Gold Standard for the Global Goals

TEMPLATE

KEY PROJECT INFORMATION & PROJECT DESIGN DOCUMENT (PDD)

PUBLICATION DATE **14.10.2020**

VERSION **v. 1.2**

RELATED SUPPORT

- **TEMPLATE GUIDE Key Project Information & Project Design Document v.1.2**

This document contains the following Sections

KEY PROJECT INFORMATION

GS ID of Project	917
Title of Project	CAKIRLAR RUN-OFF-RIVER HYDRO POWER PLANT
Time of First Submission Date	20~~11~~/05~~3~~/2021
Date of Design Certification	25/02/2015 CP Renewal Date: 20/07~~5~~/2021
Version number of the PDD	v6 For renewal crediting period: v5~~4~~
Completion date of version	18~~31~~/01~~10~~/2023~~1~~
Project Developer	ANADOLU ELEKTRİK ÜRETİM TİCARET SANAYİ A.Ş. (Private Entity)
Project Representative	SEKANS DANIŞMANLIK (Private Entity)
Project Participants and any communities involved	-
Host Country (ies)	TURKEY
Activity Requirements applied	☐ Community Services Activities ☒ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A
Scale of the project activity	☐ Micro scale ☐ Small Scale ☒ Large Scale
Other Requirements applied	-
Methodology (ies) applied and version number	ACM0002 version 20.0.0
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A
Project Cycle:	

	☐ Regular ☒ Retroactive

Table 1 – Estimated Sustainable Development Contributions

Sustainable Development Goals Targeted	SDG Impact (defined in B.6.)	Estimated Annual Average	Units or Products
13 Climate Action	Emission Reductions	27,610	VERs
SDG 7 Ensure access to affordable, reliable, sustainable and modern energy for all	MWh of renewable energy generated	59,928	MWh
SGD 8 Decent Work and Economic Growth	Employee	21	Number of employees

SECTION A. DESCRIPTION OF PROJECT

A.1 Purpose and general description of project

ANADOLU ELEKTRİK ÜRETİM TİCARET SANAYİ A.Ş. has installed a run-off river hydropower plant near Murgul creek in Artvin. The project built the installation of a 17.0 MW run off-river hydropower electricity plant (HEPP) near Egrisu, Soval, Kopurten and Suluduz brooks in Artvin, Turkey. The project activity was started at May 1st, 2007. The construction was finished by August 2009. The purpose of the project is to generate electricity and to feed it into the public grid. Due to its significant contribution in diminishing carbon emissions and protecting the climate as well as due to some significant additionality issues discussed further below, this project fulfilled the requirements of the Gold Standard rigorously. The project was not rejected by another GHG program before. In addition, the project highly supports the sustainable economic development in the region.

The project –produces positive environmental and economic benefits through the following aspects:

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

The project was operational on 13/08/2009 and registered on 25/02/2015 under the Gold Standard Registry with the registration number GS917.

Implementation of the project consisted of construction of the following main items:

- Four weirs, where water from the river is diverted into conveyance pipes;
- Total length of the conveyance pipes is 8,888 m.
- Powerhouse with Pelton type turbines;

In the powerhouse, there are two generators attached to the facility. Generators have power factor of 0.8309 d/d, a frequency of 50 Hz The efficiency of the turbines is 85%.

The construction finished by August 2009 when the plant was commenced, the entire net electricity production is - 59,928 GWh per year. The amount of emission reductions due to the realization of the proposed clean energy project is 27,610 tons CO_2 per annum.

For drinking water supply, irrigation or electricity generation purposes, water can be obtained from appropriate parts of rivers by an intake structure. Characteristics of river basins, hydrologic factors of regions and specifications and amount of sediment in rivers can affect type of water intake structure. The most commonly used water

intake structure is "direct water intake". In this structure, tyrol type regulators are used.

The project has four diversion weirs: Kunsu, Eğrisu, Suludüz and Köpürten. As indicated above type of these regulators is tyrol type regulator and the project does not include water reservoirs or dams. These type hydroelectric power plants do not have regulation capacity or they have only daily regulation capacity. Therefore, the power density of project has not been calculated.

Please see the chronological key events as below:

Date	**Events**
March 2006	The first Feasibility Report
November 2006	Revised Feasibility Report (approved by DSİ)
January 08th, 2007	EIA not Required Letter' (by the Ministry of Environment and Forestry)
February 13th, 2007	Water Usage Agreement
March 15th, 2007	License granted by EMRA
April 30rd, 2007	Board's Decision on application to carbon finance
May 01st, 2007	Agreement with the contractor company (project activity start date)
May 2007	Construction Start date
August 31st, 2007	Equipment Supply Agreement
November 2007	Agreement with PDD Consultant
December 25th, 2007	Loan Agreement
September 2008	VER validation process start date for VCS
August 01st, 2009	Commissioning date of the power plant
August 14th, 2009	Completion of VCS validation process (VCS validation report date)

October 10th, 2010	MoU signed between the GS and Anadolu Elektik Üretim A.Ş.
May 25th, 2011-July 25th, 2010	Stakeholder Feedback Round Process

A.1.1. Eligibility of the project under Gold Standard

Requirements document as below.

- The project applies methodology ACM0002 Version 20.0, which is an approved methodology under Gold Standard.
- The project type is hydro and an eligible project type as per the 1.1.Eligible Project Types & Scope under Renewable Energy Activity Requirements.

  (a) Project shall generate and deliver energy services (e.g. mechanical work/electricity/heat) from non-fossil and renewable energy sources.

  (b) Project shall comprise of renewable energy generation units, such as photovoltaic, tidal/wave, wind, hydro, geothermal, waste to energy and renewable biomass.
- The project activity results in displacement of electricity from thermal power stations while contributing to sustainable development of Turkey. Hence, the project contributes to the Gold Standard Vision and Mission.
- Hydro is an approved project type.

General Eligibility Criteria

- Type of project: Hydro
- Location of project: The project is located in Artvin province, Turkey. Therefore, the project is eligible.
- Project Area, Boundary and Scale: The registered project activity is 17.0 MWe as large scale.

The project activity has completed its transition to GS4GG and meet additional requirements:

- Principle 1- Contribution to Climate Security & Sustainable Development as contributing to SDG 7, 8 and 13.
- Principle 2 – Safeguarding Principles (Please see Appendix 1)
- Principle 3 – Stakeholder Inclusivity as Stakeholder Consultation Processes were already implemented and grievance mechanism is already in place.
- Principle 4 – Demonstration of Real Outcomes as the Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period", Version 03.0.1 has already been applied.
- Principle 5 – Financial Additionality & Ongoing Financial Need
  (Please see section B.5.2)

Technology Specific Eligibility Criteria

1.1. Hydropower project activity

Assessment Questions

a.Are there any competing uses of water resources at the project location, of what nature and how severe are they? Convincing evidence must be provided that the hydropower project does not divert water from other current users or if it does, these users are in agreement with the shift of use.

- There is no competing use of water resources at the project location.

b. What is the minimum ecological flow that shall be complied with at any point in time, accounting for the specificities of local ecosystems and seasonality?

What quality assurance and control procedures shall be put in place for appropriate continuous monitoring over the crediting period?

- The minimum ecological flow was monitored during the 1st CP and it's monitored under 2nd CP.

c. Is the groundwater level seriously affected by the hydropower project?

What quality assurance and control procedures shall be put in place for appropriate continuous monitoring over the crediting period?

- The groundwater level is not affected by the project. Environmental Due Diligence Study was conducted and proves this. Additionally, ecological flow is monitored.

d. Is the design of the fish passages and screens (water intake structure) installed in line with internationally recognized guidance.

Are these measures indeed effective over the crediting period, and if not, what shall be done to improve the situation?

Since the stream bed between regulators/weirs and the HEPP is long enough, there hasn't been any need to build a fish passage as it's reported by the experts in Environmental Due Diligence Report.

e. What sediment management plan shall be considered?

Is it indeed effective over the crediting period, and if not, how shall it be improved?

-Because of the high elevation difference and steep slopes of the rivers in the project area, sediment accumulation below dams does not occur.

f. What mitigation measures shall be put in place to prevent soil erosion?

Are they effective and if not, what complementary action shall be taken?

- The project activity has developed activities for prevention of soil erosion. The project owner is committed to minimize deforestation and commit to reforestation. The Project Developer replaced the trees cut during the construction of the Project. Riverbed and Riverside have been protected. All forestation payments and proofs of forestation activities have been provided during the 1st crediting period

A.1.2. Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project

ANADOLU ELEKTRİK ÜRETİM TİCARET SANAYİ A.Ş.

A.2 Location of project

Cakirlar HEPP is located in the Black Sea Region of Turkey. The project is in Eastern Black Sea basin, within the province of Artvin. The project is on the Murgul creek. The geographical location of the project on Turkey map is 41º 08´ 21´´ - 41º 09´ 23´´ North, and 41º 31´ 05´´ - 41º 33´ 54´´ East[1].

[1] Please see the registered PDD.

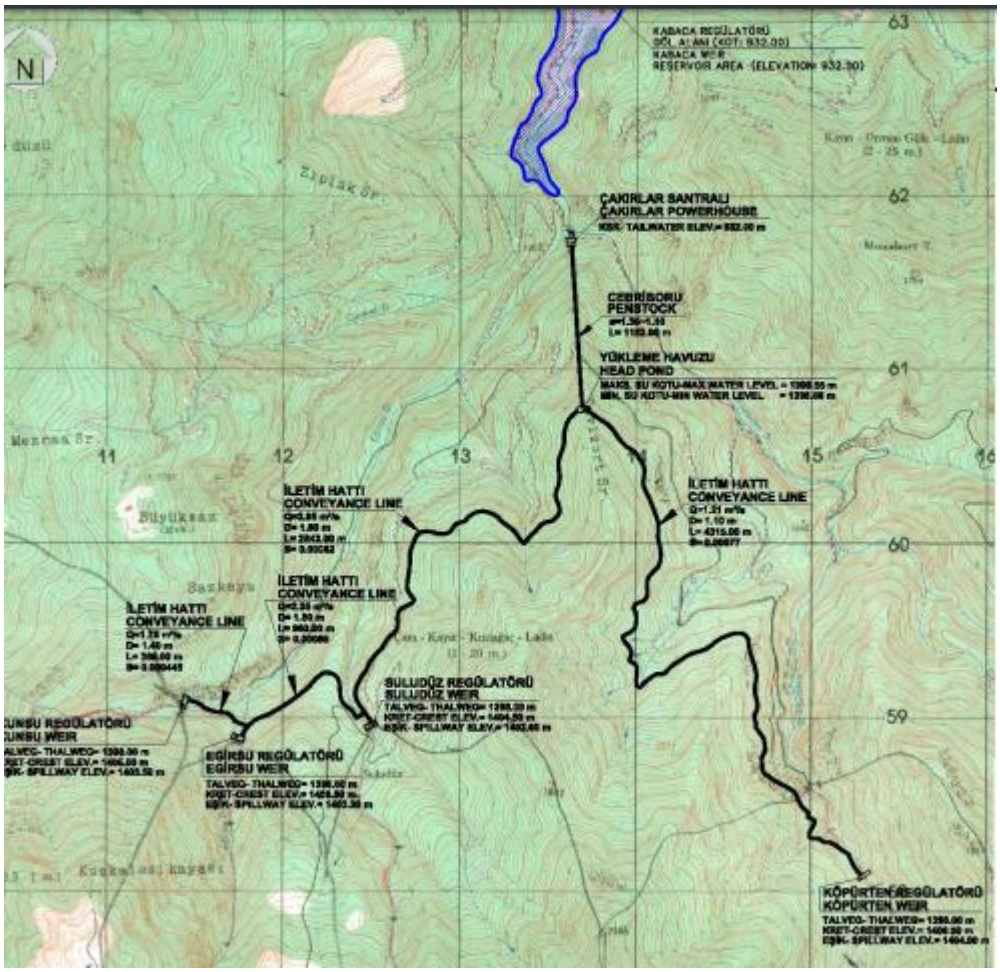

Figure 1. Site Layout

Figure 2. Project Location on Turkey Map

A.3 Technologies and/or measures

Cakirlar HEPP project entailed the construction and operation of a 17.00 MW hydroelectric power plant, the construction of weirs, conveyance pipes and powerhouse. The project consists of hydro power plant with two turbines of 8.519 MW. The first-hand turbines which were used in the project were supplied from Vatech Bouvier Hydro SAS, France. The turbines were Pelton type with vertical axis. The net electricity production (delivered to the grid after losses and consumption in the plant) from the plant is estimated to be 59,928[2] GWh per annum.

A.4 Scale of the project

Large scale

A.5 Funding sources of project

Private funding and funding from bank. The project activity does not have any public funding or Official Development Assistance (ODA) funding

SECTION B. APPLICATION OF APPROVED GOLD STANDARD METHODOLOGY (IES) AND/OR DEMONSTRATION OF SDG CONTRIBUTIONS

B.1. Reference of approved methodology (ies)

Project type: Type I – Renewable Energy Projects
Category: D – Electricity Generation for a System

Methodology: ACM0002: Grid-connected electricity generation from renewable sources-Version 20.0

[2] Please see the registered PDD.

Sectoral Scope: 01 Energy industries (renewable - / non-renewable sources)

ACM0002 refers to:

- Tool to calculate the emission factor for an electricity system, Version 07.0
- Tool for the demonstration and assessment of additionality, Version 07.0.0

B.2. Applicability of methodology (ies)

The methodology ACM0002: Grid-connected electricity generation from renewable sources is applicable to grid-connected renewable power generation project activities that a) install a Greenfield power plant; b) involve a capacity addition to (an) existing plant(s); c) involve a retrofit of (an) existing operating plants/units; d) involve a rehabilitation of (an) existing plant(s)/unit(s); or e) involve a replacement of (an) existing plant(s)/unit(s).

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

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

Table 1- Applicability of ACM0002

Applicability Criteria	**Justification**
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);	The project is installation of a new power plant at a site where there was no renewable energy power plant operating prior to the

(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)	implementation of the project activity.
In case of hydro power plants, one of the following conditions shall apply: (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (3), is greater than 4 W/m2; or (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (3), is greater than 4 W/m2.	The project is not a hydro power plant that results in a new reservoir or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m2.
If the new unit has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	The project has only renewable component with an installed capacity equal to 17.0 MW.
Combined heat and power (co-generation) systems are not eligible under this category.	The project is not a combined heat and power system.
In the case of project activities that involve the capacity addition of renewable energy generation	The project is not an additional to an existing

units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units	renewable power generation facility.
In the case of retrofit, rehabilitation or replacement, to qualify as a small-scale project, the total output of the retrofitted, rehabilitated or replacement power plant/unit shall not exceed the limit of 15 MW.	The project is not a retrofit, rehabilitation or replacement of an existing facility and is a newly built hydro power plant.
In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. If the recovered methane is used for electricity generation for supply to a grid then the baseline for the electricity component shall be in accordance with procedure prescribed under this methodology. If the recovered methane is used for heat generation or cogeneration other applicable Type-I methodologies such as "AMS-I.C.: Thermal energy production with or without electricity" shall be explored.	The project is not a landfill gas, waste gas, wastewater treatment and agro-industries project.

B.3. Project boundary

The project boundary encompasses the physical, geographical site of the renewable generation source. The wind power plant with all installation is the project boundary.

As the electricity generated by the project displaces the electricity generated by national grid, the baseline boundary is defined as the national grid. This includes the project site and all power plants connected physically to the national grid and excludes the off-grid power plants. Please see the diagram below:

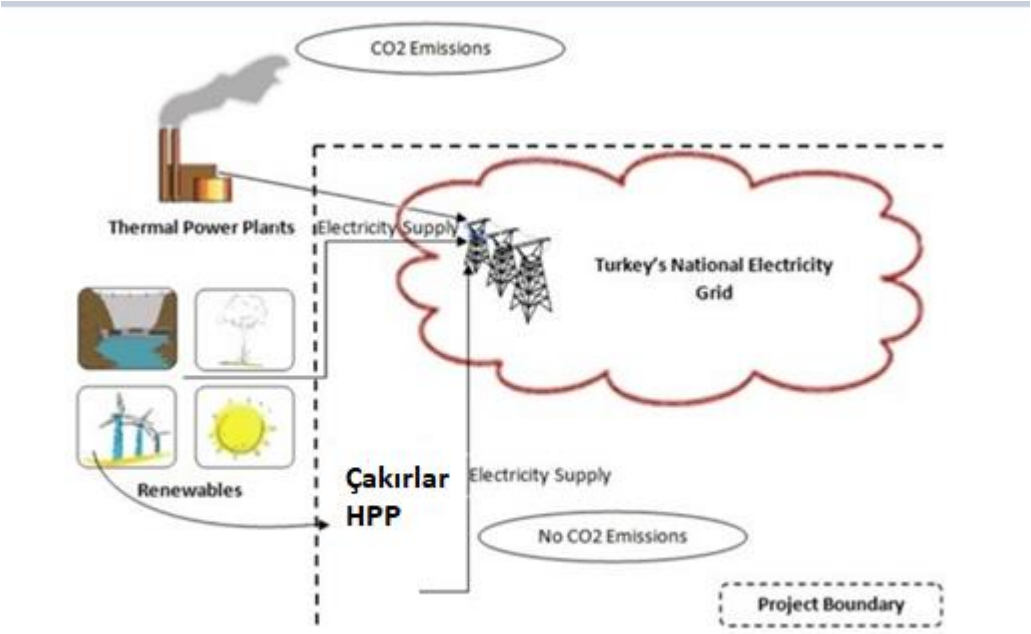

Figure 3.Project Boundary

Source		GHGs	Included ?	Justification/Explanation
Baseline scenario	Source 1	CO2	Yes	Main source. The dominant emissions from power plants are in the form of CO2, therefore CO2 emissions from fossil fuel fired power plants connected to the grid will be accounted for in baseline calculations.
		CH4	No	Minor

		N2O	No	Minor
Project scenario	Source 1	CO2	No	Not applicable

B.4. Establishment and description of baseline scenario

According to ACM0002 (Version 20), if the project activity is the installation of a new grid-connected renewable power plant, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources. In line with the tool, "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period", the development of the Turkish energy mix and thus the baseline scenario have been reanalyzed as it may been seen below.

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

The current baseline complies with all relevant mandatory national and/or sectoral policies which have come into effect after the submission of the project activity for validation or the submission of the previous request for renewal of the crediting period and are applicable at the time of requesting renewal of the crediting period.

Step 1.2: Assess the impact of circumstances

As it may be seen in Figure 3, the development of Turkey's installed capacity by primary energy resources between the years, 2009-2019, the electricity generation has mainly been done by fossil fuel fired power plants in Turkey. Total Installed electricity generation capacity in Turkey has reached 91,267 megawatts (MW) as of 2019. As

having a share of 31.23%, wind power projects have an installed capacity of 28,503 MW.

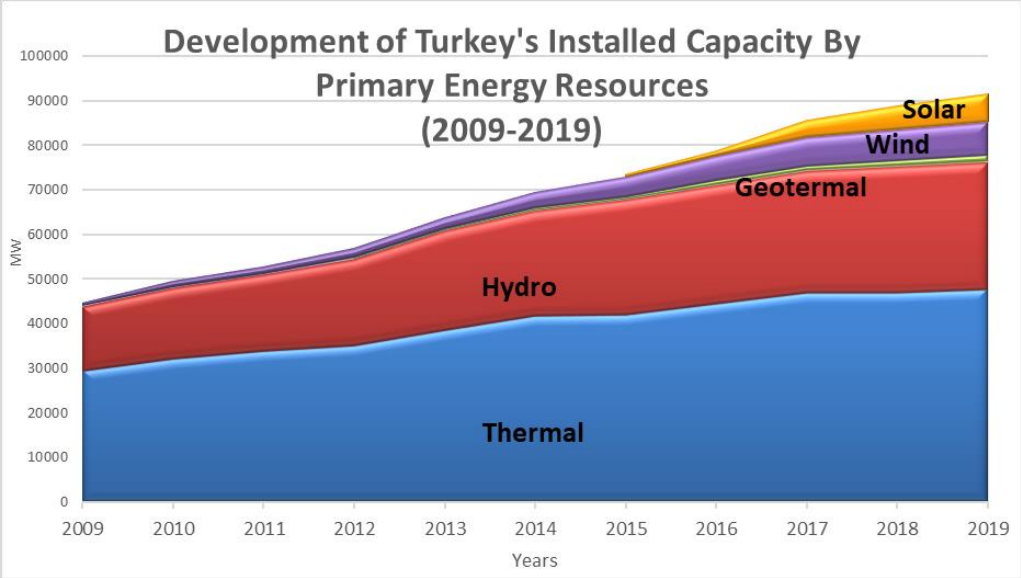

Figure 4. The development of Turkey's installed capacity by primary energy resources, 2009-2019

In reference to 5-year capacity projection[3], it is clear that fossil fuels will remain the main sources for electricity generation through until 2024. Fossil fuels will continue to dominate the market. Hydro will account for 15% of the mix whereas all non-hydro renewable combined (geothermal/ biomass/ solar/ wind) will only account for 11% of all electricity generation capacity. This projection is consistent with continuing fossil fuel dependent characteristics of Turkish electricity sector.

[3] https://webapi.teias.gov.tr/file/abeac87d-3abc-4532-9cf4-d6f3a9d34c17?download

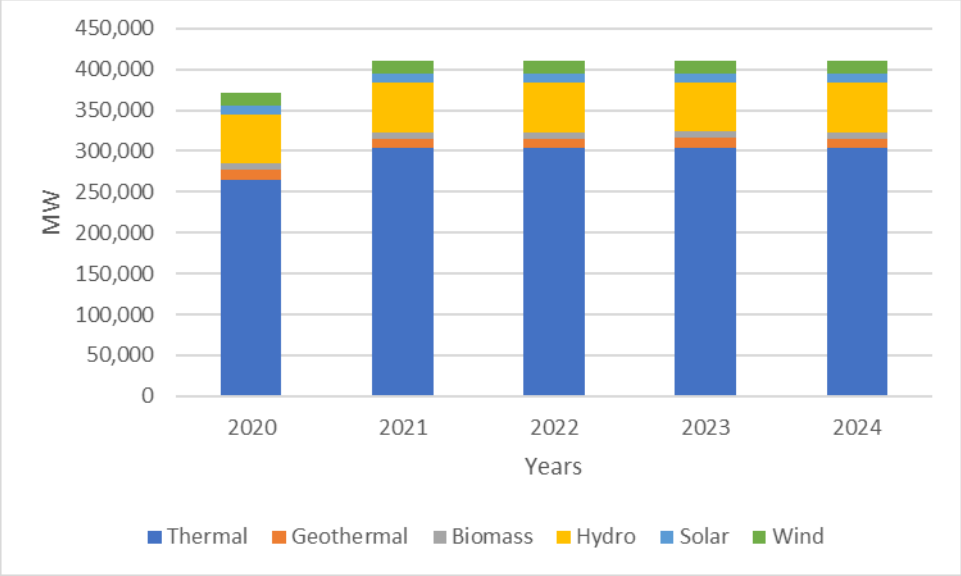

Figure 5. 5-year capacity projection

The current baseline has been updated with the latest data and projections available by the official bodies. It's clear that the baseline scenario is still valid for the second crediting period in accordance with the tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period".

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

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

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

Sections B6 and B7 have been updated.

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

Step 2.1: Update the current baseline

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

Step 2.2: Update the data and parameters

Sections B6 and B7 have been updated.

B.5. Demonstration of additionality

For the demonstration of additionality, "Tool to for the Demonstration and Assessment of Additionality Version 7.0.0" has been applied to the project. The additionality has been evaluated in first validation and that the information is repeated in this PDD and no new additionality assessment is done.

Step 2: Investment Analysis

: In line with the 'Tool for the Demonstration and Assessment of Additionality', version 07.0.0, from EB65**,** Benchmark Analysis had been selected as the analysis method and the Equity IRR is selected as the financial indicator for the demonstration of the additionality of the project.

IRR Calculation of the Project

. The assumptions used for this analysis are outlined as follows:

- A project lifetime of 20 years was used in the Feasibility Study for the project and is used in the IRR calculation for the proposed project. However, the project owner would hope that thelifetime of the project will in practice be higher than 20 years, possibly up to 30 years, but this would require additional significant investment after 20 years to replace and refurbish the key components of the plant.
- The financial analysis wasperformed over the 20 - year period from 2009 to 2028, this, therefore includes the investments made by the project owner between 2007 and 2009 and the operational costs along the lifetime of the project.
- The Internal Rate of Return (IRR) of the project cash flow was calculated.
- Annual operational cost of € 865,710 was assumed along the project lifetime.
- A tax rate of 20% wasapplied to the project in line with Turkish tax laws.
- The depreciation period of machinery and equipment was assumed as 20 years.
- For labour expenses, annual cost of labour in the project's region is estimated for each specificjob descriptions. Actually, this is still on the on the conservative side as far as the Turkey averages are concerned. According to Turkish Employer Unions Confederation, the average cost of employee in Turkey is YTL 3,183 per month (around Euro 1,768) as of

January 2008 (http://www.tisk.org.tr/gostergeler.asp?id=524). However, the average cost of labour per month assumption in the IRR calculation was Euro 1,308.

- The annual power generation figure is 59,928,000 kWh.
- The power purchase price for the project was assumed to be 5 Euro cent per kWh which is the minimum purchase guarantee offered by the State as an incentive to the investment (Please refer to Turkish Renewable Energy Law No: 5346 Article 6.c.)
- The revenues from GS VERs are excluded from scenario 1, and included in scenario 2. The volume of GS VERs generated by the project was calculated by multiplying the annual electricity output of the project by the emission factor. For sensitivity analysis, the revenues related to the sale of the GS VERs wereapplied by multiplying the volume of GS VERs by the €5, €6 and €7 price. The GS VERs were expected to be generated and sold between 2009 and 2019 for ten years.

The basic parameters used for Financial Analysis may be seen as below:

Table 2- Basic Parameters for Financial Analysis

Parameter	Value
Installed capacity (MWe)	17.0
Grid connected output (MWh)	59,928
Capital investment (TL)	35,561,765
Exchange rate (€)	1.8964
Capital investment (Euro)	18,752,248
Income tax rate (%)	20.0
Expected tariff (Euro/kWh)	0,05 €/kWh
Expected VER price (Euro/tCO2e)	5-7
General Production Expenses(Euro/year)	865,710
Project lifetime (years)	20.0
Benchmark rate (%)	15.65

Table 3 includes the results of the financial analysis for the Project, at the time that the decision to go ahead was made, both with and without VER financing.

Table 3- Summary of Project investment analysis without and with VER financing

	Without VER	@ 5 Euro/ton VER	@ 6 US$/ton VER	@ 7 US$/ton VER

Equity IRR (%)	14.88%	16.07%	16.32%	16.57%

Table 3 highlights the project IRR with and without carbon revenues. Without the additional income to the project developer resulting from VER sales, the Equity IRR is 14,88%, which is lower than the financial benchmark. Thus, the proposed project is not financially attractive.

Taking VER revenues into consideration, the Equity IRR increases to 16.07% (with 5 Euro/ton VER price).

Common Practice Analysis

The common practice analysis was done first validation and that the information is not repeated in this PDD and no new common practice analysis has been done.

Conclusion:

Ass the project activity satisfied all the criteria of "Tool for the demonstration and assessment of additionality". Therefore, the project is still additional.

Project Timeline:

Please see the milestones of the Project Activity as below:

Table 4-Project Timeline

Events and Actions	Date
The first Feasibility Report	March 2006
Revised Feasibility Report (approved by DSİ)	November 2006

'EIA not Required Letter' (by the Ministry of Environment and Forestry)	January 08th, 2007
Water Usage Agreement	February 13th, 2007
License granted by EMRA	March 15th, 2007
Board's Decision on application to carbon finance	April 30rd, 2007
Agreement with the contractor company (project activity start date)	May 01st, 2007
Construction Start date	May 2007
Equipment Supply Agreement	August 31st, 2007
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Loan Agreement	December 25th, 2007
VER validation process start date for VCS	September 2008
Commissioning date of the power plant	August 01st, 2009
Completion of VCS validation process (VCS validation report date)	August 14th, 2009
MoU signed between the GS and Anadolu Elektik Üretim A.Ş	October 10th, 2010
Stakeholder Feedback Round Process	May 25th, 2011-July 25th, 2010
Environmental Due Diligence Report prepared by TÇT	March 04th, 2013
GS Registration Date	February 25th,2015
Commissioning of the Project	August 13th, 2009
1st Monitoring Period	01/03/2013 – 31/05/2016

B.5.1 Prior Consideration

N/A

B.5.2 Ongoing Financial Need

Previously issued VERs have given support to the ongoing financial sustainability of the project. The Project Owner had difficulties to commercialize the VERs and they could hardly finish the sale of very old vintages in 2020. Both low demand for VERs and a sharp decrease in prices caused Project Owner not to benefit from carbon revenue as expected. However, the sales prices were so lower than the expected ones at the investment time, sold VERs provided contribution of the ongoing financial sustainability of the project. VER revenue from the project is mostly used for the operation costs of the project activity to be covered

Please see Figure 6 for the VER income rate against the commercial income:

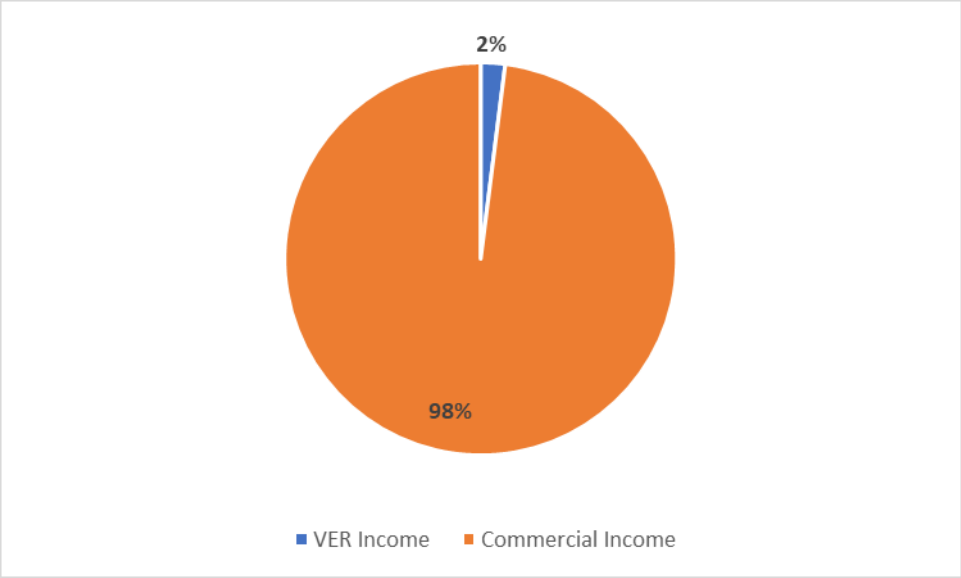

Figure 6. Rate of VER Income vs Commercial Income

B.6. Sustainable Development Goals (SDG) outcomes

Relevant Target/Indicator for each of the three SDGs

Sustainable Development Goals Targeted	Most relevant SDG Target	SDG Impact Indicator (Proposed or SDG Indicator)
13 Climate Action	13.3.Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	Emission Reductions
7 Affordable and Clean Energy	7.2.By 2030, increase substantially the share of renewable energy in the global energy mix	MWh of renewable energy generated
8 Decent Work and Economic Growth	8.5. By 2030, achieve full and productive employment and decent work for all women and men	Employees

	8.8.Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

B.6.1 Explanation of methodological choices/approaches for estimating the SDG Impact

- **Goal 7 Affordable and Clean Energy**

The project produces electricity from renewable energy sources using hydro as the power source and to contribute to Turkey's growing electricity demand through a sustainable and low carbon technology. The project displaces the same amount of electricity generated by the grid dominated with fossil firedpower plants.
The project is expected to generate 59,928 MWh annually. The project contributes to the following target 7.2. and following indicator 7.2.1.

- **Goal 8 Decent Work and Economic Growth**

During construction and operational period, the project has created employment opportunities for the local community. The project contributes the economic development of the region by providing sustainable energy resources.

Considering the operational phase, 21 personnel are working permanently. The target will be monitored by the number of full-time employees with the SGK records during the verification process. Due to job requirements and demographics of the project area, employment of woman and persons with disabilities has not been possible, yet.

The positions at the hydro projects require skilled workers, which will be achieved by adequate training. Attendance records or training certificates will be provided during the verification process. The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe work environments.

The project contributes to the following targets 8.5.; 8.8.and following indicators 8.5.2.; 8.8.1

- **Goal 13 Climate Action**

The annual emission reduction estimated by the project is 27,610 tonnes of CO2eq, approximately. While this amount of emissions are mitigated, technology transfer is also realized as benefitting from hydro energy.

The project contributes to improve the environmental situation in the region and in the country as avoiding fossil fuel-based electricity will enhance the air quality and help to reduce the adverse effects on the climate. Through renewable technologies and hydro-based electricity sustainable and climate friendly development is promoted.
The project contributes to the following target 13.3. and following indicator 13.3.2.

For the calculation of the emission reductions of the project activity, "Tool to calculate the emission factor of an electricity system" version 07.0.0. is taken into consideration.

B.6.2 Data and parameters fixed ex ante

SDG13

Data/parameter	EFgrid,CM,y
Unit	tCO2/MWh
Description	Emission factor of the Turkish grid determined ex-ante. It's been published by the Ministry of Energy for 2018.
Source of data	Ministry of Energy. Please see: https://enerjiapi.enerji.gov.tr/Media/Dizin/ETKB/Duyurular//0c6b62ea-bf2f-4fea-b9b3-28bc6f48ddf2_Bilgi_Formu_-_Web_Sitesi.pdf

Value(s) applied	0.4607
Choice of data or Measurement methods and procedures	Official data
Purpose of data	Calculation of the baseline emissions-to demonstrate contribution to SDG Target 13.3.: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
Additional comment	-

B.6.3 Ex ante estimation of SDG Impact

Calculation of the Operating Margin Emission Factor

It's been published as 0,6993 tCO2/MWh by the Ministry of Energy[4].

Calculation of the Build Margin Emission Factor

It's been published as 0,3812 tCO2/MWh by the Ministry of Energy[5].

Calculating of the Combined Margin Emission Factor

It's been published as 0,4607 tCO2/MWh by the Ministry of Energy[6].

[4] Please see https://enerjiapi.enerji.gov.tr/Media/Dizin/ETKB/Duyurular//0c6b62ea-bf2f-4fea-b9b3-28bc6f48ddf2_Bilgi_Formu_-_Web_Sitesi.pdf

[5] Please see https://enerjiapi.enerji.gov.tr/Media/Dizin/ETKB/Duyurular//0c6b62ea-bf2f-4fea-b9b3-28bc6f48ddf2_Bilgi_Formu_-_Web_Sitesi.pdf

[6] Please see https://enerjiapi.enerji.gov.tr/Media/Dizin/ETKB/Duyurular//0c6b62ea-bf2f-4fea-b9b3-28bc6f48ddf2_Bilgi_Formu_-_Web_Sitesi.pdf

Baseline Emissions

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

B.6.4 Summary of ex ante estimates of each SDG Impact

Net Benefit to SDG 7

Year	Baseline estimate	Project estimate	Net benefit
01.03.2020-31.12.2020	0	50,077	50,077
2021	0	59,928	59,928
2022	0	59,928	59,928
2023	0	59,928	59,928
2024	0	59,928	59,928
2025	0	59,928	59,928
2026	0	59,928	59,928
01.01.2027-28.02.2027	0	9,851	9,851
Total	**0**	419,496	**419,496**
Total number of crediting years		**7**	
Annual average over the crediting period	0	**59,9280**	59,928

Net Benefit to SDG 13

Year	Baseline estimate	Project estimate	Net benefit
01.03.2020-31.12.2020	23,071	0	23,071
2021	27,610	0	27,610
2022	27,610	0	27,610
2023	27,610	0	27,610
2024	27,610	0	27,610
2025	27,610	0	27,610
2026	27,610	0	27,610
01.01.2027-28.02.2027	4,539	0	4,539
Total	**193,270**	**0**	**193,270**
Total number of crediting years		**7**	
Annual average over the crediting period	**27,610**	**0**	**27,610**

SDG8

The baseline value for number of employment and training is 0. In the absence of the project activity, there wouldn't be employment of new staff. The positions at the plant require skilled workers, which is achieved by adequate training. The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments. Project value is 21.

B.7. Monitoring plan

B.7.1 Data and parameters to be monitored

SDG 13

Data/parameter	ERy
Unit	tCO2/y
Description	Emission reductions by the project activity in year y (t CO2/yr) In accordance with ACM0002, baseline emissions include CO2from electricity generation in powerplants that are displaced due to the project activity. And baseline emissions correspond to emission reductions and are calculated as the net electricity generated by the project activity, multiplied with combined margin CO2 emission factor for grid connected powergeneration in year y.
Source of data	Both measured and calculated Emission reductions will be calculated as considering the EPIAS records for the net electricity generated and the emission factor for the grid, 0.4607 tCO2/MWh, published by the Ministry of Energy
Value(s) applied	27,610[7]
Measurement methods and procedures	Please check sections B.6.3 and B.7.3 for more detailed description of the monitoring plan.
Monitoring frequency	Yearly
QA/QC procedures	- Please check section B.7.3 for the monitoring plan
Purpose of data	Calculation of combined margin CO2 emission factor and thus the baseline emissions-to demonstrate contribution to SDG Target 13.3.: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

[7] This value could change depending on the electricity generated.

Additional comment	

SDG 7

Data/parameter	EGpj,grid,y
Unit	MWh/yr
Description	Quantity of electricity generation supplied by the project plant/unit to the grid in year y
Source of data	EPIAS, formerly PMUM (Market Financial Settlement Center) records (Meter reading records-OSF forms for cross-checking of main meters)
Value(s) applied	The annual electricity fed to the grid is estimated as 59,928 MWh
Measurement methods and procedures	Please check sections B.6.3 and B.7.3 for more detailed description of the monitoring plan.
Monitoring frequency	The net electricity is measured continuously by a power meter at the grid interface and recorded monthly. EPİAŞ records are the source of the exact electricity generation of the project and the imports from the grid. The quantity of net electricity delivered to the grid is cross checked with the meter reading records (OSF forms-OSOS) which are provided to the company by TEİAŞ.

	Net electricity generation supplied by the project plant to the grid [MWh]	=	Electricity supplied to the grid [MWh]	-	Electricity consumption from the grid [MWh]

Meters' information[8]:

Specifications	Main meter	Spare Meter
Manufacturer:	LANDIS	ELSTER
Serial No:	56753526	374149
Accuracy Class:	0.5S	0.5S

TEIAS is responsible for calibration and maintenance of the devices. The periodical calibration or maintenance is under the responsibility of TEIAS and has been fixed as once in 10 years. Since TEİAŞ meters are sealed by TEIAS, the project proponent cannot intervene with the devices. Main meter was changed on The calibration reports dated on 15/02/2021.[9] The installation date is 15/11/2021[10].

QA/QC procedures	Please check section B.7.3 for the monitoring plan
Purpose of data	Calculation of emission reductions SDG 7.2. By 2030, increase substantially the share of renewable energy in the global energy mix
Additional comment	-

[8] The First Index Protocol and the calibration protocol are available to the VVB.
[9] Calibration report.
[10] Meter change protcol

SDG 8

Data/parameter	a) Number of employment b) Quality of employment
Unit	a) Number b) N/A
Description	a) Number of people permanently working for the operation of the project b) Health & Safety trainings given to the personnel
Source of data	a) Social Security System (SGK) b) Certificates and Attendance Lists
Value(s) applied	a) 21 b) b) Health & Safety trainings
Measurement methods and procedures	a) Social Security System (SGK) records b) Attendance list and/or certificates
Monitoring frequency	Yearly
QA/QC procedures	SGK records of employees are provided during each monitoring period
Purpose of data	SDG 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
Additional comment	

~~**Safeguarding Principles**~~

~~Data/parameter~~	~~Safeguarding Principle 8.1.: Impact on Natural Water Patterns/Flows~~
~~Unit~~	~~N/A~~
~~Description~~	~~The project owner guarantees to comply with the 'minimum water rule" and the 150 lt/sec stated by the Environmental Due Diligence Report[11], whichever is the highest. Average water flow and the actual water flow between the regulator and the tail race (m3/sec) comparisons are based on records on all four tributary streams of Çakırlar River (Egrisu, Köpürten, Kunsu, Suludüz,).~~
~~Source of data~~	~~State Water Works (DSI) measurements~~
~~Value(s) applied~~	~~The minimum water released by the plant is above 150 lt/sec at all times during the monitoring period within statistical significance (The released water from the plant is both above the 150 lt/sec and "minimum 10 percent rule", an estimated rule by the Environmental Due Diligence study and 150 lt/sec)[12].~~
~~Measurement methods and procedures~~	~~Streamgage gauging stations of DSI~~
~~Monitoring frequency~~	~~Continuous Measurement~~
~~QA/QC procedures~~	~~N/A~~
~~Purpose of data~~	~~To monitor compliance to Safeguarding Principle 8.1~~
~~Additional comment~~	~~-~~

[11] ~~The official writing of DSI is available to the VVB.~~
[12] ~~The monitorings are avaialbe to the VVB.~~

~~Data/parameter~~	~~Safeguarding Principle 9.5 Hazardous and Non-hazardous Waste~~
~~Unit~~	~~N/A~~
~~Description~~	~~Hazardous wastes and waste oil~~
~~Source of data~~	~~Waste transfer records~~
~~Value(s) applied~~	~~No hazardous waste would be disposed to the environment.~~
~~Measurement methods and procedures~~	~~Hazardous wastes are handled appropriately in closed containers and transported by licensed transporters to the licensed processing and disposal facilities.~~
~~Monitoring frequency~~	~~Yearly~~
~~QA/QC procedures~~	~~N/A~~
~~Purpose of data~~	~~To monitor compliance to Safeguarding Principle 9.5~~
~~Additional comment~~	~~-~~

B.7.2 Sampling plan

N/A

B.7.3 Other elements of monitoring plan

The Project Owner will be responsible for the overall management of the monitoring procedures including recording, data collection and store. The consultant will calculate emission reductions based on these monitored data and prepare monitoring report.

According to the methodology applied, the electricity supplied to the national grid by the project and the electricity consumed by the project activity shall be monitored. The net electricity is the difference of the electricity supplied and consumed by the project and shall be taken into account for emission reduction calculations.

Two power meters are installed at the grid interface of the project. One is the main meter and the other is back-up meter of the main meter for cross-checking. Both meters are jointly inspected and sealed in order to be protected from interference by any of the parties.

The accuracy class for main power meters have been defined in the Communiqué for Power Meters as 0.2S class. The back-up meter has the same accuracy class of 0.2S. The calibration will be implemented in accordance with the related standard procedures (IEC-EN 62053-22 and 62053-23) by either Turkish Electricity Transmission Corporation (TEIAS) or the provider company in the name of TEIAS.

TEİAŞ is performing remote reading of the meters and monthly power meter readings are the basis for monitoring net electricity fed into the grid. EPİAŞ records will used as the source of net generated electricity value and meter reading forms or OSF forms issued by TEİAŞ will be used for the crosscheck.

The website of EPİAŞ (https://cas.epias.com.tr/cas/login) is accessible to Project owner with their unique user ID and password. Once accessed, the Project owner is able to call electricity generation and consumption reports of their own projects. The same reports are used by the Project owner for invoicing TEİAŞ. The electricity generation data is reported monthly basis.

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

SECTION C. DURATION AND CREDITING PERIOD

C.1. Duration of project

C.1.1 Start date of project

01.05.2007

C.1.2 Expected operational lifetime of project

20 years

C.2. Crediting period of project

C.2.1 Start date of crediting period

Start date of the first crediting period: 01/03/2013

End date of the first crediting period: 29/02/2020

Start date of the second crediting period: 01/03/2020

End date of the second crediting period: 28/02/2027 (both dates are included)

C.2.2 Total length of crediting period

Since this is second crediting period of the Project Activity,7 years, renewed once

SECTION D. SUMMARY OF SAFEGUARDING PRINCIPLES AND GENDER SENSITIVE ASSESSMENT

D.1 Safeguarding Principles that will be monitored

Data/parameter	Safeguarding Principle 8.1.: Impact on Natural Water Patterns/Flows

Unit	N/A
Description	The project owner guarantees to comply with the 'minimum water rule" and the 150 lt/sec stated by the Environmental Due Diligence Report[13], whichever is the highest. Average water flow and the actual water flow between the regulator and the tail race (m3/sec) comparisons are based on records on all four tributary streams of Çakırlar River (Egrisu, Köpürten, Kunsu, Suludüz,).
Source of data	State Water Works (DSI) measurements
Value(s) applied	The minimum water released by the plant is above 150 lt/sec at all times during the monitoring period within statistical significance (The released water from the plant is both above the 150 lt/sec and "minimum 10 percent rule", an estimated rule by the Environmental Due Diligence study and 150 lt/sec)[14].
Measurement methods and procedures	Streamgage gauging stations of DSI
Monitoring frequency	Continuous Measurement
QA/QC procedures	N/A
Purpose of data	To monitor compliance to Safeguarding Principle 8.1
Additional comment	-

[13] The official writing of DSI is available to the VVB.
[14] The monitorings are avaialbe to the VVB.

Data/parameter	Safeguarding Principle 8.2. : Erosion and/or Water Body Instability
Unit	N/A
Description	Soil erosion
Source of data	Visual inspection
Value(s) applied	The project activity has developed activities for prevention of soil erosion. The project owner is committed to minimize deforestation and commit to reforestation. The Project Developer replaced the trees cut during the construction of the Project. Riverbed and Riverside have been protected.
Measurement methods and procedures	N/A
Monitoring frequency	Once for each monitoring period
QA/QC procedures	N/A
Purpose of data	To monitor compliance to Safeguarding Principle 8.2
Additional comment	-

Data/parameter	Safeguarding Principle 9.5 Hazardous and Non-hazardous Waste
Unit	N/A
Description	Hazardous wastes and waste oil
Source of data	Waste transfer records

Value(s) applied	No hazardous waste would be disposed to the environment.
Measurement methods and procedures	Hazardous wastes are handled appropriately in closed containers and transported by licensed transporters to the licensed processing and disposal facilities.
Monitoring frequency	Yearly
QA/QC procedures	N/A
Purpose of data	To monitor compliance to Safeguarding Principle 9.5
Additional comment	-

~~A completed Safeguarding Principles Assessment is in Appendix 1, ongoing monitoring is summarised below.~~

~~**Principles**~~	~~**Mitigation Measures added to the Monitoring Plan**~~
~~**Principle** Safeguarding Principle 8.1~~	~~The project owner guarantees to comply with the 'minimum water rule". The amount of minimum water to sustain the fauna, flora and the agriculture in the basin is estimated by the State Water Works (DSI). DSI monitors the actual water flow through streamgage gauging stations~~

D.2. Assessment that project complies with GS4GG Gender Sensitive requirements

Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	The Project provide equal opportunity for women and men to contribute both in volunteer and working positions. The project owner takes into account participation by both men and women. The access of women or men, as the case may be, to Project participation and benefits is not limited. Regarding the Project Activity, women have various assignments within the company. Specially, the responsible employee for carbon projects within the company -who is also the Trading Support Services Manager- is woman. Additionally, the carbon consult of the Project Activity is also woman. The Project Owner gives priority with working with women.
Question 2 - Explain how the project aligns with existing country policies, strategies and best practices	The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis. Turkey signed the convention of International Labour Organization. The related articles are 100 and 111. The project owner respects Article 5/8425 of Labour Law; which states no discrimination based on gender, race, religion, sexual orientation or any other basis is allowed.

Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?	No
Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?	No

SECTION E. SUMMARY OF LOCAL STAKEHOLDER CONSULTATION

The below is a summary of the 2 step GS4GG Consultation for monitoring purposes. Please refer to the separate Stakeholder Consultation Report for a complete report on the initial consultation and stakeholder feedback round.

E.1 Summary of stakeholder mitigation measures

The project owner used different channels to invite comments by stakeholders. Most of the meetings were held through the Mukhtar (village governors) and Council of Elderly (İhtiyar Heyeti; the village council) of Kabaca village, and the officials of Municipality of Murgul. Due to the fact that the apiculture represents an important source of income for Kabaca Village, the project owner that maintained very good communication and relationship with the villagers dealing with apiculture took all necessary measures for the sustainability of the activity during the construction period. Also, a relevant contact information of the Project Owner is available to the villagers for ongoing communication.

The grievance mechanism as suggested by the Gold Standard is fully functional. A related form is available at the village governor’s office and the village coffee shop at all times.

During the first crediting period, there hasn’t been any complaint from the stakeholders regarding the project activity.

The contact information of the plant responsible exist at the Mukhtar, the project owner and local community are always in touch. The project owner regularly checks with the Mukhtar if any complaint or a request exists. Any complaint or need from the local community could directly be received by the project owner and appropriate contributions or improvements are made to the local community. The related forms which may be reached by local stakeholders for any grievance are kept at the village governor's office.

E.2 Final continuous input / grievance mechanism

Method	Include all details of Chosen Method (s) so that they may be understood and, where relevant, used by readers.
Continuous Input / Grievance Expression Process Book (mandatory)	The grievance mechanism as suggested by the Gold Standard is fully functional. The relateds forms are available at the village governor's office and at the village coffee shop is available at all times. Additionally, the VVB has realized interviews within the scope of remote verification.
GS Contact (mandatory)	help@goldstandard.org
Other	

APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT

Complete the Assessment below and copy all Mitigation Measures for each Principle into SECTION D above. Please refer to the instructions in the Guide to Completing this Form.

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
Principle 1. Human Rights			
1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in	No	1. Turkey is a party to European Convention on Human Rights since 18.May. 1954.[15] 2. The project owner respects internationally proclaimed human rights including dignity, cultural property and	Not required

[15]Please See Official Website of Ministry of Foreign Affairs of Turkey: http://www.mfa.gov.tr/the-european-convention-on-human-rights.en.mfa

the Universal Declaration of Human Rights 2. The Project shall not discriminate with regards to participation and inclusion		uniqueness of indigenous people. The project is not complicit in Human Rights abuses.	
Principle 2. Gender Equality			
1. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women 2. Projects shall apply the principles of nondiscrimination, equal treatment, and equal pay for equal work 3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks	No	1. a. No, the project does not reduce access to or control of resources for women. b. No, the project does not involve in any form discrimination in any kind of form.The project respects the employees' freedom of association and their right to collective bargaining and is not complicit in restrictions of these freedoms and rights. c.The project does not involve and is not complicit in any form of discrimination based on gender, race, religion,	Not required

4. (where required) Summary of opinions and recommendations of an Expert Stakeholder(s)		sexual orientation or any other basis. d.No, the project does notdiscriminate on basis of gender. e. No, the project design does not contribute to an increase in women's workload that adds to their care responsibilities or that prevents them from engaging in other activities. f.No,the project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis. g.No, the project is not complicit in restrictions of any freedoms and rights; and does not involve and is not complicit in any form of discrimination based on	

		gender, race, religion, sexual orientation or any other basis. h.No, the project does not expose women and girls to further risks or hazards. 2. a.The project does not lead or contribute sexual harassment and/or any forms of violence against women. b. There is no such risk for the project. Participation in the project is voluntary. c. The project does not restrict women's rights or access to resources (natural or economic). d.The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis.	

		3.a. The Project provide equal opportunity for women and men to contribute both in volunteer and working positions. b. The project owner takes into account participation by both men and women. 3. The access of women or men, as the case may be, to Project participation and benefits is not limited. 4. The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis. Turkey signed the convention of International Labour Organization. The related articles are 100 and 111.	

		The project owner respects Article 5/8425 of Labour Law; which states no discrimination based on gender, race, religion, sexual orientation or any other basis is allowed.	
Principle 3. Community Health, Safety and Working Conditions			
1. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community	No	The Project avoids community exposure to increased health risks[3] and does not adversely affect the health of the workers and the community.	Not required
Principle 4.1 Sites of Cultural and Historical Heritage			
Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture?	No	During the construction and operation of the project, there was not any damage, alteration or removal to the critical cultural heritage. Because the project location does not involve any critical cultural heritage. Cultural and	Not required
>>			

		environmental heritage is protected against alteration, damage or removal by the law.[16]	
Principle 4.2 Forced Eviction and Displacement			
Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	No	The Project shall not involve and shall not be complicit in the involuntary relocation of people.	Not required
Principle 4.3 Land Tenure and Other Rights			
a. Does the Project require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage rights or land ownership?	No	a. There is no resettlement issue associated with the Project. There was not house in the project area, thus the	Not required

[16] Reference: "Law on Protection of Cultural and Environmental Assets"
http://mevzuat.basbakanlik.gov.tr/Metin.Aspx?MevzuatKod=1.5.2863&MevzuatIliski=0&sourceXmlSearch=

b. For Projects involving land use tenure, are there any uncertainties with regards to land tenure, access rights, usage rights or land ownership?		project did not cause any resettlement. All land acquisition was executed in compliance with the Turkish Energy sector regulations as well as the Expropriation Law of Turkey. b. There are no uncertainties with regards land tenure, access rights, usage rights or land ownership.	
Principle 4.4 - Indigenous people			
Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?	No	There is no resettlement issue associated with the Project. There was not house in the project area, thus the project did not cause any resettlement.	Not required
Principle 5. Corruption			
1. The Project shall not involve, be complicit in	No	The Project does not involve, be complicit in or	Not required

or inadvertently contribute to or reinforce corruption or corrupt Projects		inadvertently contribute to or reinforce corruption or corrupt Projects	
Principle 6.1 Labour Rights			
1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions 2. Workers shall be able to establish and join labour organisations 3. Working agreements with all individual workers shall be documented and implemented and include:	No	1. The Project Developer shall ensure that there is no forced labour and that all employment is in compliance with national labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labour Organization (ILO) fundamental conventions. 2. Workers are able to establish and join labour organisations. 3. Working agreements with all individual workers are	Not required

a) Working hours (must not exceed 48 hours per week on a regular basis), AND b) Duties and tasks, AND c) Remuneration (must include provision for payment of overtime), AND d) Modalities on health insurance, AND e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave. 4. No child labour is allowed (Exceptions for children working on their families' property		documented and implemented. The employment model applied. is locally and culturally appropriate. 4. Child labour, as defined by the ILO Minimum Age Convention is not allowed. 5. The use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures are provided.	

requires an Expert Stakeholder opinion) 5. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures			
Principle 6.2 Negative Economic Consequences			
1. Does the project cause negative economic consequences during and after project implementation?	No	1. Financial Sustainability of the project has been discussed under Section B.5. The calculations are for the entire life of the project. 2. There are no negative economic impacts or potential risks to the local economy deriving the project activity.	Not required

Principle 7.1 Emissions			
Will the Project increase greenhouse gas emissions over the Baseline Scenario? >>	No	The project activity is a wind power project and does not cause any greenhouse gas emissions in project scenario.	Not required
Principle 7.2 Energy Supply			
Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users? 	Yes	The auxiliary consumption of the Project is met from the national grid.	Not required
Principle 8.1 Impact on Natural Water Patterns/Flows			
Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	Potentially~~No~~	Because of the high elevation difference and steep slopes in the project area and the impermeable rock formations avoid underground water accumulation in the basin. Therefore, underground water and flood plains do not	Not required

>>		present in the basin. The project owner guarantees to comply with the 'minimum water rule". The amount of minimum water to sustain the fauna, flora and the agriculture in the basin is estimated by the State Water Works (DSI). DSI monitors the actual water flow through streamgage gauging stations. Average water flow and the actual water flow between the regulator and the tail race (m3/sec) comparisons based on records on all four tributary streams of :Çakırlar River (Egrisu, Köpürten, Kumsu, Suludüz,) and monitored by DSI.	

Principle 8.2 Erosion and/or Water Body Instability			
a. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? b. Is the Project's area of influence susceptible to excessive erosion and/or water body instability? >>	Potentially~~No~~	The project activity has developed activities for prevention of soil erosion. The project owner is committed to minimize deforestation and commit to reforestation. The Project Developer replaced the trees cut during the construction of the Project. Riverbed and Riverside have been protected.	Not required
Principle 9.1 Landscape Modification and Soil			
Does the Project involve the use of land and soil for production of crops or other products? >>	No	The project activity does not involve the use of land and soil for production of crops or other products.	Not required

Principle 9.2 Vulnerability to Natural Disaster			
Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	No	The Project will not be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions.	Not required
>>			
Principle 9.3 Genetic Resources			
Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)?	No	The project is not impacted by the use of genetically modified organisms or GMOs.	Not required
>>			
Principle 9.4 Release of pollutants			

Could the Project potentially result in the release of pollutants to the environment? >>	No	As being a renewable energy power project, the project activity does not lead to release of any pollutants. The project complies with the related regulations of Ministry of Environment and Urbanization. The electricity delivered to the grid by the project activity substitutes the same amount of electricity generated from the generation mix of Turkey, which is dominated by fossil fuels.	Not required
Principle 9.5 Hazardous and Non-hazardous Waste			
Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials? >>	Potentially~~No~~	During operation of the project activity, there are no positive nor negative impacts expected. During excavation and construction no	Not required

		hazardous, toxic or flammable materials have not been used. Wastewater produced by workers during operation is collected in an impermeable septic tank and later they are periodically transferred to wastewater treatment plant. Hazardous wastes are handled appropriately in closed containers and transported by licensed transporters to the licensed processing and disposal facilities.	
Principle 9.6 Pesticides & Fertilisers			
Will the Project involve the application of pesticides and/or fertilisers?	No	The Project will not involve the application of pesticides and/or fertilisers.	Not required

>>			
Principle 9.7 Harvesting of Forests			
Will the Project involve the harvesting of forests?	No	The Project does not involve the harvesting of forests.	Not required
>>			
Principle 9.8 Food			
Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No	The Project does not have any impact on the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives.	Not required
>>			
Principle 9.9 Animal husbandry			
Will the Project involve animal husbandry?	No	The Project will not involve animal husbandry.	Not required
>>			
Principle 9.10 High Conservation Value Areas and Critical Habitats			
Does the Project physically affect or alter largely intact or High Conservation Value (HCV)	No	The Project does not physically affect or alter	Not required

ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified? >>		largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified as it's stated in EIA.	
Principle 9.11 Endangered Species			
a. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? b. Does the Project potentially impact other areas where endangered species may be present through transboundary affects? >>	No	a. There aren't any endangered species identified as potentially being present within the Project boundary (including those that may route through the area) b. The Project does not potentially impact other areas where endangered species may be present through transboundary affects. Since there are alternative areas for reptile species and the activity of feeding these	Not required

		species and the project activity does not restrict roaming, sheltering and breeding areas the project does not cause any adverse effects, as stated in EIA.	

APPENDIX 2- CONTACT INFORMATION OF PROJECT PARTICIPANTS

Organization name	ANADOLU ELEKTRİK ÜRETİM ve TİCARET A.Ş
Registration number with relevant authority	
Street/P.O. Box	GAMA BINASI, NERGIS SOKAK, BEŞTEPE Yenimahalle, Ankara/TURKEY
Building	No:9
City	
State/Region	
Postcode	06560
Country	TURKEY
Telephone	
E-mail	natakan@gamaenergy.com
Website	
Contact person	
Title	Trading Support Services Manager
Salutation	Ms.
Last name	Dündar
Middle name	Atakan
First name	Narınç
Department	
Mobile	
Direct tel.	+90 216 571 5448
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