the EIA report.

According to the articles of the Water Use Agreement signed between the General Directorate of State Hydraulic Works and the Project Owner, the PO will release the amount of water that will ensure the maintenance of natural life downstream of the water intake point of the stream bed and meet the water rights in this section. The amount and timing of the water to be released into the riverbed for wildlife is determined in the EIA or Project Introduction File prepared by the PO for hydroelectric power generation facilities.

A few of the environmental impacts foreseen in the Project are related to waste from hazardous, electronic, battery, end-of-life products. These are estimated to occur in very small quantities. The principles set out in Turkish legislation will be applied to handle these types of wastes. Detailed information is provided in Section E.1.

Air

Since it is a hydroelectric energy power plant, the project is expected to have a positive impact on climate change by eliminating fossil fuels. Hence, the project prevents CO2 emissions. No other emissions are expected due to project activity.

Land

All the waste generated on the project sites are handled, stored and disposed according to the national law and regulations. The waste generated during construction is reused for road levelling. Construction waste is handled according to the Regulation on Handling and Disposal of Construction Waste. If any e-wastes, batteries, end-of-life wastes, are handled according to the Regulation on

Electrical and Electronic Waste Control[75] and Regulation on Battery and Accumulator Wastes[76]. If any waste oil is generated on site, it is handles according to the Regulation on Waste Oils[77]. Domestic solid wastes generated on the project sites are handled according to the national law and regulations such as Regulation on Waste Management[78]. No soil pollution is expected due to project activity. Hazardous waste is not expected to be generated on-site. In the case of any generation, it would be in a very minimal quantity or not at all.

Wastes

All the waste generated on the project sites is handled, stored and disposed of according to national law and regulations. The waste generated during construction is reused for road levelling. Construction waste is handled according to the Regulation on Handling and Disposal of Construction Waste. If any e-wastes, batteries, end-of-life wastes are handled according to the Regulation on Electrical and Electronic Waste Control[79] and Regulation on Battery and Accumulator Wastes[80]. If any waste oil is generated on site, it is handles according to the Regulation on Waste Oils[81]. Hazardous waste is not expected to be generated on-site. In the case of any generation, it would be in a very minimal quantity or not at all. Domestic solid wastes generated on the project sites are handled according to the national law and regulations such as Regulation on Waste Management[82]. No soil pollution is expected due to project activity.

Water

The project does not consume water or change reliability or accessibility of water supply. No significant wastewater is generated on-site, if generated, it is handled according to the national regulations. The project does not cause any pollution to surface water, groundwater and any other water bodies.

Natural Resources

The project does not have any expected effects on the natural or pre-existing pattern of water courses, groundwater or the watershed. No other natural resources are expected to be affected by the project activity. The project sites are located on arid, infertile, uncultivated lands; hence, any plants or forests will not be affected by the project activity. The project site does not include any pasture lands, all mechanical equipment is protected by fences, hence, if any animal is present near the project area, they will not be affected since they cannot enter the plant site through the fences.

D.2. Environmental impact assessment and management action plans

[75] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=16159&MevzuatTur=7&MevzuatTertip=5
[76] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=7118&MevzuatTur=7&MevzuatTertip=5
[77] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=34051&MevzuatTur=7&MevzuatTertip=5
[78] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=20644&MevzuatTur=7&MevzuatTertip=5
[79] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=16159&MevzuatTur=7&MevzuatTertip=5
[80] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=7118&MevzuatTur=7&MevzuatTertip=5
[81] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=34051&MevzuatTur=7&MevzuatTertip=5
[82] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=20644&MevzuatTur=7&MevzuatTertip=5

>> In accordance with Turkish environmental regulations, “Environmental Impact Assessment (EIA) Approval Letter” was approved by Ministry of Environment and Forestry in 31/05/2007. Then project was invested in 12/08/2008. First commissioning was made in April 2016 with the partial completion of the construction. After the project started operation, EIA decision was changed, and new approval letter was approved in 31/10/2017. Therefore, the project is considered to be implemented according to the national laws and regulations as long as the environmental precautions stated in the report are applied.

T.C.
ÇEVRE ve ŞEHİRCİLİK BAKANLIĞI
Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürlüğü

ÇED OLUMLU BELGESİ

25.11.2014 tarih ve 29186 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Çevresel Etki Değerlendirmesi Yönetmeliği'nin 14. maddesi gereğince; **"Umutlu HES (21,5 MWm /20,34 MWe)"** projesi hakkında **"Çevresel Etki Değerlendirmesi Olumlu"** kararı verilmiştir.

M. Mustafa SATILMIŞ
Bakan a.
Genel Müdür

Karar Tarihi : 31.10.2017
Karar No : 4820
Proje Sahibi : GA Elektrik Enerji Üretim Sat. San. Ve Tic. A.Ş.
Proje Yeri : Amasya İli, Tasova İlçesi, Mülkbükü
Kapasite: 21,5 MWm /20,34 MWe

Figure 4. EIA Approval Letter

Within the scope of the EIA study, detailed measures have been defined for all identified potential impacts. Also, stakeholder consultation has been organized and documented via participation from locals and public institutions.

Section E. Environmental and social safeguards

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E.1. Environmental safeguards

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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 (To be included in Project Verification Report only)
		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 Plans for aspects marked as Harmful**		**Performance indicator for monitoring of impact**	***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 monitoring**	**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**
Environmental Aspects on the identified categories [83] ***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 are expected to be in compliance with applicable national regulatory /stricter voluntary corporate requirements and will be within legal/ voluntary corporate limits by way of plant design 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*	*Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as '****Harmful*** *at least to a level that is in compliance with applicable legal/regulatory 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 whether it 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 impact of 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 the Project Activity against the particular aspect and in case of "harmful impacts" how has the project adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm as well as the net positive impacts of the project with respect to the most likely baseline alternative.* .

[83] sourced from the CDM SD Tool and the sample reports are available (https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx)

					operating principles, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as ***Harmless*** */If the project has a positive impact on the environment mark it as "harmless" as well.*	*(may be un-safe) and shall be indicated as* ***Harmful***						
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 13 (e) (ii)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragraph 22*		*Paragraph 24 and Paragraph 26 (a) (i)*
Environment - *Air*	*SO_x emissions (EA01)*	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	NO_x emissions (EA02)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	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.	N/A	N/A	-	-	N/A	N/A	Continuous measuring for electricity generation will be done by using electricity meters. Therefore, emission reduction calculations will be done according to the generation values.	+1	Continuous measuring for electricity generation will be done.	-
	CO emissions (EA04)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-

	Suspended particulate matter (SPM) emissions (EA05)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Fly ash generation (EA06)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Non-Methane Volatile Organic Compounds (NMVOCs) (EA07)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Odor (EA08)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Noise Pollution (EA09)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Others (EA10)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Add more rows if required and corresponding notation with EA as prefix)											
Environment - *Land*	*Solid waste Pollution from Plastics (EL-01)*	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Solid waste	Waste oil might be generated during	Regulation on Waste	-	Harmless	-	N/A	N/A	The project owner will comply with the	+1	Frequency of waste oil	-

	Pollution from Hazardous wastes (EL02)	maintenance works of the equipment.	Management published in Official Gazette dated 02/04/2015 numbered 29314, with regulation number 20644. Regulation on Waste Oil Management published in Official Gazette dated 21/12/2019 numbered 30985, with regulation number 34051.						law and regulations in handling hazardous waste generated on site. Waste declarations and abatement records will be collected.		formation is seen to be very low. As per the regulations, waste oil is monitored closely. Therefore, no risk is foreseen.	
	Solid waste Pollution from Bio-medical wastes (EL03)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Solid waste Pollution from E-wastes (EL04)	There is a possibility that a very small amount of e-waste may be generated during maintenance operations etc. However, it is quite unlikely due to the up-to-date technology and quality of the turbines and other equipment.	Regulation on Waste Management[84], Regulation on the Management of Waste Electrical and	-	Harmless	-	N/A	N/A	If any e-waste is generated, disposal records will be present.	+1	Management and disposal of the waste will be done in a proper legal manner. Therefore, the project activity will not cause any harm.	-

[84] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=20644&MevzuatTur=7&MevzuatTertip=5

			Electronic Equipment [85]									
	Solid waste Pollution from Batteries (EL05)	No battery pollution is expected from the project activity. If any battery is generated, they will be handled according to national regulations.	Regulation on Waste Management[86], Regulation on the Management of Waste Electrical and Electronic Equipment[87], and Regulation on Control of Battery and Accumulator Wastes[88]	-	Harmless	-	N/A	N/A	If any battery waste is generated, disposal records will be present.	+1	Frequency of battery waste formation is seen to be very low. Therefore, no risk is foreseen.	-
	Solid waste Pollution from end-of-life products/ equipment (EL06)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Solid waste Pollution from constructio n	The construction waste will be handled according to national regulations.	Regulation on Handling and Disposal of Constructi on Waste[89]	-	Harmless	-	N/A	N/A	If such waste is generated, disposal records will be present.	0	The waste is reused for road levelling during construction.	-

[85] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=40055&MevzuatTur=7&MevzuatTertip=5
[86] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=20644&MevzuatTur=7&MevzuatTertip=5
[87] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=40055&MevzuatTur=7&MevzuatTertip=5
[88] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=7118&MevzuatTur=7&MevzuatTertip=5
[89] https://www.mevzuat.gov.tr/File/GeneratePdf?mevzuatNo=5401&mevzuatTur=KurumVeKurulusYonetmeligi&mevzuatTertip=5#:~:text=Madde%2024%20%E2%80%94%20Hafriyat%20topra%C4%9F%C4%B1%20ile,Ta%C5%9F%C4%B1ma%20%C4%B0zin%20Belgesi%22%20almakla%20y%C3%BCk

	Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury) (EL07)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	land use change (change from cropland /forest land to project land) (EL08)	The project may be installed on an area that includes government and private lands.	Soil Conservation and Land Use Law[90]	-	Harmless	-	N/A	N/A	Forestry permit, expropriation documents and invoices of compensation paid will be provided to ensure that the project owner complies with the legal requirements.	0	No harm is expected from this parameter throughout the project's lifetime.	-
	Others (EL09)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Add more rows if required											
Environment - *Water*	*Reliability/ accessibility of water supply (EW01)*	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Water Consumption from ground and other sources (EW02)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-

%C3%BCml%C3%BCd%C3%BCrler.
Construction Waste.pdf

[90] https://www.mevzuat.gov.tr/mevzuatmetin/1.5.5403.pdf

	Generation of wastewater (EW03)	Limited amount of wastewater will be formed. Wastewater will be collected via trucks and send to municipality facilities	The Water Pollution Control Regulation [91] will be followed.	-	Harmless	-	N/A	N/A	If such wastewater is generated, sewage collection records will be present.	+1	The wastewater generated at the site is collected in a septic tank and then discharged by sewage truck periodically.[92]	-
	Wastewater discharge without/with insufficient treatment (EW04)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Pollution of Surface, Ground and/or Bodies of water (EW05)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Others (EW07)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Add more rows if required											
Environment – *Natural*	*Conserving mineral resources (ENR01)*	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-

[91] Regulation on Water Pollution Control (Official Gazette Date: 31/12/2004 Official Gazette Number: 25687) https://www.mevzuat.gov.tr/File/GeneratePdf?mevzuatNo=7221&mevzuatTur=KurumVeKurulusYonetmeligi&mevzuatTertip=5

[92] DPR, page 9-10-44

Resources	*Protecting/ enhancing plant life (ENR02)*	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Protecting/ enhancing species diversity (ENR03)	Fish may be affected by the project activity. For the fish to be able to pass through and lay eggs, a fish passage had been built.	Water Utilization Rights Protocol was published by State Water Works (DSİ). According to this protocol, minimum flow rates are determined by State Hydraulic Works. Minimum flow rates are determined by State Hydraulic Works.	-	Harmless	-	N/A	N/A	In the project site, there are 11 fish species identified.[93] According to Red List of IUCN, 1 species is under category "VU" and 1 species is under category "LC".[94] Therefore, together with the fish passages, the negative effects of the projects will be minimized for those species. Still water generated by the regulator will also promote those species in terms of phytoplantonic aspects.[95] Requirements for welfare of fish species, are considered and lifeline water flow is calculated.[96] There are fish passages which allows fish to pass through downstream.[97]	+1	The fish passages are constructed.[98] Construction of fish passage will be confirmed during site visits or pictures. Release of minimum flow will be monitored via flow records. Since the plant is run-type and there is no water diversion, there is no change in the amount of water flowing in the river. Therefore, no change is expected in agricultural and husbandry activities. The amount of lifeline water is also monitored by the State Hydraulic Works.	-

[93] Umutlu HEPP EIA, page 98
[94] https://www.iucn.org/resources/conservation-tools/iucn-red-list-threatened-species
[95] EIA, page 124-126
[96] Umutlu HEPP Ecosystem Report, page 59
[97] Umutlu HEPP EIA, page 306
[98] Umutlu HEPP EIA, page 306

	Protecting/ enhancing forests (ENR04)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Protecting/ enhancing other depletable natural resources (ENR05)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Conservin g energy (ENR06)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Replacing fossil fuels with renewable sources of energy (ENR07)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Replacing ODS with non-ODS refrigerant s (ENR08)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Others (ENR09)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	-	N/A	-
	Add more rows if required											

Net Score:	**+6**	
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] or [is likely to cause] net harm to the environment...

E.2. Social Safeguards

>>

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 (To be included in Project Verification Report only)
		Description of Impact (*positive or negative*)	Legal requirement /Limit, Corporate policies / Industry best practice	Do-No-Harm Risk Assessment (Choose which ever is applicable)			Risk Mitigation Action Plans (for aspects marked as Harmful)	Performance indicator for monitoring of impact.	Ex-ante scoring of environmental 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 justification/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[99] indicated below.	*Indicators for social impacts*	*Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all sources during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside the project boundary, over which the project Owner(s) has/have control*	*Describe the applicable national regulatory requirements / legal limits 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 in compliance with applicable national regulatory requirements/ stricter voluntary corporate limits by way of plant design and operating principles then the Project Activity is unlikely to cause any harm (is safe) and shall be*	*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 cause harm and shall be*	*Describe the operational or management controls that can be implemented as well as best practices, focusing on how to implement and operate the Project Activity, 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/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*

[99] sourced from the CDM SD Tool and the sample reports are available (https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx)

					*indicated as **Harmless**), project having positive impact on society. To the BAU / baseline scenario must also mark their aspect as **"harmless"***	*indicated as **Harmful***					*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.*
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)*	*Paragraph 23*		*Paragraph 24 and Paragraph 26 (a) (ii)*
Social - *Jobs*	*Long-term jobs (> 10 year) created/ lost (SJ01)*	The project creates long term job opportunities during operation.	All employment is done according to the national employment regulations. All employees have social security. There is no legal requirement/limit for this parameter.	N/A	-	-	N/A	A minimum of 15 people is employed as long-term employee. Social security records will be checked.	+1	Project is a greenfield project and will create new job opportunities.	-
	New short-term jobs (< 1 year) created/ lost (SJ02)	The project creates short term job opportunities during construction and operation.	All employments are done according to the national employment regulations.	N/A	-	-	N/A	Social security records will be used for monitoring.	+1	Project will create new and skilled job opportunities by investor and suppliers. Project will have positive impact due to new job opportunities.	-
	Sources of income generation increase	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-

	d / reduced (SJ03)										
	Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04) *(Human rights)*	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
Social - *Health & Safety*	*Disease prevention (SHS01)*	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Occupational health hazards (SHS02)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Reducing / increasing accidents /Incidents/fatality (SHS03)	There may be occupational accidents at the site.	All trainings and precautions will be done according to the HSE Law[100].	-	Harmless	-	N/A	HSE Trainings (i.e., H&S, Working at Heights, Hygiene Certificate, First Aid, Fire Awareness, Manual handling, etc. if necessary) will be provided to all staff recruited in the project site to inform staff and avoid accidents and	+1	Training and occupational accident records will be provided. HSE training will be provided to staff at least once each year.	-

[100] https://www.mevzuat.gov.tr/MevzuatMetin/1.5.6331.pdf

								necessary precautions required by the HSE Law will be taken. In addition to that, number of incident/accidents will be monitored, and the records will be kept by the PO.			
	Reducing / increasing crime (SHS04)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Reducing / increasing food wastage (SHS05)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Reducing / increasing indoor air pollution (SHS06)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Efficiency of health services (SHS07)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Sanitation and waste management (SHS08)	Waste and wastewater might be generated due to domestic consumption.	Regulation on Waste Management published in Official Gazette dated 02/04/2015 numbered 29314, with regulation number 20644.	-	Harmless	-	N/A	The project owner will comply with the law and regulations in handling domestic waste generated on site that might cause sanitation problems.	0	All management and disposal processes will be applied according to the law and regulations. There is no harm expected to be caused due to domestic	-

										waste generated on site.	
	Other health and safety issues (SHS09)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Add more rows if required										
Social - *Education*	*Job related training imparted or not*	Regular training on maintenance, electric power plants trainings will be provided to staff those responsible for operation, maintenance and repair of the turbines.	There is no legal requirement/limit for this parameter.	N/A	-	-	N/A	The training records will be provided during monitoring period.	+1	The project activity will supply necessary trainings in the field.	-
	specialized training / education to local personnel (SE01)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Educational services improved or not (SE02)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Project-related knowledge dissemination effective or not (SE03)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Other educational	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-

	issues (SE03)										
	Add more rows if required (SE04)										
Social - *Welfare*	*Improving/ deteriorating working conditions (SW01)*	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Community and rural welfare (indigenous people and communities) (SW02)	There are no indigenous people identified. Thus, the project activity has no impact on this parameter.	Turkey has ratified ILO convention 155 and about work safety and precautions.	N/A	-	-	N/A	No monitoring is required for this parameter.	0	-	-
	Poverty alleviation (more people above poverty level) (SW03)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Improving / deteriorating wealth distribution/ generation of income and assets (SW04)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-

	Increased or / deteriorating municipal revenues (SW05)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Women's empowerment (SW06) *(Human rights)*	The PO prioritizes inclusion and participation of both men and women, therefore there will not be social inequality.	Türkiye has ratified ILO convention 100, 111, 122 and 142, which provides gender equality.	N/A	-	-	N/A	All the workers are socially secured by the PO and protected by employment agreements. Fiscal and social policies that promote equality will be adopted. Social security records will be checked in the scope of monitoring of long-term jobs created. If women employment is done, it will be ensured that equal opportunities will be provided for men and women.	0	In case of employment, women will have the same opportunities and rights as men do, their employment will be done according to national laws and regulations on employment and equal opportunities for men and women.	-
	Reduced / increased traffic congestion (SW07)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Exploitation of Child labour	PO will never be complicit in violence or human rights abuses or child/forced labor.	Türkiye is a party of IPEC[101],[102] since 1992 and ratified ILO convention 138 and 182[103].	-	Harmless	-	N/A	All the workers are socially secured by the PO and protected by employment agreements.	0	Social security records can be checked for employmen	-

101 http://www.ilo.org/ipec/programme/lang--en/index.htm
102 http://www.ilo.org/ipec/Regionsandcountries/lang--en/index.htm
103 http://www.ilo.org/public/turkish/region/eurpro/ankara/about/sozlesmeler.htm

	(Human rights) *(SW08)*									t of any child or forced labor in site.	
	Minimum wage protection *(Human rights) (SW09)*	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Abuse at workplace. (With specific reference to women and people with special disabilities / challenges) *(Human rights) (SW10)*	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Other social welfare issues (SW11)	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Avoidance of human traffickin g and forced labour *(Human rights)* *(SW12)*	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-

	Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs *(Human rights)* *(CW13)*	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Provisions of resettlement and human settlement displacement *(Human rights)* *(CW14)*	N/A	N/A	N/A	-	-	N/A	N/A	-	-	-
	Add more rows if required										
Net Score:			**+4**								
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] or [is likely to cause] net harm to society.								

Section F. United Nations Sustainable Development Goals (SDG)

>>

UN-level SDGs	UN-level Target	Declared Country-level SDG	Defining Project-level SDGs					GCC Project Verifier's Conclusion (To be included in Project Verification Report only)	
			Project-level SDGs	**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 SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope or creating a new indicator(s). Refer to previous column for guidance.*	*Define project-level targets/actions in line with nee project level indicators chosen. Define the target date by which the project Activity is expected to achieve the project-level SDG target(s).*		*Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined project-level SDG targets*	*Describe the monitoring approach and the monitoring parameters to be applied 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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-

Goal 3. Ensure healthy lives and promote well-being for all at all ages	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-
Goal 5. Achieve gender equality and empower all women and girls	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-
Goal 6. Ensure availability and sustainable management of water and sanitation for all	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-
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 biomass as a renewable energy source."	Yes	Increase the share of renewables in the total installed power capacity connected to the national grid.	Provide 78,920 MWh clean energy annually.	Enhance the share of installed electricity generation capacity from renewable energy sources.	The project increases the renewable energy share in Türkiye's energy production mix. It provides 78,920 MWh annual clean energy to the grid.	Calculate the share of installed capacity from renewable energy.	-	-

	Indicator 7.2.1 Renewable energy share in the total final energy consumption *Project Specific KPI: Amount of renewable energy supplied to grid for consumption*								
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	Yes	Generated job opportunities and income	Provide a minimum number of 15 employment opportunities	Minimum 15 people to be recruited including all levels.	The project created job opportunities for both construction and operation period. It created long term employment for Minimum 15 people who are directly working at the site.	Check employment records	-	-

	equal value". Indicator 8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities *Project Specific KPI: Average earning of females and male employees engaged in the project and segregated by age and persons with disabilities*								
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-

Goal 10. Reduce inequality within and among countries	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-
Goal 11. Make cities and human settlements inclusive, safe, resilient, and sustainable	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-
Goal 12. Ensure sustainable consumption and production patterns	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-
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, adaptation, impact reduction and early warning". Indicator 13.3.2 Number of countries that have communi	Yes	Eliminates 43,816 tCO_2 annually	Commissioning of 78,920 MWh renewable energy plant	Reduce greenhouse gas emissions by 43,816 tonnes annually	Since the project uses wind energy, there is no GHG emissions related to the project activity. It eliminates 43,816 tCO_2 annually.	Calculate avoided GHG emissions every year	-	-

	cated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions *Project Specific KPI: Amount of emission reductions achieved by project*								
Goal 14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-
Goal 15. Protect, restore, and promote sustainable	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-

use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss									
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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-

SUMMARY	**Targeted**	**Likely to be Achieved**
Total Number of SDGs	**3**	**3**
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF	**Silver**	**Silver**

Section G. Local stakeholder consultation

G.1. MODALITIES FOR LOCAL STAKEHOLDER CONSULTATION

>> As per the Regulation on Environmental Impact Assessment numbered #31907[104] Article 17, some projects might receive “EIA not required” letter. EIA was not mandatory for hydro power plants below 25 MW at the time of the project owner's application for EIA. For this reason, the project received EIA exemption on 31/05/2007. After the plant became operational, the EIA decision had to be renewed and an EIA report was prepared in this context. According to Article 14 of the EIA Regulation, "EIA approval" was given for Umutlu HEPP on 31/10/2017 and the decision was announced to the public by the Amasya governorship. Public participation meeting was held on 15/08/2017 in Mülkbükü Village, Taşova District of Amasya Province.

Since the public participation meeting was held within the framework of Turkish legislation and did not meet the rules and requirements of the GCC, an additional LSC was held by the project owner and local stakeholders were informed about the impact of the project. Both male and female stakeholders from Mülkbükü Village, Taşova District of Amasya Province with different occupations have been involved in the consultation process. They were reached via phone calls and with the help of the Village Head. Although the invitation to fill in the forms was made to a larger group of people, the ones that have any opinion about the project were willing to give their inputs, which makes a total of 20 people.

Local stakeholders have been informed on project specific goals via an information sheet provided to the local stakeholders by the project employees in person. A sustainable development form for them to fill was provided with an attached evaluator information sheet with sections to write their input on positive and negative impacts of the project. The participants were given enough time to fill in the forms thus, the consultation process continued for several days. The information sheet included both technical and non-technical information about the project, such as information on the project owner, information on equipment (their number, capacity etc.), photographs from the project sites, commissioning and decision-making dates, as well as the SDGs that this project contributes such as generating clean energy.

The information sheet has the details of:

- Positive impacts on environment (E+ Label)
- Positive impacts on social (S+ Label)
- Technical and non-technical information about the project
- Environment and social impacts of the project as well as the SDG contributions

The communication culture in the area is verbal, hence, comments are received mostly verbally for ongoing communication mechanism. The filled-out sample forms are provided in Appendix 6.

[104] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=39647&MevzuatTur=7&MevzuatTertip=5

G.2. SUMMARY OF COMMENTS RECEIVED

>> The comments received by local stakeholders are positive. In general, its positive effect on agricultural irrigation, employment creation and contribution to energy production were mentioned. These show that local people are satisfied with the project and its effects. Evaluation forms have been provided in Appendix 6.

G.3. CONSIDERATION OF COMMENTS RECEIVED

>> GA Elektrik Enerji Üretim Satış Sanayi ve Ticaret A.Ş. give importance to the comments of local stakeholders. There were no negative comments on the evaluation forms. Thus, no additional action is needed at this stage. However, the project owner is willing to meet stakeholders' wishes at any time of the project activity.

They were also given the contact information of the project owners. The grievance mechanism will be maintained by continuous communication with local stakeholders during the operation period. The input mechanism is continuous hence, stakeholders are able to provide their input anytime.

Section H. Approval and authorization

>> As per GCC requirements, if GCC Program receives the approval to issue CORSIA eligible units beyond 31 December 2020, the Project owner shall ensure that there is no double counting for Emission units generated after 31 December 2020. Hence, a written attestation, expressing the intention, from the host country's national focal point or focal point designee shall be provided prior to submission of request for registration to the GCC Program. This authorization is not required if ACCs are requested to be issued for monitoring period ending on or prior to 31 December 2020 and this is not a requirement for C+ Label. A written attestation from the host country's national focal point or focal point designee will be provided at the earliest opportunity, but prior to submission of requesting issuance to the GCC Program for the relevant monitoring period form 01/01/2021 onwards, for the issuance of ACCs with CORSIA-market eligibility flag (C+).

The Host Country Letter of Authorization will be provided during first emission reduction verification after 31 December 2020 period or when a national entity is assigned or a regulation regarding the issue is published in Türkiye to meet the requirements of CORSIA.

APPENDIX 1. CONTACT INFORMATION OF PROJECT OWNERS

Project Owner name (as per LON/LOA)	GTE KARBON SÜRDÜRÜLEBİLİR ENERJİ EĞİTİM DANIŞMANLIK VE TİCARET A.Ş.
Country	Türkiye
Address	Mustafa Kemal Mah. 2111. Sok. No: 5 Çankaya Ankara
Telephone	+90 312 514 63 63
Fax	-
E-mail	kemal.demirkol@gte.com.tr
Website	http://www.gte.com.tr/
Contact person	M. Kemal Demirkol

Project Owner name (as per LON/LOA)	GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş.
Country	Türkiye
Address	Barbaros Mah. Ihlamur Sok. No:4 A Özel İşyeri No:1 Ataşehir/İstanbul
Telephone	+90 216 687 11 11
Fax	-
E-mail	ersan.gulay@agaoglu.com.tr
Website	-
Contact person	Ersan Gülay

APPENDIX 2. AFFIRMATION REGARDING PUBLIC FUNDING

>> No public funding provided

APPENDIX 3. APPLICABILITY OF METHODOLOGY(IES)

>> Described above.

APPENDIX 4. FURTHER BACKGROUND INFORMATION ON EX ANTE CALCULATION OF EMISSION REDUCTIONS

>> Described above.

APPENDIX 5. FURTHER BACKGROUND INFORMATION ON MONITORING PLAN

>> N/A

APPENDIX 6. SUMMARY REPORT OF COMMENTS RECEIVED FROM LOCAL STAKEHOLDERS

>> The forms filled in by the local stakeholders are provided in this section. Their personal phone numbers are covered in order to respect their privacy.

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SUSTAINABLE DEVELOPMENT EVALUATION FORM

Sustainable Development Indicators	Participant Comments		
	Positive	Negative	No Effect
Air quality (Sulfur dioxide, nitrogen oxides, soot, etc.)			
Water quality and quantity (Access to water resources)			
Soil quality (Fight against erosion, soil pollution, etc.)			
Other pollution sources (noise, light, etc. pollution sources)			
Biodiversity (Effect on protected species)			
Employment Quality (Working conditions, job security)			
Combating Poverty (Impact on standard of living, access to health services, etc.)			
Access to clean energy sources (Reliable, cheap energy, impact on energy imports)			
Personal and institutional capacity (Education, awareness raising)			
Contribution to employment and income level (New job opportunity, income increase)			
Balance of Payments (Reducing foreign dependency, increasing investment)			
Technology transfer and technological competence (Using, adapting, etc.)			

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EVALUATOR INFORMATION	**Name surname**	
	Phone	
	District/Province	
	Institution/Duty	
What are the aspects that you find **positive** about the project?		
What are the aspects that you find **negative** about the project?		

CONTACT:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret A.Ş.

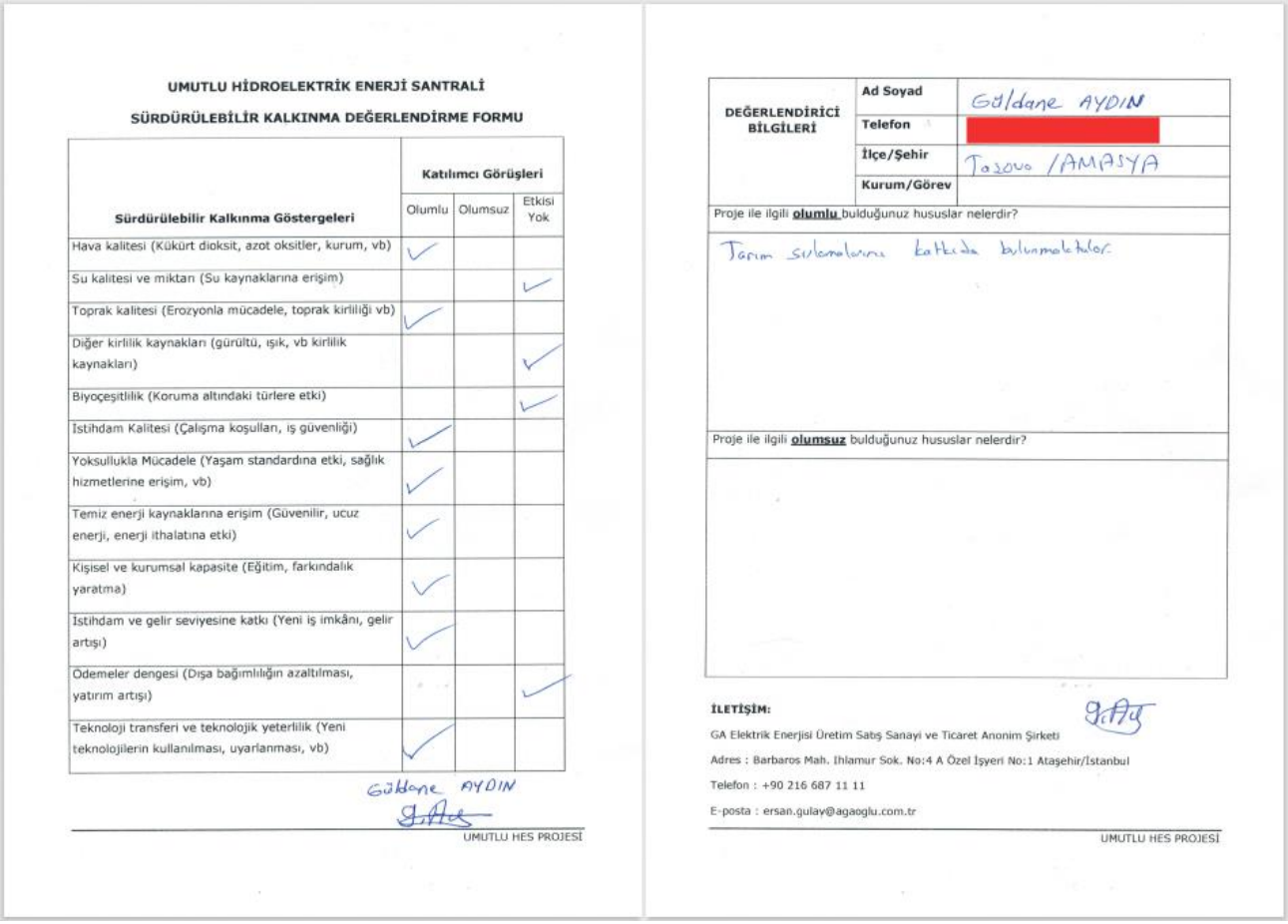
Address : Barbaros Mah. Ihlamur Sok. No:4 A Özel İşyeri No:1 Ataşehir/İstanbul

Telephone : +90 216 687 11 11

Email: ersan.gulay@agaoglu.com.tr

UMUTLU HEPP

Figure 5. Sustainable development evaluation form provided to local stakeholders



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)			✓
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)			✓
Biyoçeşitlilik (Koruma altındaki türlere etki)			✓
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)			✓
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Güldane AYDIN

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Güldane AYDIN
	Telefon	[redacted]
	İlçe/Şehir	Taşova / AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Tarım sistemlerine katkıda bulunmaktalar.

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

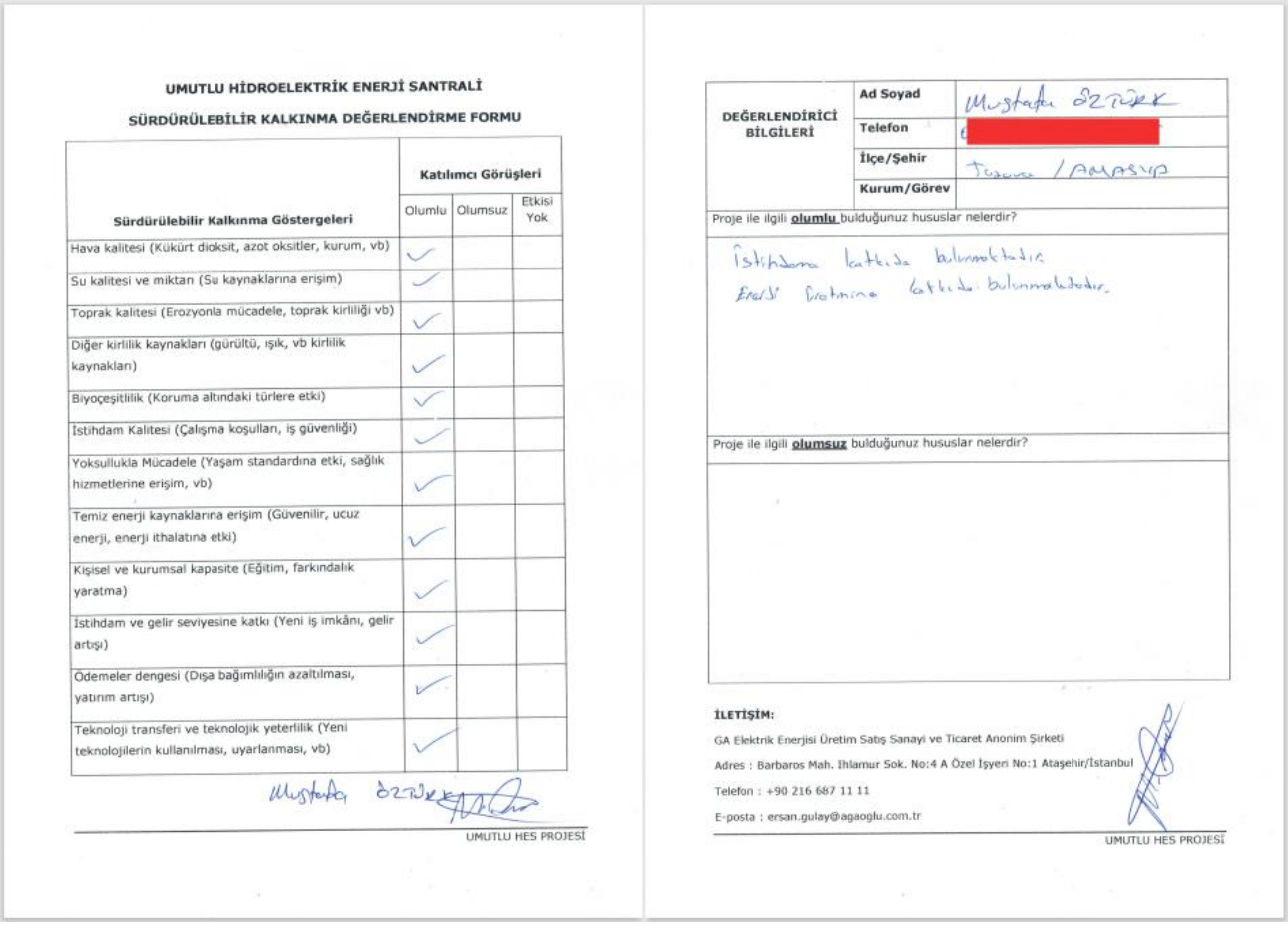
Adres : Barbaros Mah. Ihlamur Sok. No:4 A Özel İşyeri No:1 Ataşehir/İstanbul

Telefon : +90 216 687 11 11

E-posta : ersan.gulay@agaoglu.com.tr

UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Güldane Aydın
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
It contributes to agricultural irrigation.		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Mustafa Öztürk

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Mustafa Öztürk
	Telefon	[redacted]
	İlçe/Şehir	Taşova / Amasya
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

İstihdama katkıda bulunmaktadır.
Eğitim öğretime katkıda bulunmaktadır.

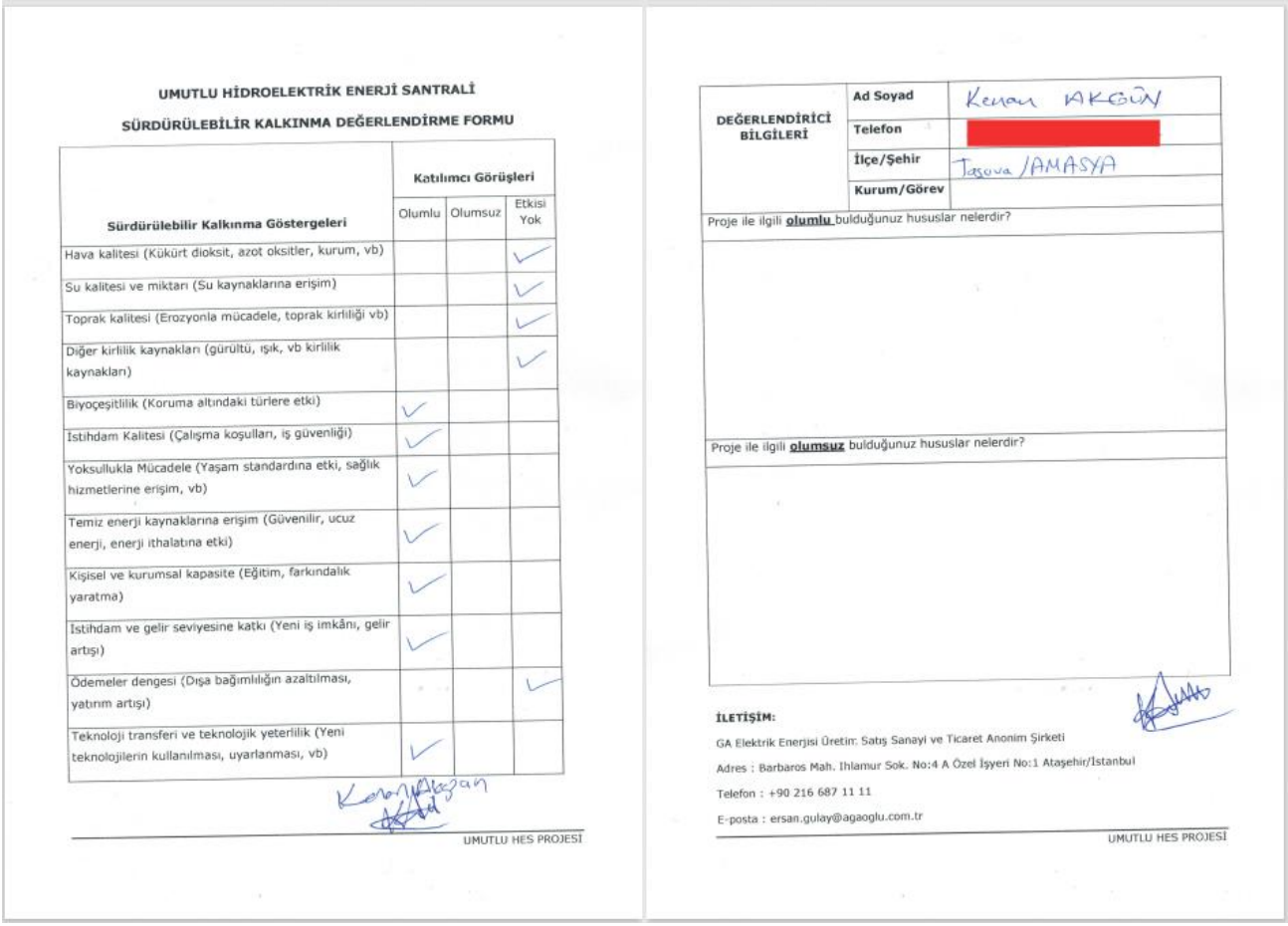
Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi
Adres : Barbaros Mah. Ihlamur Sok. No:4 A Özel İşyeri No:1 Ataşehir/İstanbul
Telefon : +90 216 687 11 11
E-posta : ersan.gulay@agaoglu.com.tr

UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Mustafa Öztürk
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
It contributes to employment. It contributes to energy production.		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)			✓
Su kalitesi ve miktarı (Su kaynaklarına erişim)			✓
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)			✓
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)			✓
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)			✓
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Kenan Akgün

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Kenan AKGÜN
	Telefon	[redacted]
	İlçe/Şehir	Taşova /AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim: Satış Sanayi ve Ticaret Anonim Şirketi

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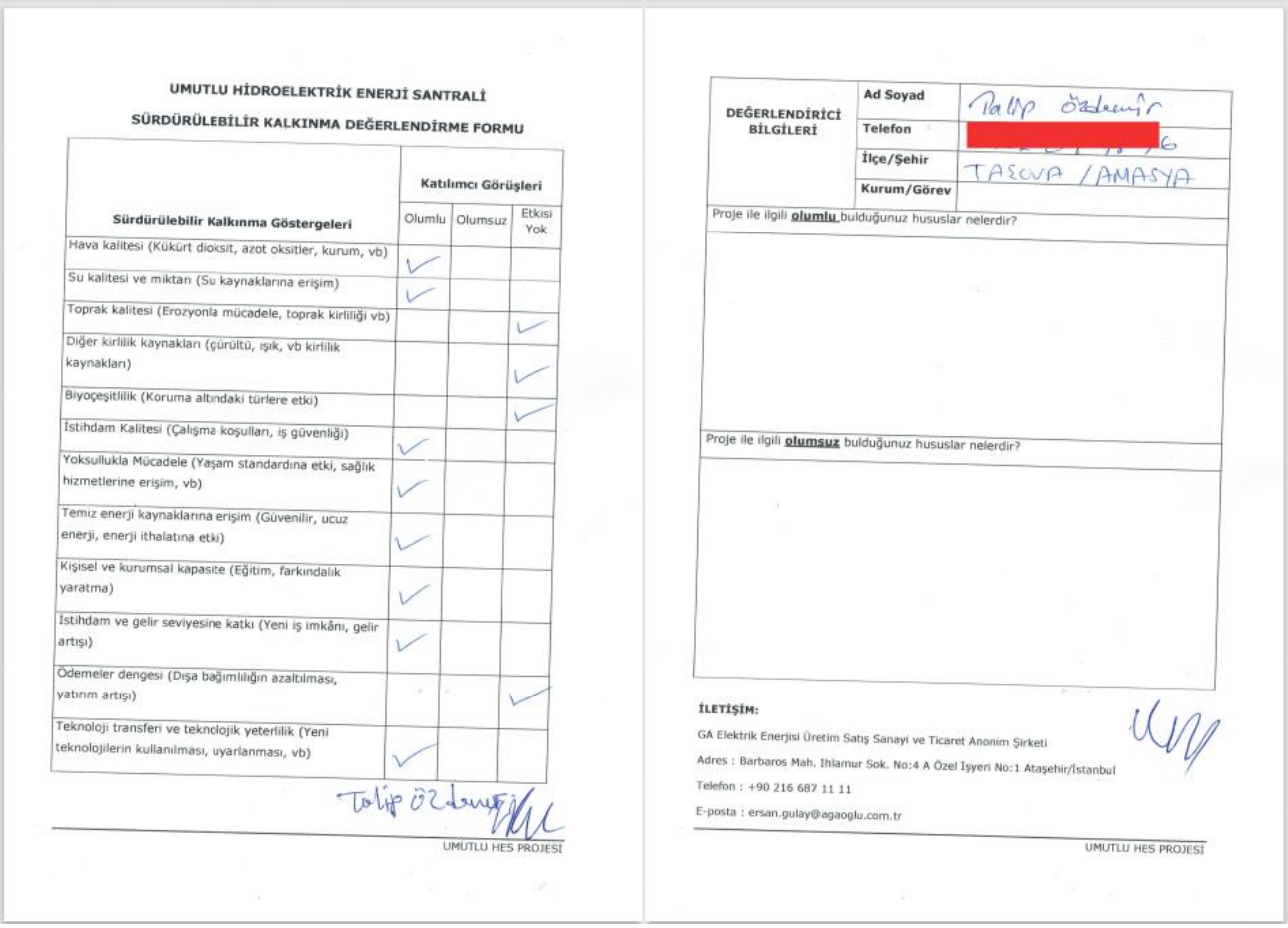
Telefon : +90 216 687 11 11

E-posta : ersan.gulay@agaoglu.com.tr

UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Kenan Akgün
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
-		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)			✓
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)			✓
Biyoçeşitlilik (Koruma altındaki türlere etki)			✓
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)			✓
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Talip Özdemir

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Talip Özdemir
	Telefon	[redacted]
	İlçe/Şehir	TAŞOVA / AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

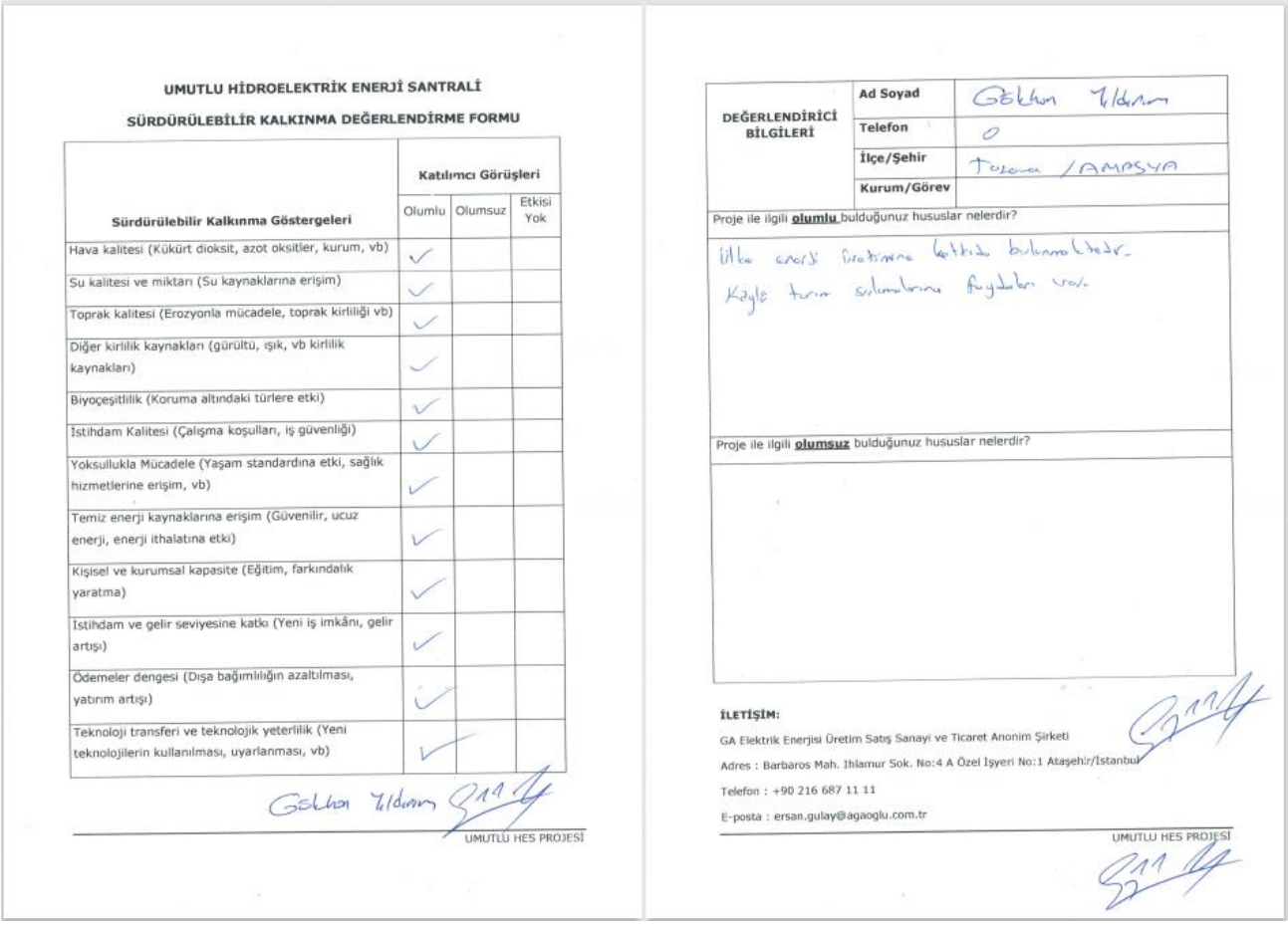
Adres : Barbaros Mah. Ihlamur Sok. No:4 A Özel İşyeri No:1 Ataşehir/İstanbul

Telefon : +90 216 687 11 11

E-posta : ersan.gulay@agaoglu.com.tr

UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Talip Özdemir
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
-		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Gökhan Yıldırım

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Gökhan Yıldırım
	Telefon	0
	İlçe/Şehir	Taşova / AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

İlke enerji üretimine katkıda bulunmaktadır. Küçük tarım işletmelerine faydaları var.

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

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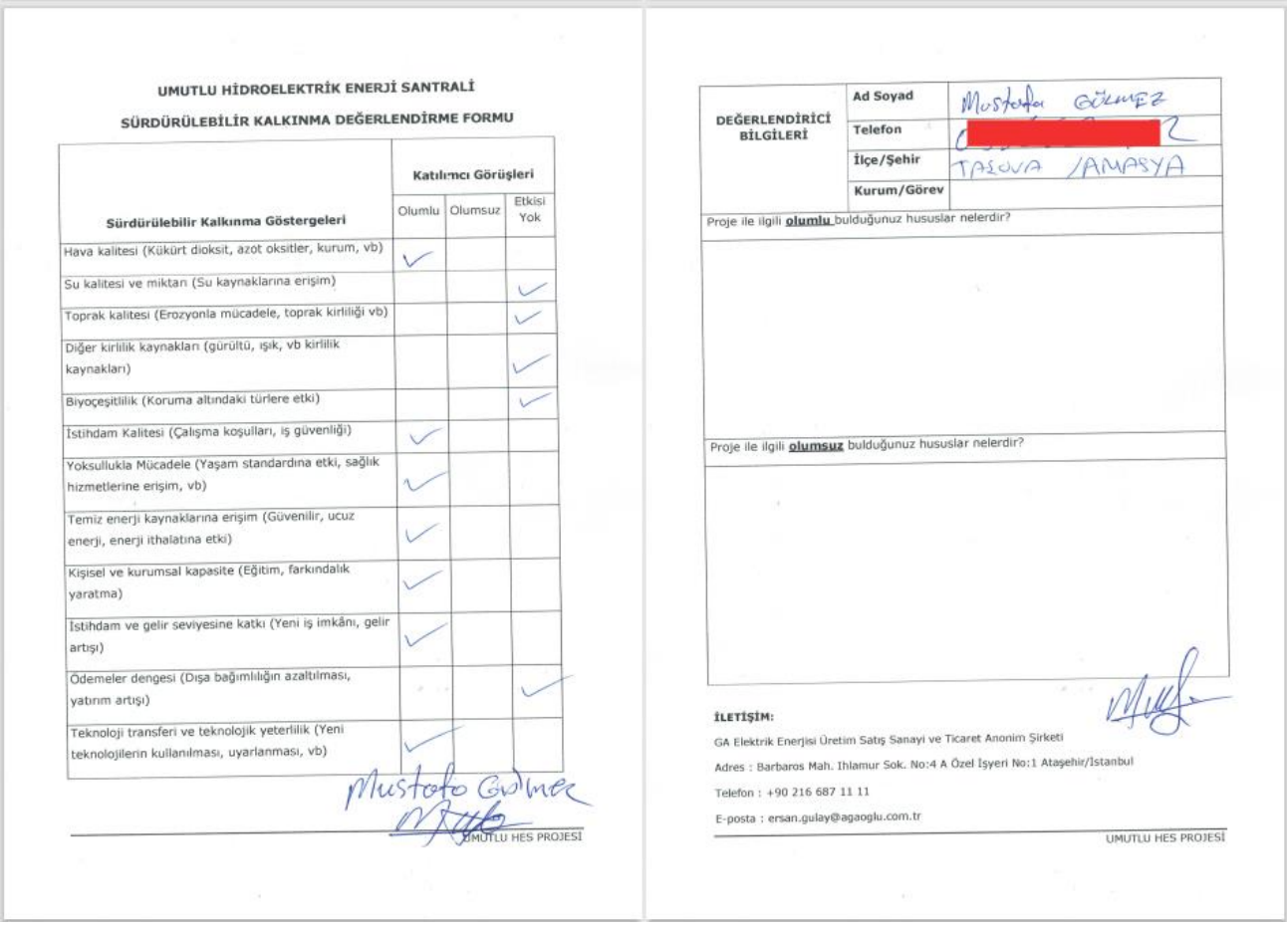
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Gökhan Yıldırım
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
It contributes to country's energy production. The villagers benefit from agricultural irrigation.		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)			✓
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)			✓
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)			✓
Biyoçeşitlilik (Koruma altındaki türlere etki)			✓
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)			✓
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Mustafa Gülmez

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Mustafa GÜLMEZ
	Telefon	[redacted]
	İlçe/Şehir	TAŞOVA /AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

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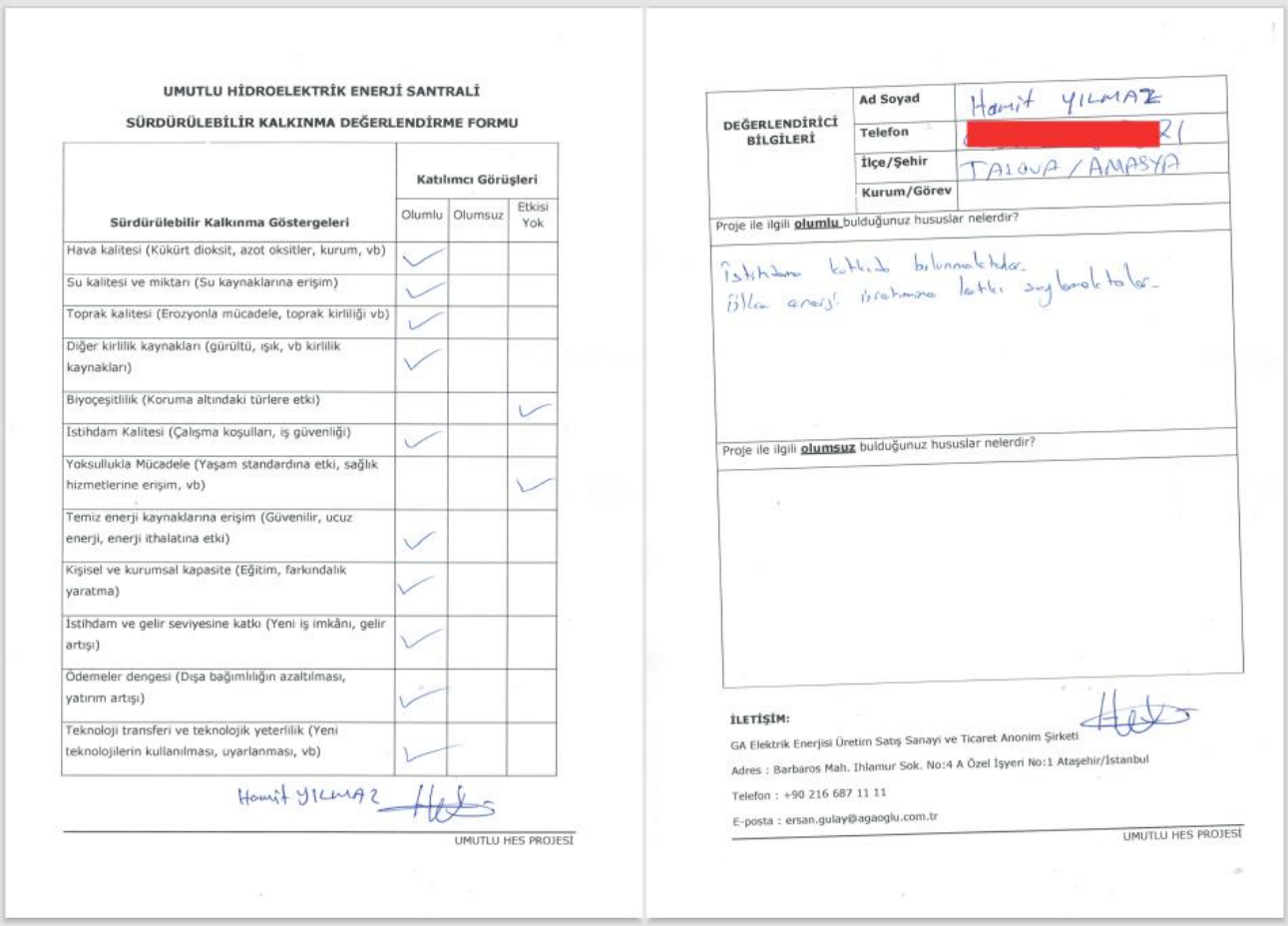
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Mustafa Gülmez
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
-		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)			✓
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)			✓
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Hamit YILMAZ

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ	
Ad Soyad	Hamit YILMAZ
Telefon	[redacted]
İlçe/Şehir	TAŞOVA / AMASYA
Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

İstihdama katkıda bulunmaktadır.
İşlem arası ulaşıma katkı sağlamaktadır.

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

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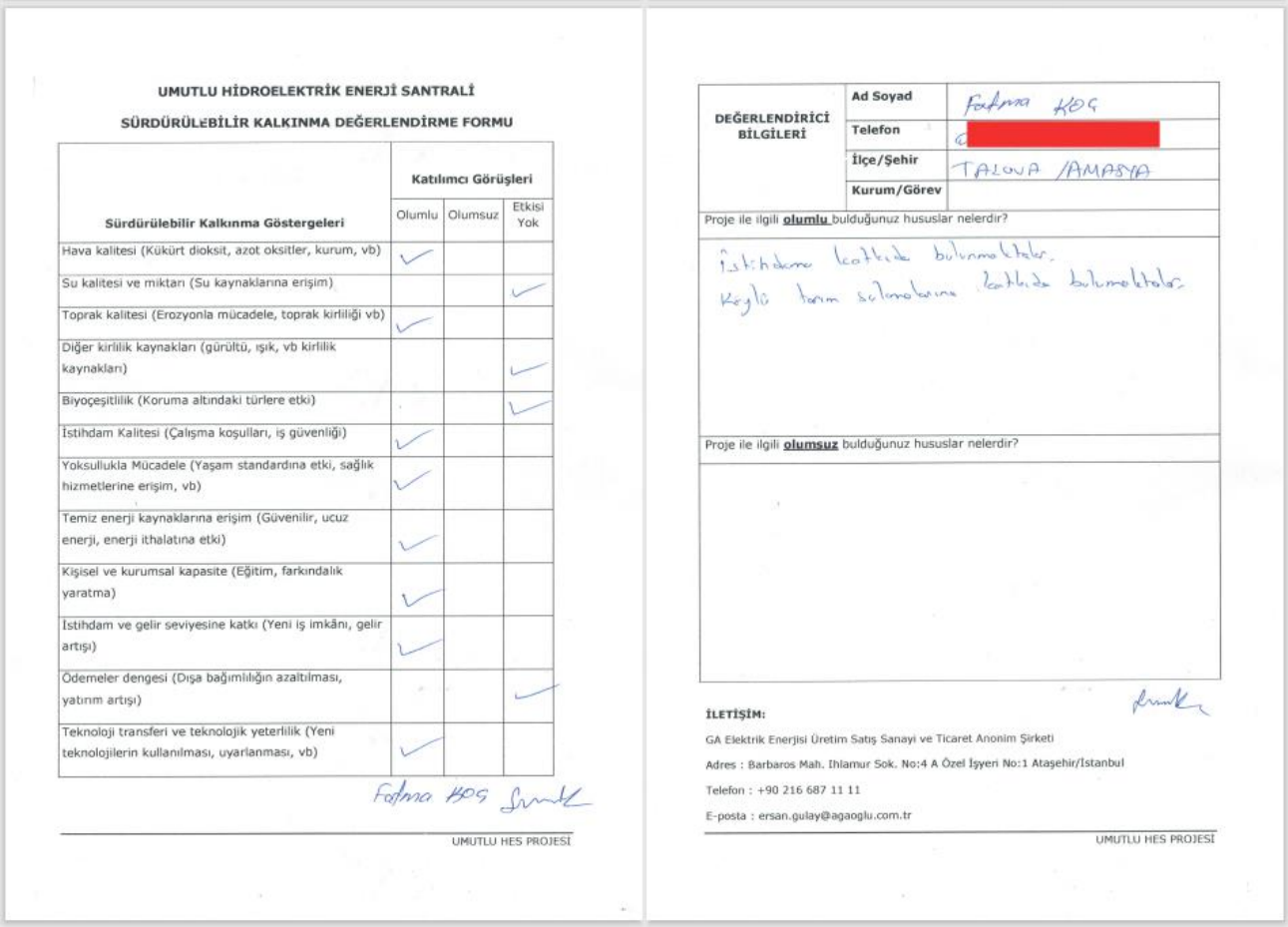
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Hamit Yılmaz
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
They contribute to employment. It contributes to country's energy production.		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)			✓
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)			✓
Biyoçeşitlilik (Koruma altındaki türlere etki)			✓
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksulluk la Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)			✓
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Fatma KOÇ

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Fatma KOÇ
	Telefon	[redacted]
	İlçe/Şehir	TAŞOVA /AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

İstihdama katkıda bulunmaktalar.
Kayıtlı tarım sulamalarına katkıda bulunmaktalar.

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

Adres : Barbaros Mah. Ihlamur Sok. No:4 A Özel İşyeri No:1 Ataşehir/İstanbul

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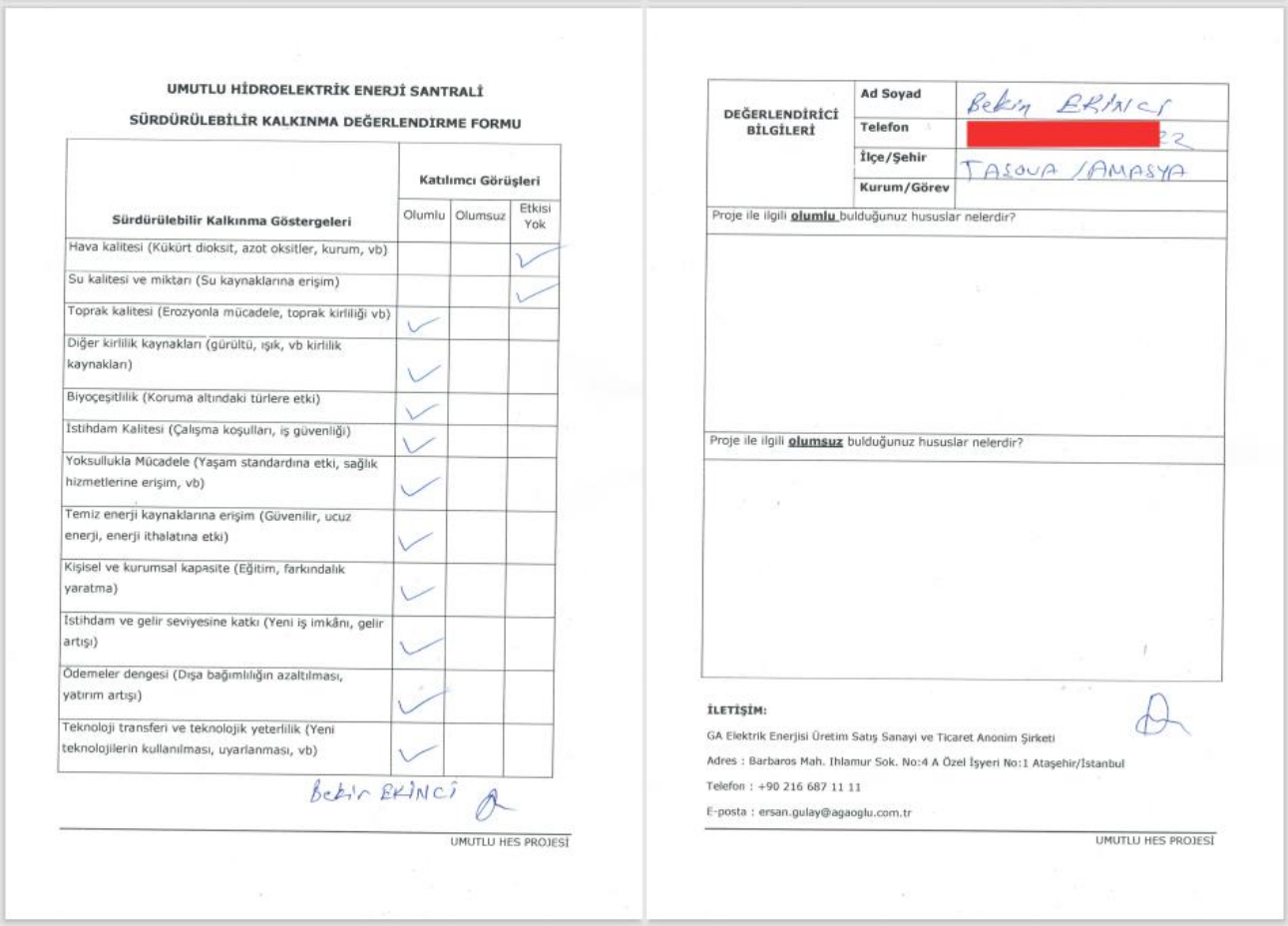
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Fatma Koç
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
They contribute to employment. The villagers benefit from agricultural irrigation.		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)			✓
Su kalitesi ve miktarı (Su kaynaklarına erişim)			✓
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Bekir EKİNCİ

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Bekir EKİNCİ
	Telefon	[redacted]
	İlçe/Şehir	TAŞOVA / AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

Adres : Barbaros Mah. İhlamur Sok. No:4 A Özel İşyeri No:1 Ataşehir/İstanbul

Telefon : +90 216 687 11 11

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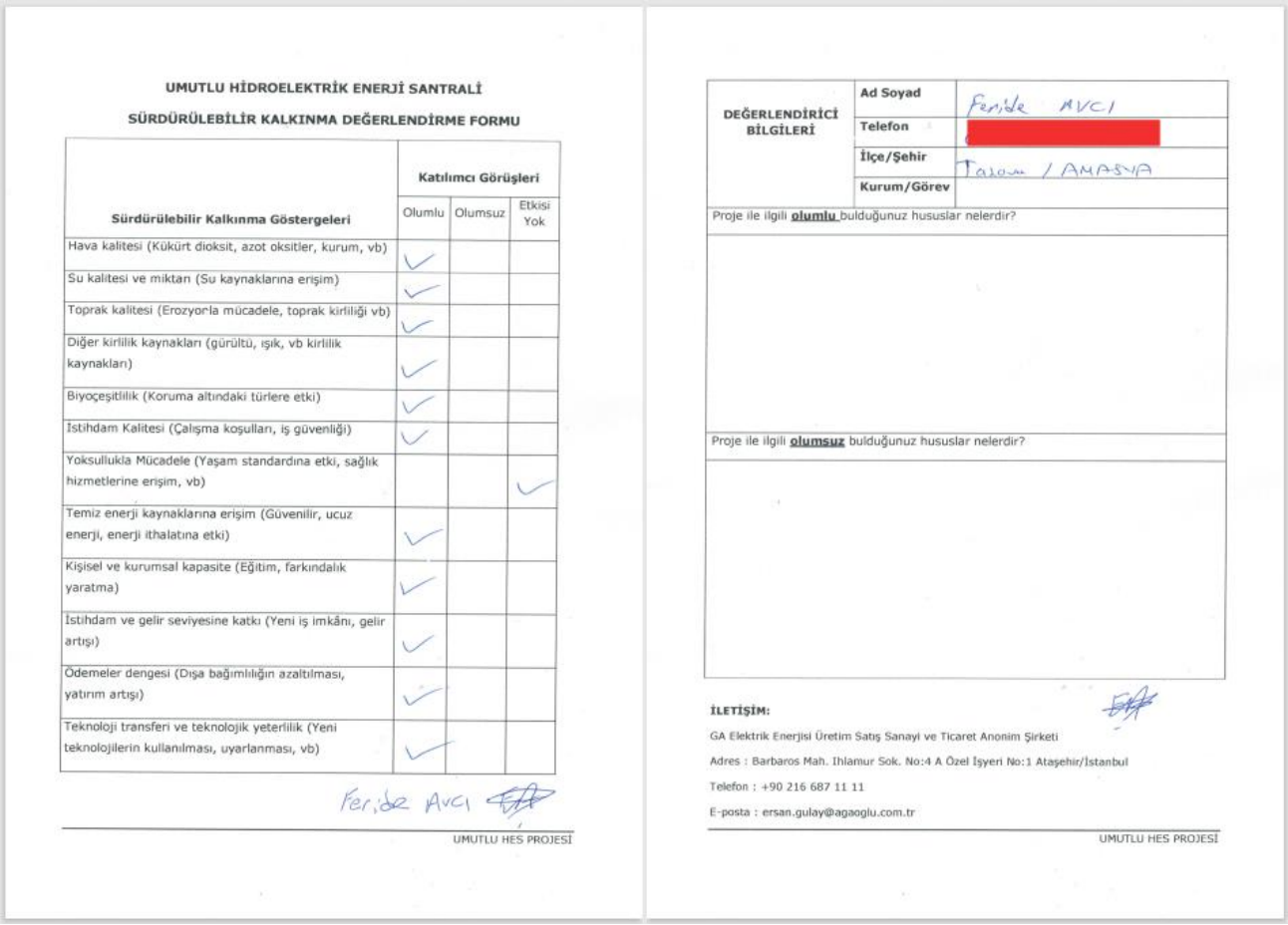
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Bekin Ekinci
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
-		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)			✓
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Feride Avcı

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Feride AVCI
	Telefon	[redacted]
	İlçe/Şehir	Taşova / AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

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Telefon : +90 216 687 11 11

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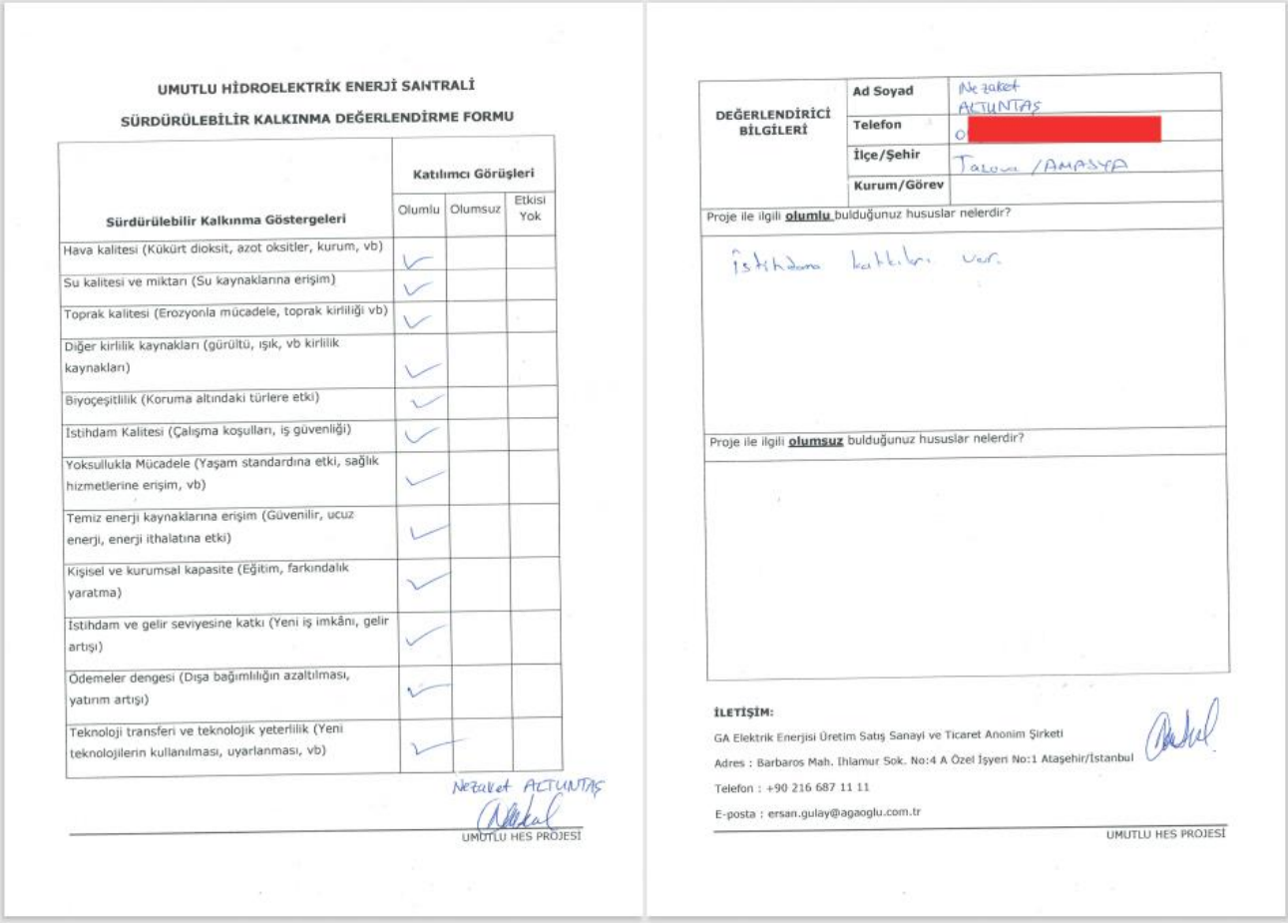
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Feride Avcı
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
-		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Nezaket ALTUNTAŞ

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Nezaket ALTUNTAŞ
	Telefon	0 [redacted]
	İlçe/Şehir	Taşova /AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

İstihdama katkısı var.

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

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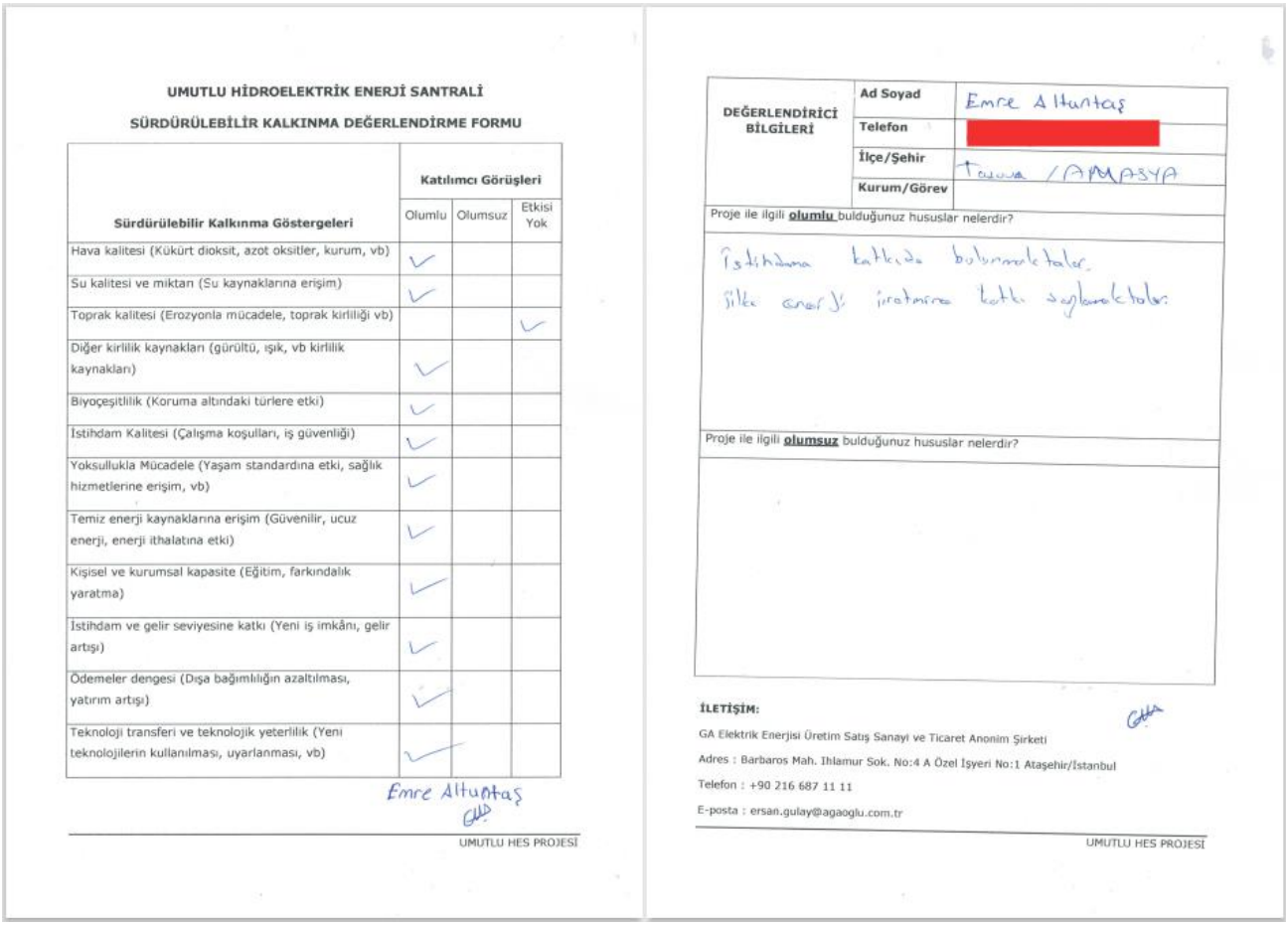
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Nezaket Altuntaş
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
There are employment contributions.		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)			✓
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Emre Altuntaş

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Emre Altuntaş
	Telefon	[redacted]
	İlçe/Şehir	Taşova / AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

İstihdama katkıda bulunmaktalar.
Ülke enerji üretimine katkı sağlamaktalar.

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

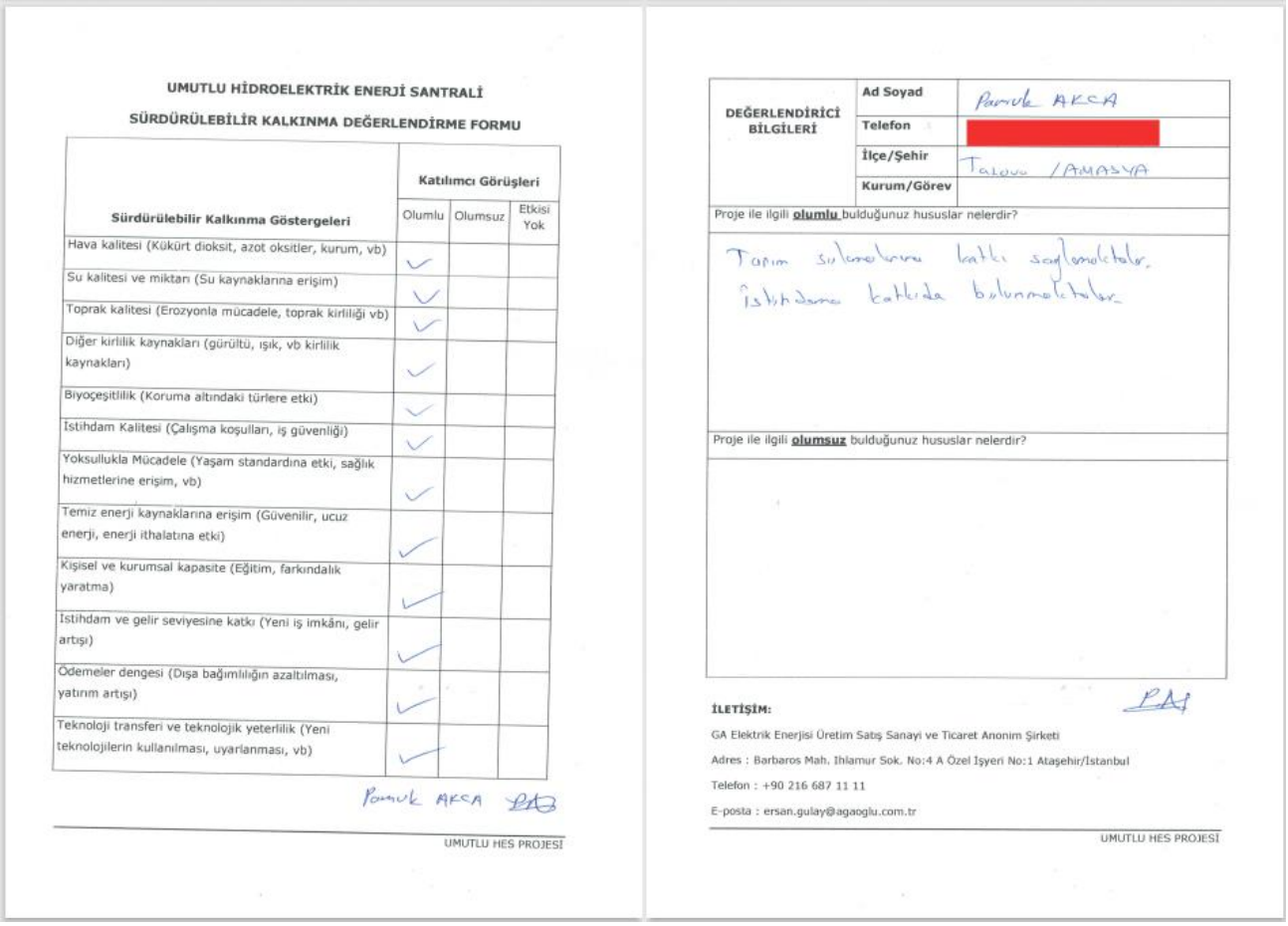
Adres : Barbaros Mah. Ihlamur Sok. No:4 A Özel İşyeri No:1 Ataşehir/İstanbul

Telefon : +90 216 687 11 11

E-posta : ersan.gulay@agaoglu.com.tr

UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Emre Altuntaş
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
It contributes to employment. It contributes to the country's energy production.		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Pamuk AKCA PA

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Pamuk AKCA
	Telefon	[redacted]
	İlçe/Şehir	Taşova / AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Tarım sulamalarına katkı sağlamaktalar. İstihdama katkıda bulunmaktalar.

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

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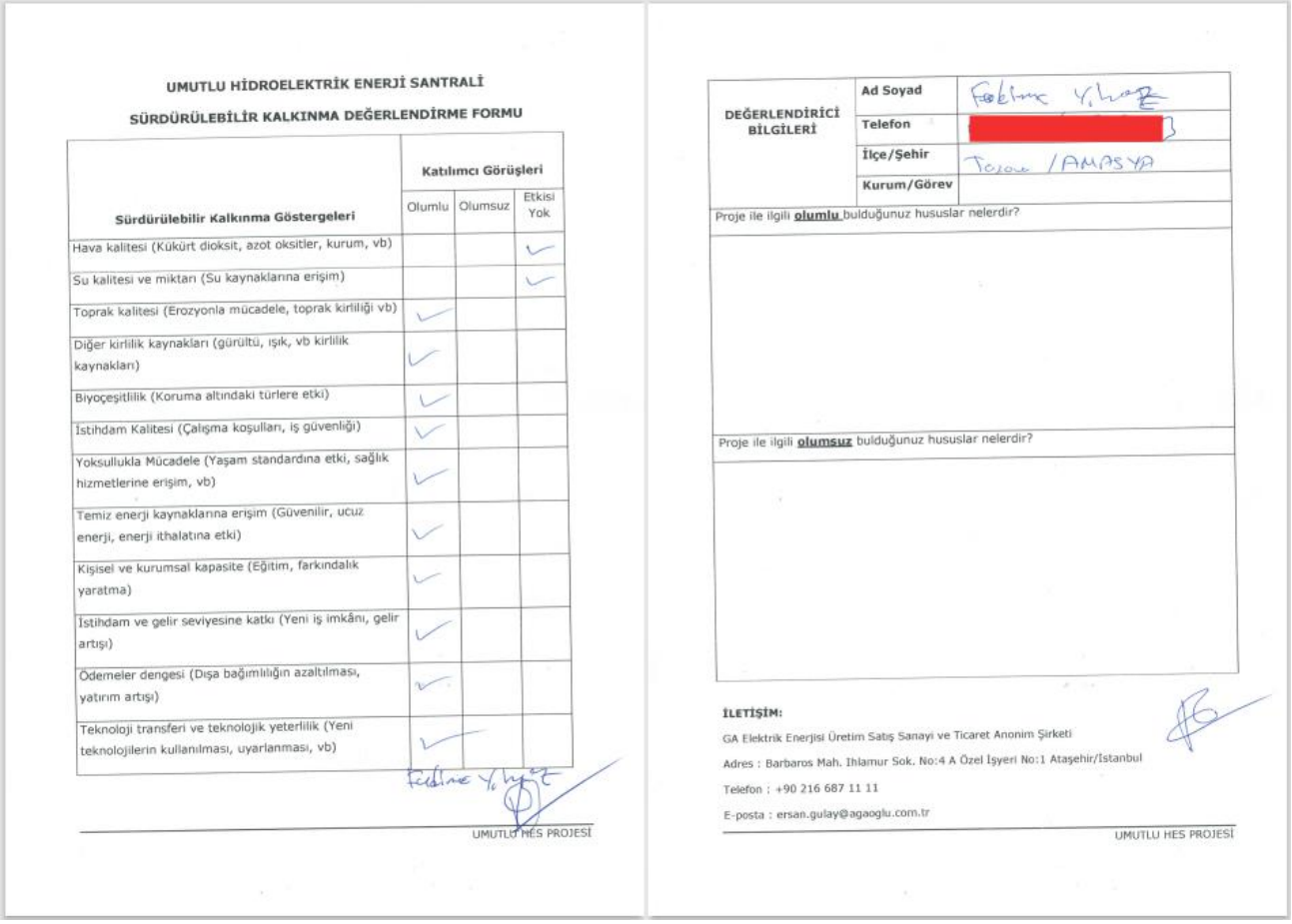
E-posta : ersan.gulay@agaoglu.com.tr

PA

UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Pamuk Akca
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
It contributes to agricultural irrigation. It contributes to employment.		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)			✓
Su kalitesi ve miktarı (Su kaynaklarına erişim)			✓
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Fadime Yılmaz

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Fadime Yılmaz
	Telefon	[redacted]
	İlçe/Şehir	Taşova / AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

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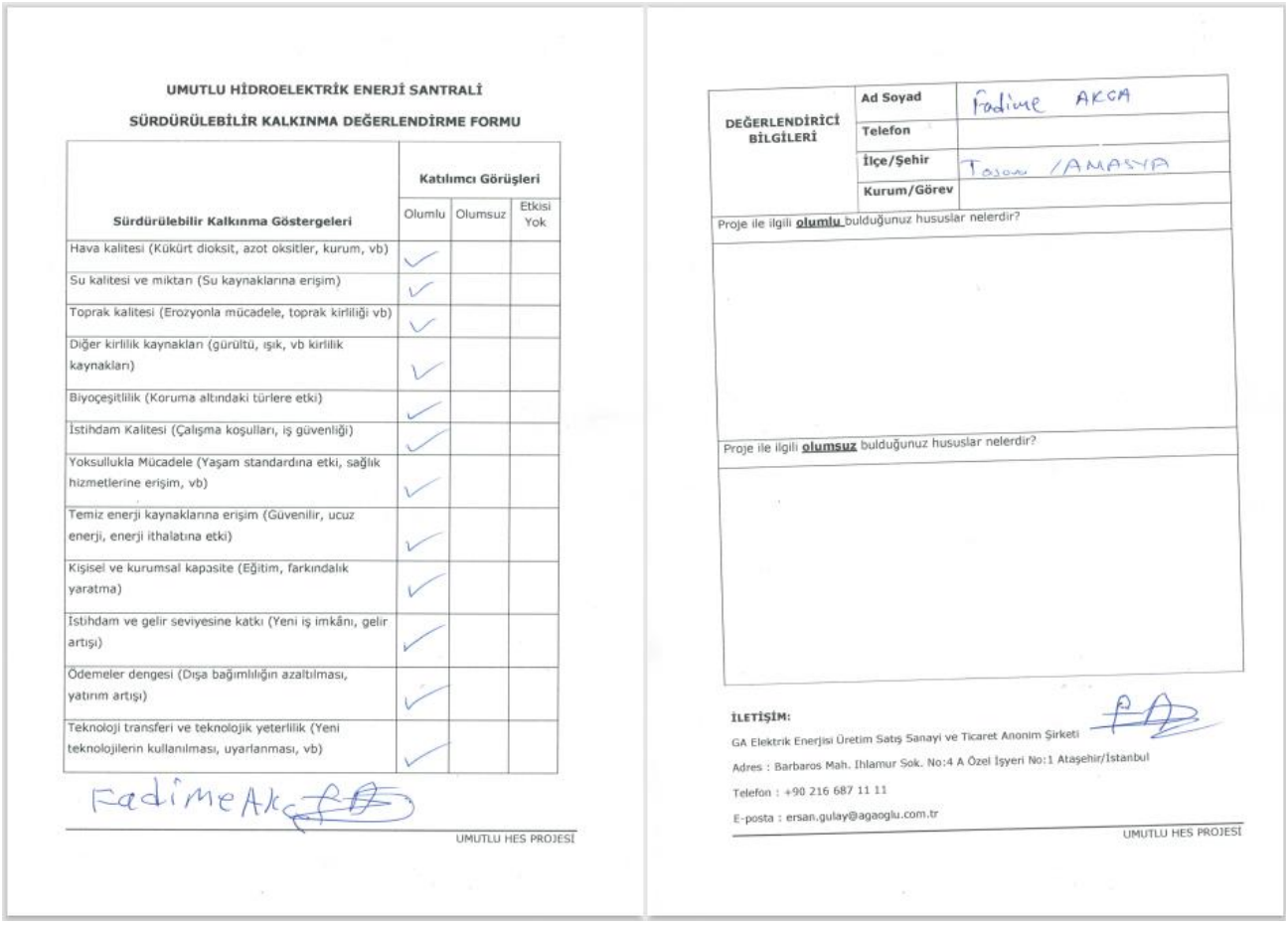
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Fadime Yılmaz
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
-		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Fadime Akça

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ	
Ad Soyad	Fadime AKÇA
Telefon	
İlçe/Şehir	Taşova /AMASYA
Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

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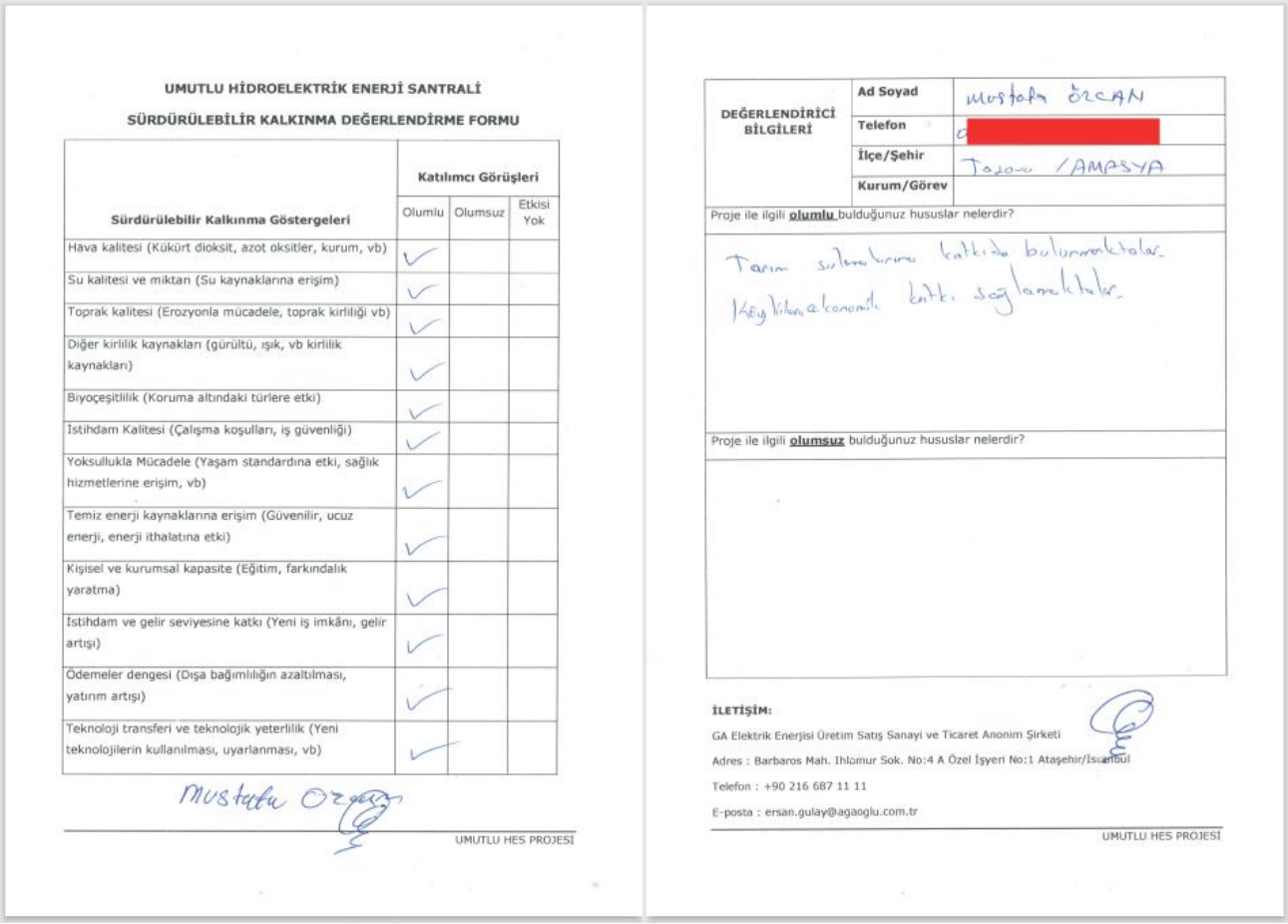
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Fadime Akça
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
-		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Mustafa Özcan

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ	
Ad Soyad	Mustafa ÖZCAN
Telefon	[redacted]
İlçe/Şehir	Taşova /AMASYA
Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Tarım sektörüne katkıda bulunmaktalar.
Köy kalkınmasına katkı sağlamaktalar.

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

Adres : Barbaros Mah. Ihlamur Sok. No:4 A Özel İşyeri No:1 Ataşehir/İstanbul

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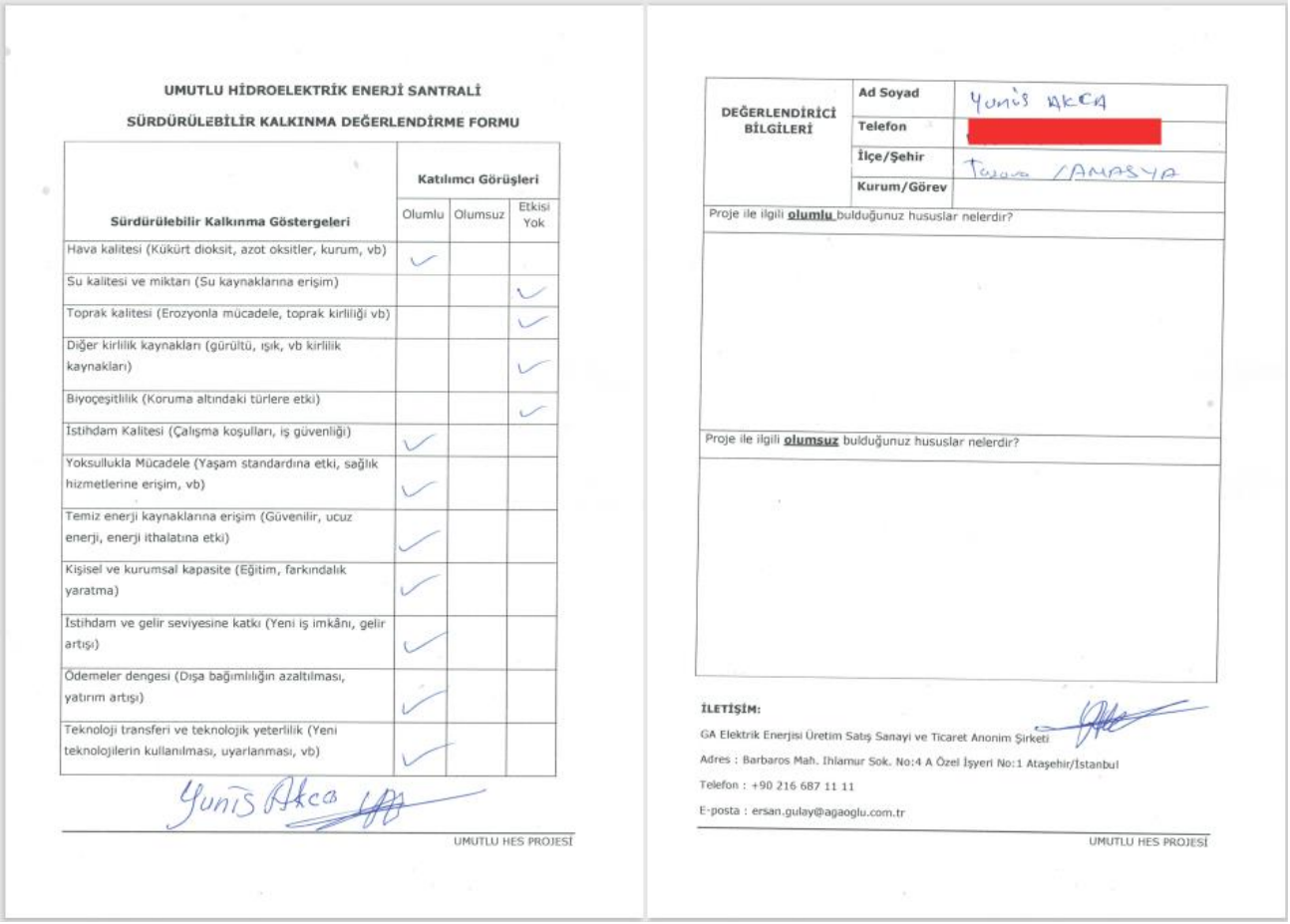
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Mustafa Özcan
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
It contributes to agricultural irrigation. They provide economic contribution to the villagers.		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)			✓
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)			✓
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)			✓
Biyoçeşitlilik (Koruma altındaki türlere etki)			✓
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Yunis Akca

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Yunis AKCA
	Telefon	[redacted]
	İlçe/Şehir	Taşova /AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

Adres : Barbaros Mah. Ihlamur Sok. No:4 A Özel İşyeri No:1 Ataşehir/İstanbul

Telefon : +90 216 687 11 11

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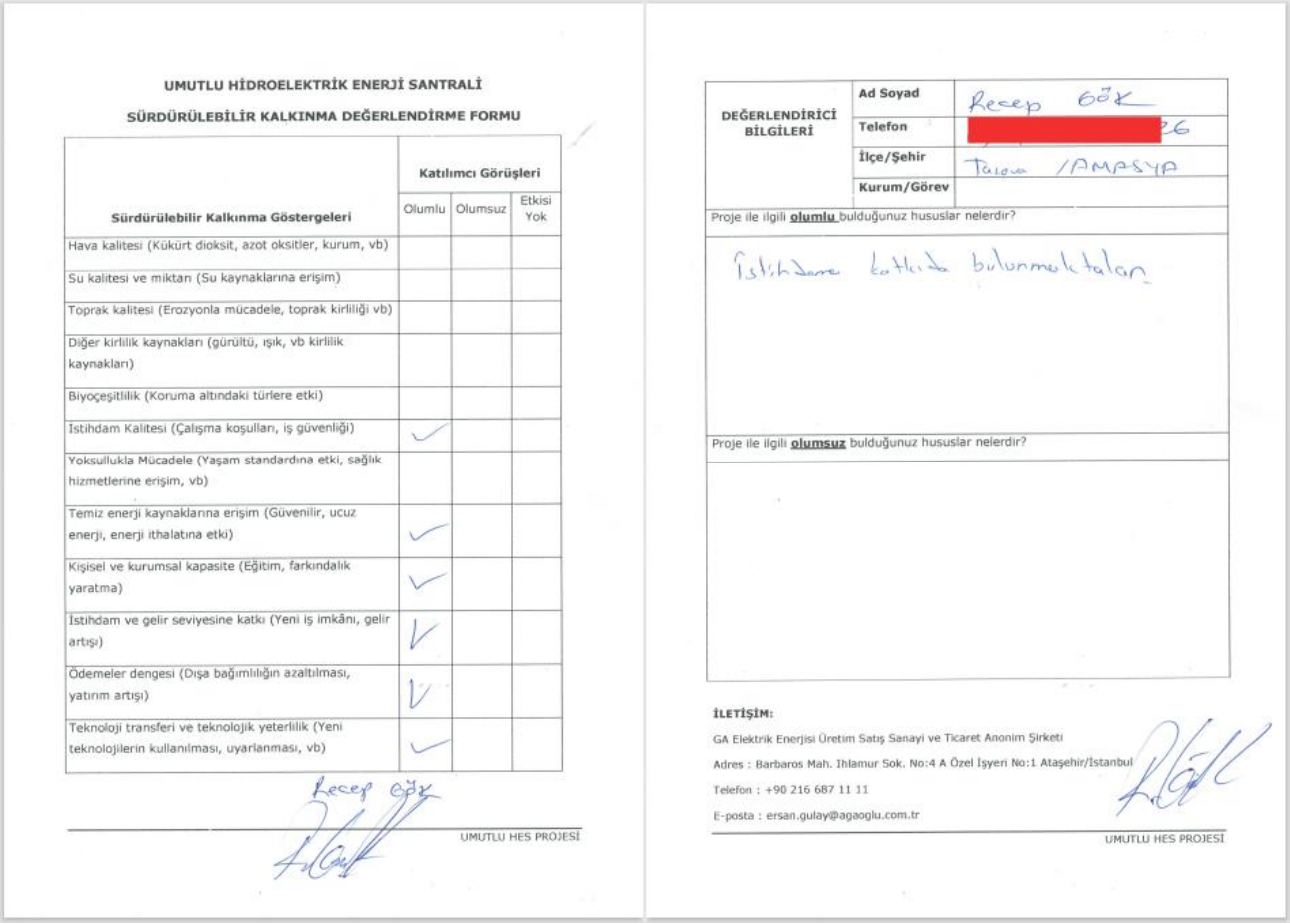
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Yunus Akca
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
-		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)			
Su kalitesi ve miktarı (Su kaynaklarına erişim)			
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)			
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)			
Biyoçeşitlilik (Koruma altındaki türlere etki)			
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)			
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Recep Gök

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	Recep GÖK
	Telefon	[redacted]26
	İlçe/Şehir	Taşova /AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

İstihdama katkıda bulunmaktadır.

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

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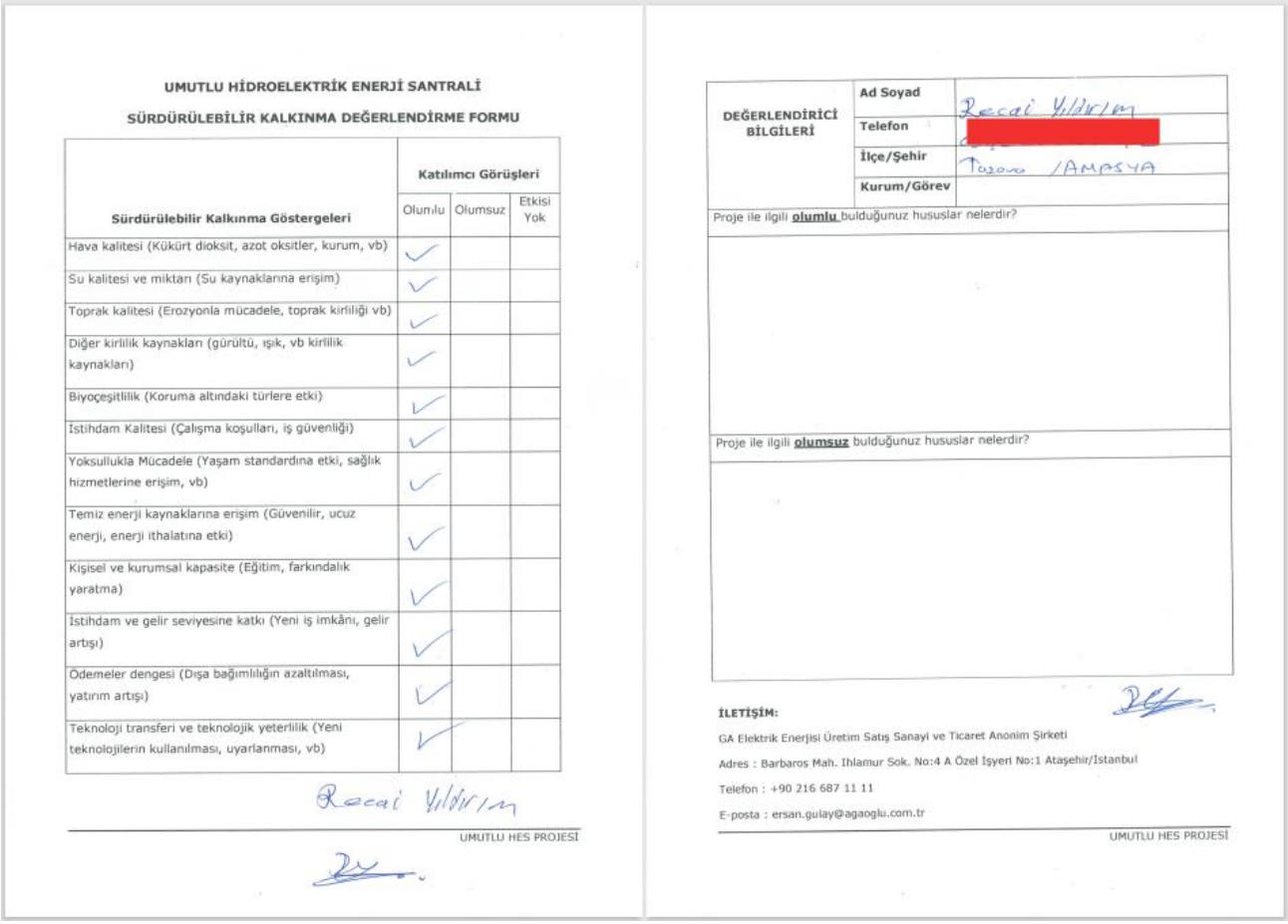
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Recep Gök
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
It contributes to employment.		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

Recai Yıldırım

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ	
Ad Soyad	Recai Yıldırım
Telefon	[redacted]
İlçe/Şehir	Taşova /AMASYA
Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

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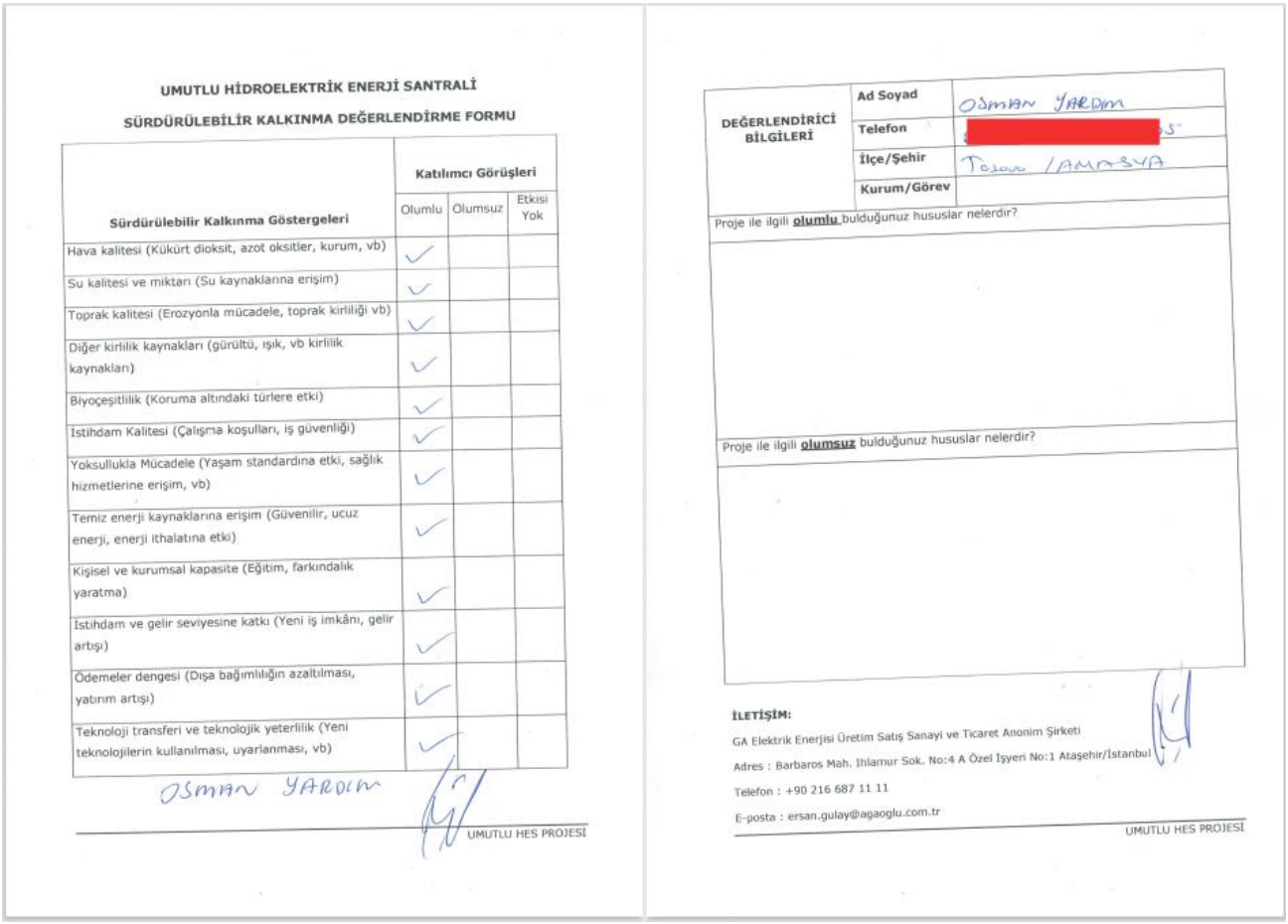
UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Güldane Aydın
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
-		
What are the aspects that you find **negative** about the project?		
-		



UMUTLU HİDROELEKTRİK ENERJİ SANTRALİ

SÜRDÜRÜLEBİLİR KALKINMA DEĞERLENDİRME FORMU

Sürdürülebilir Kalkınma Göstergeleri	Katılımcı Görüşleri		
	Olumlu	Olumsuz	Etkisi Yok
Hava kalitesi (Kükürt dioksit, azot oksitler, kurum, vb)	✓		
Su kalitesi ve miktarı (Su kaynaklarına erişim)	✓		
Toprak kalitesi (Erozyonla mücadele, toprak kirliliği vb)	✓		
Diğer kirlilik kaynakları (gürültü, ışık, vb kirlilik kaynakları)	✓		
Biyoçeşitlilik (Koruma altındaki türlere etki)	✓		
İstihdam Kalitesi (Çalışma koşulları, iş güvenliği)	✓		
Yoksullukla Mücadele (Yaşam standardına etki, sağlık hizmetlerine erişim, vb)	✓		
Temiz enerji kaynaklarına erişim (Güvenilir, ucuz enerji, enerji ithalatına etki)	✓		
Kişisel ve kurumsal kapasite (Eğitim, farkındalık yaratma)	✓		
İstihdam ve gelir seviyesine katkı (Yeni iş imkânı, gelir artışı)	✓		
Ödemeler dengesi (Dışa bağımlılığın azaltılması, yatırım artışı)	✓		
Teknoloji transferi ve teknolojik yeterlilik (Yeni teknolojilerin kullanılması, uyarlanması, vb)	✓		

OSMAN YARDIM

UMUTLU HES PROJESİ

DEĞERLENDİRİCİ BİLGİLERİ		
	Ad Soyad	OSMAN YARDIM
	Telefon	[redacted]
	İlçe/Şehir	Taşova / AMASYA
	Kurum/Görev	

Proje ile ilgili **olumlu** bulduğunuz hususlar nelerdir?

Proje ile ilgili **olumsuz** bulduğunuz hususlar nelerdir?

İLETİŞİM:

GA Elektrik Enerjisi Üretim Satış Sanayi ve Ticaret Anonim Şirketi

Adres : Barbaros Mah. İhlamur Sok. No:4 A Özel İşyeri No:1 Ataşehir/İstanbul

Telefon : +90 216 687 11 11

E-posta : ersan.gulay@agaoglu.com.tr

UMUTLU HES PROJESİ

EVALUATOR INFORMATION	**Name surname**	Osman Yardım
	District/Province	Taşova/Amasya
What are the aspects that you find **positive** about the project?		
-		
What are the aspects that you find **negative** about the project?		
-		

APPENDIX 7. SUMMARY OF DE-REGISTERED CDM PROJECT OR PROJECTS FROM OTHER GHG / NON-GHG PROGRAMS (TYPE B)

>>

Complete this form in accordance with the instructions attached at the end of this form.	
Program Name	
Project registration number	
Date of registration in the program	
Title of the Project Activity	
Project de-registration reference number	
Date of de-registration of the Project	
Project Participants (Authorized by the host / annex 1 country letter of approval)	
Country where the project is located	
Applied methodology(ies) (Provide reference and version number(s))	

Pre-registration changes to the Project Activity

(Tick as applicable)

Pre-registration Changes	Reference number	Approved	Provide a summary of pre-registration changes
Deviations from approved baseline and monitoring methodology		☐	
Deviations from applied Tool & Guidance		☐	
Deviations from the rules		☐	
Other…….		☐	

Post-registration changes to the Project Activity

(Tick as applicable)

Post registration Changes	Reference number	Approved	Provide a summary of post-registration changes
Change in project design		☐	
Request for revision of monitoring plan		☐	
Request for change in start date of crediting period		☐	
Renewal of crediting period		☐	
Temporary deviations		☐	
Other…….		☐	

Crediting Period(s)

Crediting period(s)			Period (start & end dates)	ERs as per registered PDD/MR/Project documents	Credits issued
Crediting Period (Shall start on or after 1 Jan 2016)	Fixed 10 year				
	Renewable (7 years, with 2 approved renewals)	1st			
		2nd			
		3rd			
Period for which Credits have been issued					
Period for which Credits have been requested but not issued					-
Period for which Credits have never been requested for issuance (No monitoring reports submitted)					-
Period for which Credits have never been requested for issuance prior to CDM de-registration					-
Remaining Crediting period, after de-registration, for which Credits have not been issued by the program , subject to a ceiling of 10 years as allowed under the GCC Program					-

<table>
<tr><td>Details of Previous Issuance Requests</td><td>
<table>
<tr><th>Issuance Request</th><th>Period (start & end dates)</th><th>ERs as per registered PDD</th><th>Quantity of Credits requested to be issued</th><th>Quantity of Credits issued</th></tr>
<tr><td>1st</td><td></td><td></td><td></td><td></td></tr>
<tr><td>2nd</td><td></td><td></td><td></td><td></td></tr>
<tr><td>3rd</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4th</td><td></td><td></td><td></td><td></td></tr>
<tr><td>5th</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Add rows …….</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total</td><td></td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>List any open issues in the Validation and last Verification Report (e.g., FARs, if any) and how they have been addressed</td><td></td></tr>
<tr><td>Any other relevant information that has not been reported in the registered documents and that may have adverse impacts on the environmental integrity of the Project Activity</td><td></td></tr>
<tr><td>Provide the list of all the registered documents related to this project, as available on the program’s website and the corresponding URLs.</td><td></td></tr>
</table>

Appendix 8. FURTHER INFORMATION ON DETERMINATION OF BUNDLE IN PROJECT ACTIVITY.

>>

Appendix 9. PUBLIC DECLARATION FOR A2 (Sub Type 2 and 3), B1 & B2 PROJECTS ON NON CONTINUATION FROM CDM/GHG/NON-GHG PROGRAMS.

>>

Appendix 10. TÜRKİYE NATIONAL ELECTRICITY GRID EMISSION FACTOR DATA SHEET

T.C. ENERJİ VE TABİİ KAYNAKLAR BAKANLIĞI	TÜRKİYE ULUSAL ELEKTRİK ŞEBEKESİ EMİSYON FAKTÖRÜ BİLGİ FORMU	Doküman No	ETKB-EVÇED-FRM-039 Rev.02
		Revizyon / Yayın Tarihi	02.09.2022

Hesaplama Dönemi	Hesaplama Yayım Tarihi	Hesaplama Revizyon No
2020	20.09.2022	00

Amaç:
Yıllık olarak hesaplanan Türkiye ulusal elektrik şebekesi emisyon faktörünün bilgilendirilmesi.

Kapsam:
Bu bilgi formunda Faaliyet Temelli Marj (Operating Margin-OM), Gelişim Temelli Marj (Build Margin-BM) ve Birleşik Marj (Combined Margin-CM) Emisyon Faktörlerinin ilgili yıl için hesaplanan değerleri yer almaktadır.

Hesaplama Metodolojisi:
Hükümetler arası İklim Değişikliği Paneli (IPCC)'nin Temiz Kalkınma Mekanizması Tool 07-V07.0 yöntemi kullanılmıştır.

Veri Seti:
1. TEİAŞ Türkiye elektrik üretim-tüketim ve kayıpları istatistikleri,
2. Türkiye'nin Ulusal Sera Gazı Envanter Raporu kapsamında hazırlanan Ortak Raporlama Formatı- Common Reporting Format (CRF) tablolarında yer alan elektrik üretimi (1.A.1.a.i) emisyon değerleri,
3. TEİAŞ Yük Tevzi Daire Başkanlığı'ndan elektrik üretim santrallerinin kronolojik sıra ile devreye alınma tarihleri, santral isimleri, yakıt tipleri, kurulu güç değerleri, hesaplanan yıl için elektrik üretim miktarları,
4. Gold Standard (GS), Verified Carbon Standard (VCS) ve Global Carbon Council (GCC) web adreslerinden gönüllü karbon azaltım sertifikası sahiplik durumu ve
5. Temiz Kalkınma Mekanizması-Clean Development Mechanism (CDM) Tool 09-V03.0'den santral verim rakamları kullanılmıştır.

Elektrik Şebekesi Emisyon Faktörü:

Faktör Türü	Yılı	Değeri (tCO_2/MWh)
Faaliyet temelli marj emisyon faktörü	**2020**	**0,7424**
Gelişim temelli marj emisyon faktörü	**2020**	**0,3680**

1

T.C. ENERJİ VE TABİİ KAYNAKLAR BAKANLIĞI	TÜRKİYE ULUSAL ELEKTRİK ŞEBEKESİ EMİSYON FAKTÖRÜ BİLGİ FORMU	Doküman No	ETKB-EVÇED-FRM-039 Rev.02
		Revizyon / Yayın Tarihi	02.09.2022

Faaliyet temelli marj ve gelişim temelli marj emisyon faktörü rakamları birleşik marj emisyon faktörünün hesaplanmasında kullanılmaktadır.

Hesaplanan faaliyet temelli marj ve gelişim temelli marj kullanılarak **güneş ve rüzgâr kaynaklı elektrik üretim santralleri ve diğer yenilenebilir enerji santralleri için iki farklı birleşik marj emisyon faktörü** hesaplanmıştır.

Faktör Türü	Yılı	Değeri (tCO_2/MWh)
Birleşik marj emisyon faktörü (güneş ve rüzgâr)	**2020**	**0,6488**
Birleşik marj emisyon faktörü (diğer yenilenebilir)	**2020**	**0,5552**

Yenilenebilir enerji kaynaklı elektrik üretimi ile sağlanacak sera gazı salım **(SGS) azaltım hesaplamalarında** kaynak türüne göre hesaplanan **birleşik marj emisyon faktörleri** kullanılabilecektir.

EVÇED, Çevre ve İklim Daire Başkanlığı **Telefon:** +90 312 546 56 25/26
e-posta: cevre.iklim@enerji.gov.tr

Yasal Bilgilendirme:

Yayımlanan bilgilerin güncelliği, doğruluğu, güvenliği ve tamlığı konusunda tüm titiz çalışmalara rağmen olabilecek hatalardan Enerji Verimliliği ve Çevre Dairesi (EVÇED) hiçbir taahhüt altına girmez ve sorumluluk kabul etmez. Bilgilerin yanlış kullanılması veya yorumlanması sonucunda doğrudan veya dolaylı bir zarar oluşması halinde EVÇED'e hiçbir borç, sorumluluk veya mükellefiyet yüklenemez. EVÇED bilgilendirmede yer alan bilgileri önceden bildirimde bulunmaksızın değiştirebilir veya kullanım dışı bırakabilir.

DOCUMENT HISTORY

Version	Date	Comment
V 4.0	27/09/2022	▪ Revised version released on approval by Steering Committee as per GCC Program Process. ▪ Revised version contains following changes: ○ Introduced A3 type projects A2 project sub-types. ○ Included revised Declaration by the 'Authorized Project Owner and focal point' on GCC requirements. ○ Included modified format for E+/S+/ SDG assessment. ○ Revised instructions for filling in the PSF. ○ Editorial changes to the document.
V 3.2	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 3.1	17/08/2020	▪ Editorial revisions made ○ Revised Table in section B.7.2 on Monitoring-program of risk management actions ○ Revised Table in section E.1 on Environmental Safeguards ○ Revised Table in section E.1 on Social Safeguards ○ Revised Table in section F on United Nations Sustainable Development Goals (SDG)
V 3.0	05/07/2020	▪ Revised version released on approval by Steering Committee as per GCC Program Process. ▪ Revised version contains following changes: ○ Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC). ○ Considered and addressed comments raised by Steering Committee: ➢ during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and ➢ electronic consultations EC01-Round 01 (15.09.2019 – 25.09.2019), EC01-Round 02 (27.03.2020 – 27.06.2020). ○ Feedback from Technical Advisory Board (TAB) of ICAO on GCC submission for approval under CORSIA[105];

[105]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

V 2.0	25/06/2019	▪ Revised version released for approval by the GCC Steering Committee. ▪ Revised version includes additional details and instructions on the information to be provided, consequent to the latest developments world-wide (e.g., CORSIA EUC).
V 1.0	01/11/2016	Initial version released under the GCC Program Version 1

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