

TEMPLATE

KEY PROJECT INFORMATION & PROJECT DESIGN DOCUMENT (PDD)

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VERSION **v.1.5**

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KEY PROJECT INFORMATION

GS ID of Project	702
Title of Project	Boreas-1 Enez Wind Power Plant
Time of First Submission Date	17/07/2013
Date of Design Certification	25/04/2013
Version number of the PDD	04
Completion date of version	01/07/2025
Project Developer	Boreas Enerji Üretim Sistemleri Sanayi ve Ticaret A.Ş.
Project Representative	Ozan Orsan
Project Participants and any communities involved	- Boreas Enerji Üretim Sistemleri Sanayi ve Ticaret A.Ş.
Host Country (ies)	Türkiye
Activity Requirements applied	☐ Community Service Activity ☒ Renewable Energy ☐ Land-Use and Forests Activity Requirements /Risks & Capacities ☐ N/A
Scale of the project activity	☐ Micro scale ☒ Small Scale ☐ Large Scale
Other Requirements applied	N/A
Methodology (ies) applied and version number	AMS-I.D: "Grid Connected Renewable Electricity Generation," Version 18.0 (latest approved version)
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 (mandatory)	The Boreas-1 Enez Wind Power Plant contributes to "Emissions Reductions or Removals and/or Adaptation to Climate Change" by displacing fossil fuel-generated electricity, thereby reducing associated CO ₂ emissions in accordance with Gold Standard for the Global Goals (GS4GG) principles.	32,049	Emission Reduction per year, ERy (tCO ₂ /y)
7 Affordable and Clean Energy	Increasing the number and capacity of renewable energy facilities, such as wind power plants, will significantly boost the share of renewables in the global energy mix, advancing progress toward universal access to affordable, reliable, and modern energy services.	52,941.132	MWh/yr
8 Decent Work and Economic Growth	Boreas-1 Enez WPP contributes to Target 8.5 by providing full, productive, and decent employment opportunities to all workers, irrespective of gender, age, or disability status, thereby supporting reductions in	10	Number of employment

unemployment (Indicator 8.5.2). Additionally, the project promotes Target 8.8 by safeguarding labour rights and ensuring safe and secure working environments for all, including women, migrant workers, and those in vulnerable positions. Occupational safety is systematically monitored and improved by tracking the frequency of fatal and non-fatal injuries, disaggregated by gender and migrant status (Indicator 8.8.1).	3	Number of trainings
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SECTION A. DESCRIPTION OF PROJECT

A.1 Purpose and general description of project

The Boreas-1 Enez Wind Power Plant (WPP), owned and operated by Boreas Enerji Üretim Sistemleri Sanayi ve Ticaret A.Ş., is a renewable energy project located in Enez district of Edirne province, Türkiye. Initially commissioned with an installed capacity of 15 MW, the project consists of six Nordex N90 wind turbines, each with a rated power of 2.5 MW and an 80-meter hub height. The wind power plant generates renewable electricity which is supplied directly to the Turkish national electricity grid via the Enez TM 154 kV substation through a dedicated 10 km transmission line.

The primary purpose of the Boreas-1 WPP project is to generate clean electricity from wind energy resources, displacing fossil fuel-based electricity generation, and contributing directly to the reduction of greenhouse gas (GHG) emissions. During its previous crediting periods, the project demonstrated considerable environmental benefits, with verified average annual emission reductions of approximately 29,948 tCO₂eq/year. The project supports Türkiye’s broader renewable energy goals and helps diversify the country's energy portfolio, aligning with both national policies and global climate commitments.

The project boundary encompasses the physical and geographical area of the Boreas-1 Enez WPP, including:

- The six Nordex N90 turbines
- The transformer station
- The 10 km transmission line
- The connection point at Enez TM 154 kV substation
- The interconnected national grid receiving the generated electricity

As illustrated in Figure 3 of the PDD, the boundary also defines the upstream and downstream electricity flows, including internal electricity consumption and emissions relevant to the renewable generation activity.

Only CO₂ emissions from the displaced grid electricity are included in the accounting boundary, in line with the applied methodology. CH₄ and N₂O emissions are excluded as they are deemed negligible.

In accordance with the approved methodology AMS-I.D. "Grid Connected Renewable Electricity Generation" (Version 18.0), and the tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period", the baseline scenario assumes that, in the absence of the Boreas-1 project, the equivalent amount of electricity would have been generated by fossil fuel-fired power plants connected to the Turkish national grid.

Between 2013 and 2023, Türkiye's electricity generation continued to be dominated by thermal power, which maintained a steadily increasing trend. Although renewable sources such as hydropower, wind, and solar have grown, their share remains significantly smaller in comparison to fossil fuel-based generation.

The baseline has been reassessed and remains valid: the electricity displaced by Boreas-1 Enez WPP would otherwise continue to be supplied by existing and new fossil fuel power plants, consistent with national trends and projections as shown in Figure 4.

For this third crediting period, the project continues to operate under its original configuration, with no new turbines or significant technological modifications implemented. Although additional turbines (two Nordex N100 turbines) were installed in 2015 and 2016, they are not eligible under the Gold Standard certification renewal due to procedural timelines; thus, the Gold Standard registered capacity remains at 15 MW. The expected annual electricity generation for the registered capacity is approximately 52,941.132 MWh/year. To ensure that only the electricity generation corresponding to the registered 15 MW capacity is considered for emission reduction calculations, the project monitors the output of the original six Nordex N90 turbines separately. The generation data used for the calculations is based solely on these turbines, and any additional generation from turbines installed after registration is excluded. Metering and monitoring practices have been set up to clearly distinguish between the registered and non-registered capacity, ensuring compliance with Gold Standard requirements.

The Boreas-1 Enez Wind Power Plant plays a significant role in climate change mitigation and sustainable development by replacing fossil fuel-based electricity with renewable wind energy. Türkiye's national electricity grid continues to be heavily reliant on coal and natural gas, and any renewable energy injected into the grid directly offsets these carbon-intensive sources.

The GHG emission reduction of the project is based on a clearly defined and internationally accepted methodology—AMS-I.D. "Grid Connected Renewable Electricity Generation" (Version 18.0). The methodology calculates the avoided emissions by estimating how much CO₂ would have been emitted if the same amount of electricity had been generated by the grid's conventional mix (which is primarily fossil-fueled in Türkiye).

Step-by-step GHG Reduction Process:

- Electricity Generation Measurement:

The project uses calibrated meters to measure the exact amount of electricity delivered to the grid from the wind farm (net of internal consumption).

- Application of the Grid Emission Factor:

This electricity generation is multiplied by the Combined Margin Emission Factor ($EF_{grid,CM,y}$), which reflects the weighted average CO₂ intensity (tCO₂/MWh) of existing and new fossil fuel power plants connected to the Turkish grid.

For the current crediting period, the combined margin emission factor is determined As $EF_{grid,CM,y} = 0.6054$ tCO₂/MWh. This value is based on the most recent national data published by the Turkish Ministry of Energy and Natural Resources (2022) for the Operating Margin (OM), and on the Build Margin emission factor of 0.2895 tCO₂/MWh, as stated in the PDD for the second crediting period.

- Estimated Annual Reductions:

With an annual net generation of 52,941.132 MWh, the Boreas-1 WPP is expected to avoid 32,049 tCO₂e of greenhouse gas emissions per year. These reductions are real, measurable, and additional to what would have occurred without the project.

This renewal validation aims to extend the project's contribution to sustainable development, climate change mitigation, and local economic benefits. Through its continued operation, Boreas-1 Enez WPP contributes specifically to Sustainable Development Goals (SDGs) 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), and 13 (Climate Action).

The Boreas-1 Enez WPP contributes meaningfully to three specific SDGs as per Gold Standard for the Global Goals (GS4GG):

- SDG 7 – Affordable and Clean Energy

The project generates approximately 52,941.132 MWh of zero-emission electricity annually, helping increase the share of clean and renewable energy in Türkiye's electricity mix. This supports Target 7.2, which aims to substantially increase the share of renewable energy by 2030. The project improves energy access, quality, and security without contributing to local air pollution or GHG emissions.

- SDG 8 – Decent Work and Economic Growth

The project employs 10 permanent staff during its operational phase and has generated further indirect employment during its construction phase. This supports Target 8.5 by contributing to full and productive employment, and Target 8.8 by

ensuring safe and secure working conditions through regular health and safety training. Employees are covered under Türkiye's social security system (SGK), ensuring fair wages, occupational accident insurance, and workplace protections.

- SDG 13 – Climate Action

The project directly contributes to climate change mitigation by displacing CO₂ emissions from fossil fuel-based power generation.

With 32,049 tCO₂e avoided annually, it supports Target 13.3, which focuses on improving national capacity for climate change mitigation.

Additionally, the project contributes to technology transfer and promotes a low-carbon development pathway for Türkiye.

A.1.1. Eligibility of the project under Gold Standard

The Boreas-1 Enez Wind Power Plant (WPP) is fully eligible under the **Gold Standard for the Global Goals (GS4GG)**, meeting all relevant criteria as outlined in the current Gold Standard Activity Requirements and Renewable Energy Activity Requirements. Specifically, the project demonstrates eligibility based on the following criteria:

1. Project Type and Methodology Applicability:

The project employs wind technology for grid-connected renewable electricity generation, which directly aligns with the eligibility conditions specified by the Gold Standard and the applied methodology **AMS-I.D "Grid Connected Renewable Electricity Generation," version 18.0**. The project exclusively uses renewable energy sources (wind), with no fossil fuel backup or hybrid elements, clearly meeting methodology applicability conditions.

2. Project Scale:

The Boreas-1 Enez WPP was originally registered as a **small-scale renewable energy project** under Gold Standard, with an initial capacity of **15 MW**. Despite subsequent expansions of the facility, the Gold Standard registered component of the project remains unchanged at **15 MW**, thus maintaining its classification and eligibility as a small-scale activity for the purposes of Gold Standard certification renewal.

3. **Additionality and Ongoing Financial Need:**

The Boreas-1 Enez WPP initially demonstrated clear additionality at the time of registration due to the project's dependency on carbon credit revenues to achieve financial viability, particularly in the context of renewable energy market conditions in Türkiye at the time. The project's eligibility continues based on the ongoing financial need criteria defined by Gold Standard. Specifically, after expiration of Türkiye's original Feed-in Tariff (FiT) support scheme (YEKDEM), the project faces increased financial uncertainty, underscoring the continued necessity of carbon finance to sustain economically viable operations.

4. **Contribution to Sustainable Development:**

The project clearly and demonstrably contributes to sustainable development by delivering measurable outcomes aligned with multiple Sustainable Development Goals (SDGs), notably:

- **SDG 7 (Affordable and Clean Energy)** through renewable electricity generation,
- **SDG 8 (Decent Work and Economic Growth)** by providing local employment opportunities during both construction and operational phases,
- **SDG 13 (Climate Action)** by significantly reducing GHG emissions compared to the baseline scenario of fossil fuel-generated electricity in the Turkish national grid.

5. **Compliance with Safeguarding Principles and Stakeholder Engagement:**

The Boreas-1 Enez WPP remains fully compliant with all Gold Standard safeguarding principles, including no adverse impacts on local biodiversity, ecosystems, human rights, or community well-being. Previous stakeholder engagements have confirmed strong local support, and the project maintains a functional grievance mechanism to ensure continuous and effective stakeholder dialogue.

Therefore, the Boreas-1 Enez Wind Power Plant clearly meets all eligibility conditions required by Gold Standard for the Global Goals, qualifying it fully for the third crediting period renewal validation.

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

Project Ownership and Legal Rights:

The Boreas-1 Enez Wind Power Plant is fully owned and operated by Boreas Enerji Üretim Sistemleri Sanayi ve Ticaret A.Ş. (Boreas Enerji), a registered company incorporated under Turkish commercial law. Boreas Enerji holds all relevant legal rights and ownership, including the necessary permissions, land usage rights, and licenses from the Turkish authorities to operate the wind energy project.

Specifically, the company holds an active Generation License granted by Türkiye's Energy Market Regulatory Authority (EPDK), which authorizes Boreas Enerji to generate and sell electricity produced by the Boreas-1 Enez Wind Power Plant. The license remains valid, and the plant continues to operate fully in compliance with all regulatory requirements.

Eligibility of Project Developer:

As the legal project owner and developer, Boreas Enerji maintains eligibility under Gold Standard rules. Boreas Enerji continues to meet all applicable conditions required of project developers, including maintaining valid commercial registration, demonstrating clear project rights, and holding exclusive authority to market associated emission reductions generated from the plant.

Legal Compliance and Authorization:

The project maintains compliance with all national laws, regulations, and requirements, including environmental and social standards as set forth by Turkish regulations. No disputes or legal claims affect the project's ability to operate or generate certified emission reductions.

In summary, Boreas Enerji Üretim Sistemleri Sanayi ve Ticaret A.Ş. remains fully eligible as the Project Developer and Owner under Gold Standard requirements. The company continues to hold clear and uncontested legal rights to operate and claim the ownership of generated emission reductions for this third crediting period renewal validation.

A.2 Location of project

Host Country: Türkiye

Province / Region / State: Edirne Province

District: Enez District

Project Site / Location details:

The Boreas-1 Enez Wind Power Plant is located within the boundaries of Enez district in Edirne province, northwestern Türkiye. The wind farm occupies an elevated area, which provides favorable wind conditions for electricity generation.

Details	Description
Country	Türkiye
Province	Edirne
District/Municipality	Enez
Nearest Village	Hisarlı and Hasköy Villages, near Enez
Coordinates	Latitude: 40° 41' 51.4" N
	Longitude: 26° 06' 33.9" E (approximate coordinates of the project location, confirm exact coordinates from latest monitoring data)
Altitude	Approximately 65-215 meters above sea level

Project Site:



Figure 1 Boreas Wind Power Plant project site in Enez, Edirne, Türkiye

Project Sitemap:

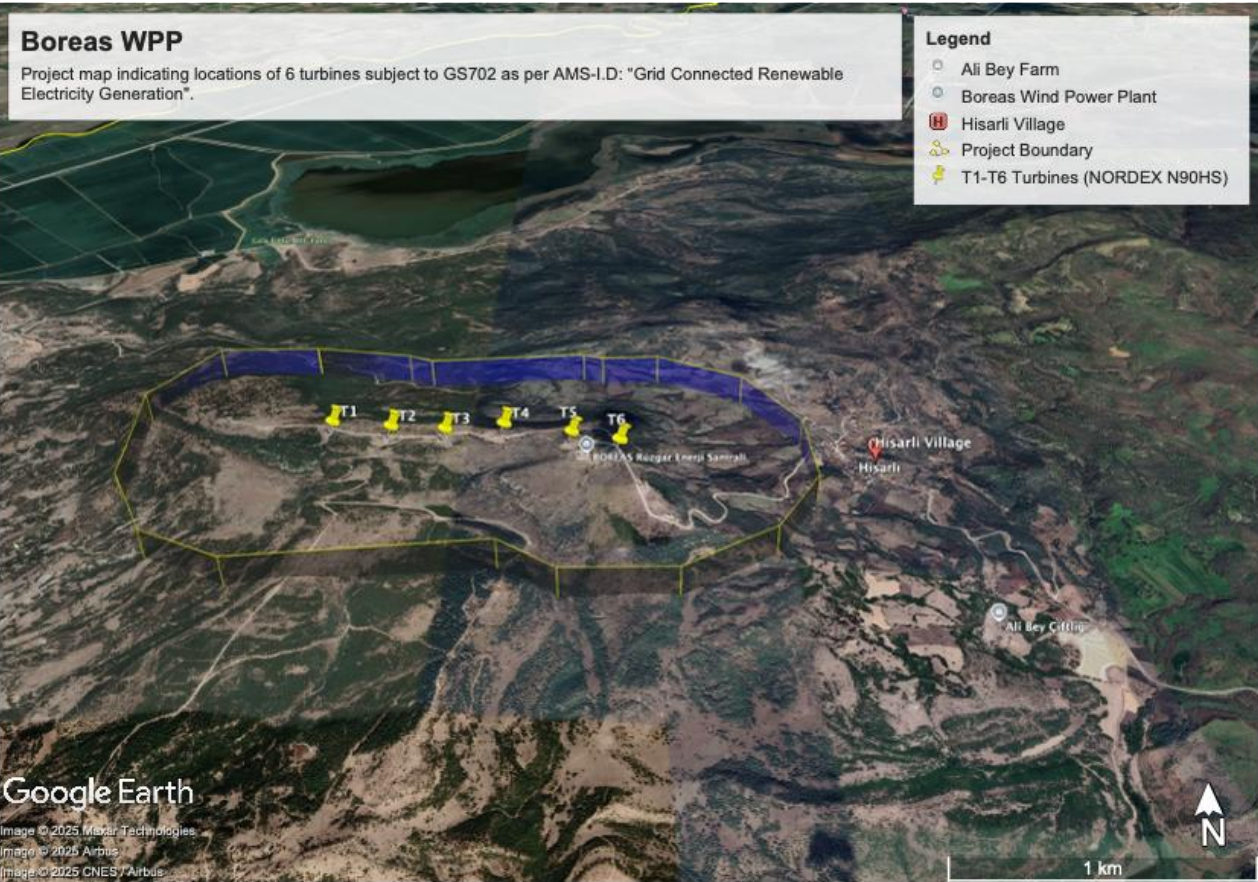


Figure 2 Boreas WPP Sitemap. The site is 1km away from Hisarlı Village.

A.3 Technologies and/or measures

The Boreas-1 Enez Wind Power Plant uses wind energy technology for grid-connected renewable electricity generation. The wind farm has not undergone any technical or operational modifications since its initial validation, and it continues to use the originally installed turbines and related infrastructure.

Main Technical Characteristics:

Technology Description	Details
Turbine Manufacturer and Model	Nordex N90/2500 HS
Number of Turbines	6 units
Installed Capacity per Turbine	2.5 MW each
Total Installed Capacity	15 MW (registered Gold Standard capacity) <i>Note: Actual total capacity including expansions is 21.6 MW, but this renewal covers only the originally validated 15 MW.</i>
Hub Height	80 meters
Rotor Diameter	90 meters
Total Expected Annual Electricity Generation	Approx. 52,941.132 MWh/year (for the validated 15 MW capacity)
Grid Connection	Connected to Turkish National Grid via Enez TM 154 kV transformer station
Metering Equipment	Certified and calibrated meters measuring electricity exported to the grid (regularly calibrated and compliant with relevant national and Gold Standard guidelines)

According to the manufacturer's specifications and industry norms, the expected operational lifespan of these turbines is 20 years¹, with possible extension up to 25 years under regular maintenance conditions.

Routine maintenance and inspections have been conducted as per Nordex's operational guidelines, ensuring optimal turbine performance and longevity.

A.4 Scale of the project

The Boreas-1 Enez Wind Power Plant was originally registered under Gold Standard as a small-scale renewable energy project, having an installed capacity of 15 MW, which is below the Gold Standard small-scale threshold of ≤ 15 MW for renewable energy projects (as defined by Gold Standard Renewable Energy Activity Requirements).

Current Status:

- **Registered Capacity under Gold Standard:** 15 MW (unchanged since original validation)
- **Actual Total Installed Capacity (full plant):** 21.6 MW (Note: Additional capacity added later is outside the Gold Standard certification boundary and not included in this renewal.)

Compliance with Gold Standard Small-Scale Threshold:

The Boreas-1 project remains eligible as a small-scale project under Gold Standard rules since:

- The originally validated project capacity (15 MW) remains within the small-scale threshold (maximum capacity limit of ≤ 15 MW for small-scale renewable projects as per GS guidelines).
- The renewable energy generation capacity registered under Gold Standard has not increased since the initial certification and first two crediting periods.
- The expansion to 21.6 MW total installed capacity has been clearly identified and separately documented, ensuring no double counting or overlap with Gold Standard-certified capacity.

The Boreas-1 Enez WPP continues to meet the definition and criteria of a small-scale project under Gold Standard rules and is thus eligible for the renewal validation as a small-scale activity.

A.5 Funding sources of project

The Boreas-1 Enez Wind Power Plant was initially financed through a combination of private equity investment and debt financing provided by private commercial institutions. Boreas Enerji Üretim Sistemleri Sanayi ve Ticaret A.Ş. fully owns the facility and retains the financial responsibility for its operation and maintenance.

Original Funding Structure:

- **Equity Finance:** The project was primarily financed through equity provided by Boreas Enerji.
- **Debt Finance:** Partial financing for the original construction was sourced through loans obtained from local financial institutions, under standard commercial terms.

Revenue Streams and Financial Context:

Initially, the project benefited from Türkiye's Renewable Energy Support Mechanism (YEKDEM feed-in tariff scheme) as per the Renewable Energy Law No. 5346. This included a guaranteed feed-in tariff (originally approximately 7.3 USD cents/kWh or ~5.5 Euro cents/kWh) for the first 10 years of project operation. This guaranteed tariff expired in 2020, after which the project transitioned to selling electricity on the open market.

Current Financial Situation:

Following the expiry of the original feed-in tariff period (post-2020), Boreas-1 Enez WPP operates under merchant market conditions, facing volatile and market-dependent electricity prices. This transition significantly increased financial uncertainty and reduced predictability of cash flows.

Due to this change, carbon credit revenue has become increasingly critical to maintaining the financial viability and continued operation of the project. Without carbon revenue, the project faces increased financial risks, including potential economic challenges due to fluctuating electricity market conditions.

Carbon Finance and Additionality:

Carbon finance from Gold Standard verified emission reductions (GS-VERs) remains essential for ongoing economic sustainability.

Continued reliance on carbon revenue meets the Gold Standard's "ongoing financial need" criterion, demonstrating additionality for this renewal period.

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

B.1. Reference of approved methodology (ies)

The Boreas-1 Enez Wind Power Plant applies the Gold Standard-approved small-scale CDM methodology: AMS-I.D.: "Grid Connected Renewable Electricity Generation," version 18.0 (latest approved version at the time of renewal)².

Project type: Type I – Renewable Energy Projects

Category: D – Electricity Generation for a System

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

B.2. Applicability of methodology (ies)

The project continues to fully meet the applicability criteria of the chosen methodology AMS-I.D (version 18.0):

² AMS-I.D: Small-scale methodology – Grid connected renewable electricity generation (Version 18.0). Clean Development Mechanism (CDM). URL. <https://cdm.unfccc.int/UserManagement/FileStorage/2P7FS6ZQAR84LG3NMKYUH50WI9ODBC>

Ref.	Applicability Criteria	Justification
1	This methodology is applicable to project activities that: (a) Install a Greenfield plant; (b) Involve a capacity addition in (an) existing plant(s); (c) Involve a retrofit of (an) existing plant(s); (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s).	The project activity involves installation of a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity. The proposed project activity is a greenfield project activity.
2	Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: (a) The project activity is implemented in an existing reservoir with no change in the volume of reservoir;(b) The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W/m ² ; (c) The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m ² .	Since the proposed project is the installation of a wind power plant, this criteria is not applicable to the proposed project activity.
3	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 components with an installed capacity equal to 15 MW.

4	Combined heat and power (co-generation) systems are not eligible under this category.	The proposed project activity is not a combined heat and power system.
5	In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	Since the proposed project activity does not involve addition of renewable energy generation units at an existing renewable power generation facility, this criteria is not applicable to the proposed project activity.
6	In the case of retrofit, rehabilitation or replacement, to qualify as a small-scale project, the total output of the retrofitted, rehabilitated or replacement power plant/unit shall not exceed the limit of 15 MW.	Since the proposed project activity does not involve retrofit or replacement, this criteria is not applicable to the proposed project activity.

7	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 activity does not involve the recovery or utilization of methane from landfill gas, waste gas, wastewater treatment, or agro-industrial processes. As such, the applicability condition related to recovered methane emissions under Type III categories is not relevant. Furthermore, the project does not involve the generation of heat or operate as a co-generation system. Therefore, there is no need to explore applicability under AMS-I.C. ("Thermal energy production with or without electricity"), and this applicability condition is not applicable to the Boreas-1 WPP.
8	In case biomass is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass" shall apply.	The project does not use biomass as a fuel source and does not involve sourcing from dedicated biomass plantations. Since the energy generation is based entirely on wind energy, there is no cultivation, harvesting, or combustion of biomass. Therefore, the applicability criteria concerning the use of the "Project emissions from cultivation of biomass" tool is not applicable to this project activity.

B.3. Project boundary

The project boundary clearly includes the physical and geographical locations relevant to the renewable electricity generation facility and the interconnected national electricity grid. Below is a clearly defined boundary of included and excluded emission sources:

Source	GHGs	Included?	Justification/Explanation
Baseline scenario	CO ₂	Yes	The primary emission source in the baseline is fossil fuel-based electricity generation replaced by renewable energy from Boreas-1 Enez WPP.
	CH ₄	No	Not significant, excluded per AMS-I.D methodology.
	N ₂ O	No	Not significant, excluded per AMS-I.D methodology.
Project scenario	CO ₂	Yes	Project emissions result from the use of diesel generators at the project site, primarily to supply auxiliary power during grid outages or maintenance periods. These emissions are calculated in line with CDM Tool 03: "Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion."
	CH ₄	No	Not applicable.
	N ₂ O	No	Not applicable.

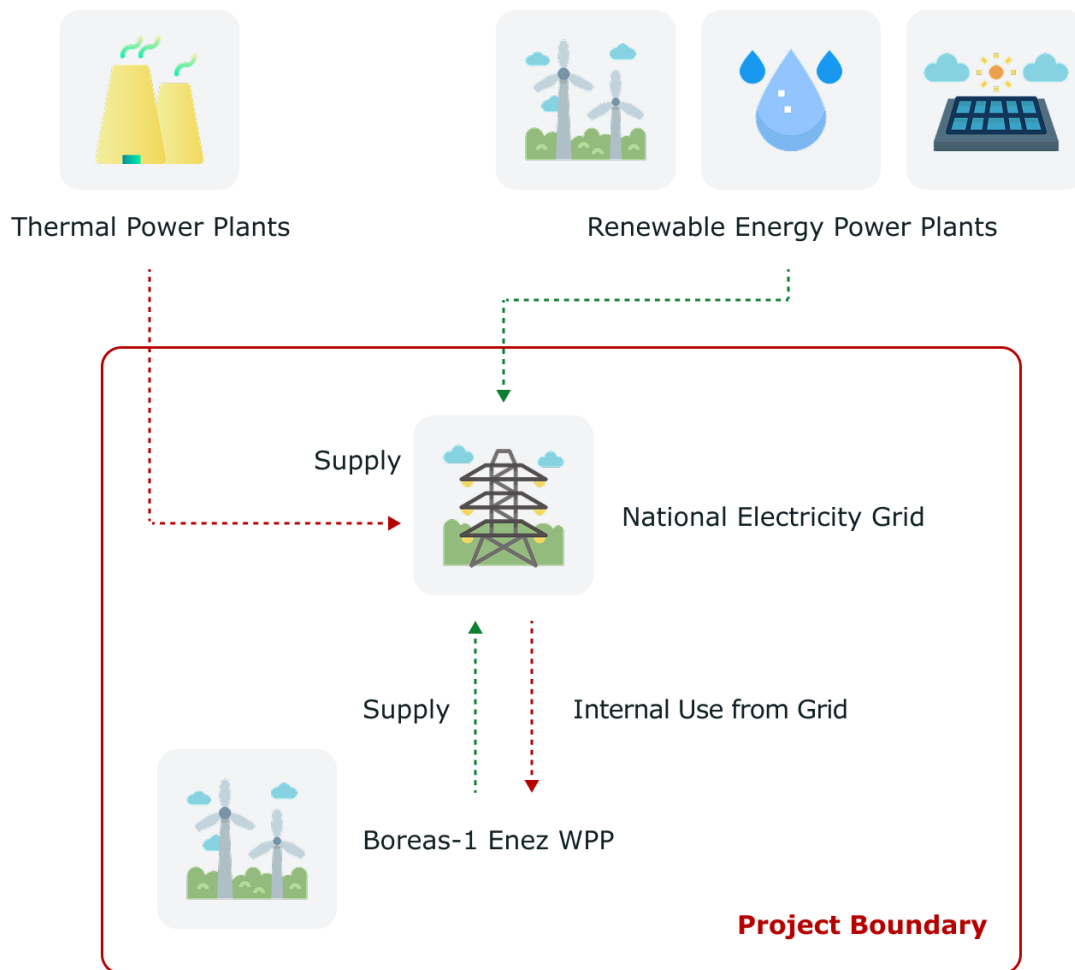


Figure 3 Project Boundary

Key Objectives of the BOREAS WPP Project:

- Utilize Türkiye's wind energy potential to meet increasing electricity demand and ensure energy security.
- Reduce GHG emissions by increasing the share of renewable energy sources.
- Contribute to economic development by generating direct and indirect employment opportunities during both construction and operational phases.
- Reduce dependence on fossil fuel imports and diversify the electricity generation mix through the use of domestic energy resources.
- Support sustainable development by fostering local community engagement and strengthening the local economy.
- In terms of local benefits, the project primarily contributes to reducing local air pollutants and creating employment opportunities within the region.

B.4. Establishment and description of baseline scenario

The project boundary has been defined in accordance with AMS-I.D. (Version 18.0), which states that the spatial extent of the boundary includes the project power plant and all other power plants physically connected to the electricity system that the project is connected to. In this context, the boundary of the Boreas-1 Enez Wind Power Plant comprises the physical site of the wind farm itself, the internal electrical infrastructure, and the interconnected Turkish national grid to which the electricity is exported.

Additionally, greenhouse gas emission sources within the boundary have been identified in line with the methodology. The baseline scenario includes CO₂ emissions from fossil fuel-based electricity generation that would have occurred in the absence of the project. This is replaced by renewable electricity generated by the Boreas-1 Enez WPP, as documented in Section B.3.

Geographical details including location, coordinates, and altitude have also been provided to support the spatial definition of the boundary. According to the approved methodology AMS-I.D. "Grid Connected Renewable Electricity Generation" (Version 18.0)², the baseline scenario for the Boreas-1 Enez Wind Power Plant is defined as electricity delivered to the Turkish national electricity grid by power plants predominantly fueled by fossil fuels. Without the project activity, the electricity generated by the Boreas-1 Enez WPP would have been produced by existing and newly constructed power plants predominantly utilizing fossil fuels.

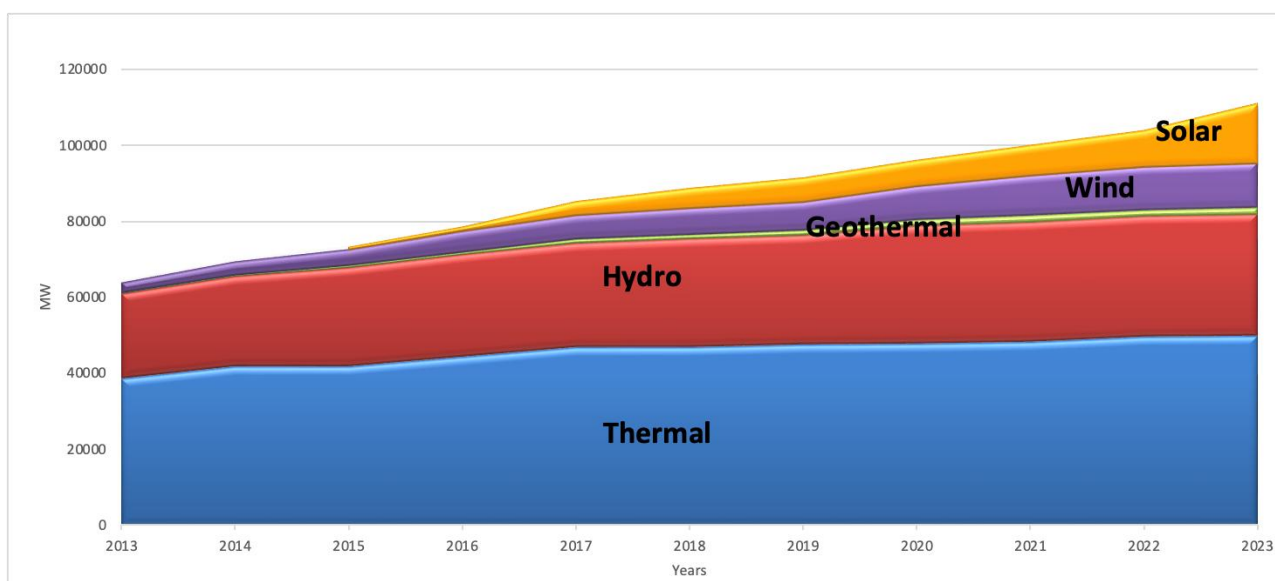


Figure 4 Development of Türkiye's installed capacity by primary energy resources (2013-2023)

The chart illustrates the dominance of fossil fuel-based power generation in Türkiye between 2013 and 2023, highlighting its steady and continuous growth over the years. Thermal power remains the largest contributor to total energy capacity, showing a consistent upward trend, which indicates the ongoing reliance on fossil fuels. Hydropower, while also expanding, does so at a much slower rate, reinforcing the dominance of thermal power in the energy mix. Although other energy sources are present, their contribution remains relatively small compared to the vast share of fossil fuel-based generation. As illustrated in Figure 4 (Development of Türkiye's Installed Capacity by Primary Energy Resources, 2013–2023), thermal power has consistently represented the largest share of the country's installed capacity over the past decade. This trend underscores Türkiye's long-standing dependence on fossil fuel-based electricity generation—particularly from coal, natural gas, and other thermal sources—which remained the dominant component of the national energy mix, accounting for more than 40% of the total installed capacity in 2023.

The Boreas-1 Enez Wind Power Plant has been developed and implemented in alignment with the Gold Standard for the Global Goals (GS4GG), ensuring that the project not only delivers real and verified emission reductions but also contributes meaningfully to sustainable development. As part of the third crediting period renewal, the project continues to comply with the four key Gold Standard principles:

Contribution to Climate Security & Sustainable Development, Safeguarding Principles, Stakeholder Inclusivity, and Demonstration of Real Outcomes.

Principle 1: Contribution to Climate Security & Sustainable Development

The Boreas-1 Enez Wind Power Plant is a grid-connected renewable energy project, automatically eligible under Gold Standard's approved activity requirements. By displacing electricity that would otherwise be generated from fossil fuels in Türkiye's national grid, the project contributes directly to SDG 13 (Climate Action). It achieves verified emission reductions of approximately 32,049 tCO₂e annually, helping Türkiye move toward its 2053 net-zero target under the Paris Agreement.

In addition to climate benefits, the project supports SDG 7 (Affordable and Clean Energy) by supplying around 52,941.132 MWh of clean electricity annually, and SDG 8 (Decent Work and Economic Growth) through local job creation and safe labor conditions. While Türkiye has policies promoting renewables (e.g., feed-in tariffs under Law No. 5346), there is no mandatory enforcement requiring private actors to develop such projects. Therefore, the baseline—continued reliance on fossil fuels—is legally and practically valid, and the Boreas-1 project's emission reductions are additional and meaningful.

Principle 2: Safeguarding Principles

The Boreas-1 project has undergone a comprehensive assessment of environmental and social safeguards and has demonstrated compliance with all relevant Gold Standard requirements. The wind farm is located in an area free of protected ecosystems or cultural heritage sites, and proper mitigation measures (such as setback distances from residences) have ensured there are no significant negative impacts on biodiversity, noise, or visual comfort.

The project also respects labor rights, provides safe working conditions, and prohibits discrimination—contributing to SDG 8. It complies with Turkish labor laws and international human rights conventions, including gender equality safeguards. As of the latest assessment, no adverse incidents or complaints have been recorded, confirming that the project does not cause harm and aligns with Gold Standard's "do no harm" policy.

Principle 3: Stakeholder Inclusivity

The project developer engaged local stakeholders early in the design phase through a two-step consultation process, including a physical meeting and a formal feedback round. Communities in Enez district, local authorities, and relevant interest groups were informed and consulted in accordance with Gold Standard requirements. Concerns—such as turbine noise and land use—were addressed transparently, and the project design was adjusted accordingly (e.g., adequate distance from residences).

A grievance mechanism was also established and remains active, allowing community members to raise concerns at any time. During follow-up engagements and verification audits, local stakeholders confirmed satisfaction with the project's operation and benefits, reinforcing that the wind farm enjoys strong community support and adheres to the principle of ongoing stakeholder inclusion.

Principle 4: Demonstration of Real Outcomes

The Boreas-1 project has a robust Monitoring and Reporting Plan in place that tracks electricity generation, emission reductions, and sustainable development impacts. It uses calibrated, double-verified meters to record energy supplied to the national grid, and this data is reviewed by Türkiye's grid operator (TEİAŞ). Monitoring also includes social indicators such as local employment and safety.

All outcomes are validated and verified by independent third-party auditors during each crediting period. Boreas-1 has already successfully completed two crediting periods and is now undergoing its third renewal, which confirms its ongoing performance and integrity. The project's real, measurable contributions to climate mitigation and sustainable development are thus verified through continuous data collection and third-party certification under the Gold Standard.

In accordance with the methodological tool, *"Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period,"* the Turkish energy mix and corresponding baseline scenario have been reassessed and updated.

Step 1: Assessment of the Validity of the Current Baseline

Step 1.1: Assess Validity of Current Baseline

- The original baseline scenario remains valid, as it aligns with all applicable mandatory national and sectoral policies effective at the time of renewal validation. Specifically, there have been no substantial policy or regulatory changes since the last crediting period that would alter the baseline scenario determination.

Step 1.2: Assessment of Changing Circumstances and Impacts

- Analysis of the Turkish energy sector shows continued dominance by fossil fuels. According to the latest available data published by TEİAŞ (Türkiye Electricity Transmission Corporation), fossil fuels remain the primary source of electricity generation, with thermal power plants (coal and natural gas-based) dominating the energy mix.
- The renewable energy share, while increasing, still comprises a minority of overall generation capacity. As of 2022, fossil fuel-based sources such as imported coal, lignite, natural gas, liquid fuels, and multi-fuel plants continue to constitute a substantial portion of Türkiye's total installed power capacity. When compared to the individual contributions of renewable sources, this share remains significant and highlights the country's historical reliance on conventional thermal power. Wind power accounted for approximately 10.1% of Türkiye's total installed capacity as of 2022, indicating ongoing reliance on fossil fuels as the primary electricity generation source.
- Therefore, the grid-connected fossil-fuel-based electricity generation remains the most plausible baseline scenario in the absence of the Boreas-1 Wind Power Plant.

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

- Analysis of the latest official energy mix projections provided by TEİAŞ (Turkish Electricity Transmission Corporation) confirms that fossil fuels (coal and natural gas) will continue to dominate electricity production in

Türkiye throughout the third crediting period. This underscores the validity of the current baseline scenario and justifies the continued applicability of AMS-I.D.

Step 1.4: Data and Parameter Validity

- The baseline emission factor ($EF_{grid,y}$) used in previous crediting periods has been updated based on the latest officially published data by the Turkish Ministry of Energy and Natural Resources. The most recent emission factors published officially by the Ministry have been applied for calculating baseline emissions.

Step 2: Update of Current Baseline and Parameters

Step 2.1: Update Current Baseline

- The grid emission factor (EF_{grid}) has been updated using the latest values published by the Turkish Ministry of Energy and Natural Resources. The combined margin emission factor ($EF_{grid, CM, y}$) applied for this crediting period is calculated as follows:

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM}$$

Where:

- $EF_{grid,CM,y}$: Combined Margin CO₂ emission factor (tCO₂/MWh)
- $EF_{grid,OM,y}$: Operating Margin emission factor (tCO₂/MWh)
- $EF_{grid,BM,y}$: Build Margin emission factor (tCO₂/MWh)
- $w_{OM} = 0.75$, $w_{BM} = 0.25$ (for wind projects, per methodology AMS-I.D. guidelines)

Step 2.2: Update Data and Parameters

- **Operating Margin (EF_{grid, OM,y}): 0.7108 tCO₂/MWh** as published by the Republic of Türkiye Ministry of Energy and Natural Resources for the year 2022³ on November 26, 2024.
- **Build Margin emission factor (EF_{grid, BM,y}): 0.2895 tCO₂/MWh** as published by the Republic of Türkiye Ministry of Energy and Natural Resources for the year 2022 on November 26, 2024.
- **Combined Margin emission factor (EF_{grid, CM,y}):**

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times 0.75 + EF_{grid,BM,y} \times 0.25$$

$$EF_{grid,CM,y} = 0.7108 \times 0.75 + 0.2895 \times 0.25$$

$$= \mathbf{0.6054 \text{ tCO}_2/\text{MWh}}$$

The combined margin CO₂ emission factor has also been published by the Republic of Türkiye Ministry of Energy and Natural Resources for the year 2022 on November 26, 2024, as **0.6054 tCO₂/MWh**. These updated values will be used for calculating the baseline emissions.

Baseline Emissions

As per the AMS-I.D "Grid-Connected Renewable Electricity Generation" Version 18.0 methodology, baseline emissions include only CO₂ emissions from electricity generation in power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions are to be calculated as follows:

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

where:

- BE_y = Baseline emissions in year y (t CO₂)

³ [Republic of Türkiye Ministry of Energy and Natural Resources. \(2022\). Electricity Grid Emission Factor 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)
- $EF_{grid,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (t CO₂/MWh)

Therefore;

$$BE_y = 52,941.132 \times 0.6054 = 32,050 \text{ tCO}_2/\text{y}$$

Project Emissions

Project emissions occur due to the use of diesel generators at the project site, primarily for auxiliary power supply during grid outages or maintenance periods. These emissions are calculated in accordance with the CDM Methodological Tool 03: "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion" (Version 03.0)⁴.

Carbon dioxide (CO₂) emissions resulting from fossil fuel combustion in process j are calculated by multiplying the quantity of fuel consumed by the applicable CO₂ emission coefficient, as defined in the following equation:

$$PE_{FC,j,y} = \sum FC_{i,j,y} \times COEF_{i,y}$$

Where:

- $PE_{FC,j,y}$ = Are the CO₂ emissions from fossil fuel combustion in process j during the year y (tCO₂/yr)
- $FC_{i,j,y}$ = Is the quantity of fuel type i combusted in process j during the year y

⁴ UNFCCC. (2011). Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion (Version 03.0). Clean Development Mechanism Methodological Tool. URL: <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-03-v3.pdf>

- (mass or volume unit/yr)
- $COEF_{i,y}$ = Is the CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)
- i = Are the fuel types combusted in process j during the year y

For diesel fuel, Option B from the methodological tool has been applied, as project-specific data such as the net calorific value and CO₂ emission factor are not available. In the absence of such data, default values provided by the IPCC 2006 Guidelines have been used to ensure a conservative and standardized estimation approach. The CO₂ emission coefficient is calculated as:

$$COEF_{i,y} = NCV_{i,y} \times EF_{CO_2,i,y}$$

Where:

- $COEF_{i,y}$ = Is the CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)
- $NCV_{i,y}$ = Is the weighted average net calorific value of the fuel type i in year y (GJ/mass or volume unit)
- $EF_{CO_2,i,y}$ = Is the weighted average CO₂ emission factor of fuel type i in year y (tCO₂/GJ)
- i = Are the fuel types combusted in process j during the year y

Thus,

$$COEF_{i,y} = 0.043^5 \times 0.0741^6 = 0.0031863 \text{ tCO}_2/\text{kg}$$

This value represents the amount of CO₂ emitted per kilogram of diesel combusted.

⁵Chapter 1: Introduction. In 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy. Intergovernmental Panel on Climate Change.

⁶Chapter 2: Stationary Combustion. In 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy. Intergovernmental Panel on Climate Change.

To convert this coefficient to represent emissions per liter of diesel, the result must be multiplied by the density of diesel (0.83 kg/liter), as follows:

$$COEF_{diesel(liter)} = 0.0031863 \times 0.83 = 0.0026446 \text{ tCO}_2/\text{liter}$$

This final value (0.0026446 tCO₂/liter) is used when calculating project emissions from diesel fuel consumption measured in liters.

At the facility, the diesel generator is activated approximately 9 days per year due to grid (TEİAŞ) electricity outages. On average, around 25 liters of diesel is consumed per day during these periods, resulting in an estimated annual diesel consumption of approximately 225 liters.

$$0.0026446 \text{ tCO}_2/\text{liter} \times 225 \text{ liters} = 0.595 \text{ tCO}_2/\text{y}$$

$$PE_y = 0.595 \text{ tCO}_2$$

Leakage

As per AMS-I.D., leakage emissions are considered to be zero for renewable energy generation project activities².

Emission Reductions

As per the AMS-I.D "Grid-Connected Renewable Electricity Generation" Version 18.0 methodology, emission reductions are calculated using the following approach:

$$ER_y = BE_y - PE_y - LE_y$$

$$ER_y = 32,050 - 0.595 - 0 = 32,049 \text{ tCO}_2/\text{y}$$

B.5. Demonstration of additionality

Within the context of the Boreas-1 Enez Wind Power Plant project activity, the most significant barrier identified is the investment barrier. In line with the examples set under the "Non-binding best practice examples to demonstrate additionality for SSC project activities", the additionality is demonstrated through the application of a benchmark analysis.

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 project owner is a small company focused on renewable energy investments, with this project being their first venture. As per Footnote 7 of Version 7.0.0 of the Additionality Tool, alternatives are defined in relation to the investor:

- **Undertaking the Project Without VER**

Implementing the project without Verified Emission Reductions (VER) is not financially viable due to the associated investment risks, as outlined below. Given these constraints, this alternative is not realistic.

- **Constructing a New Power Plant Using an Alternative Renewable Resource**

The Electricity Market License Regulation prioritizes local renewable resources with minimal environmental impact. While alternative renewable energy sources were considered, they were found to be infeasible:

- **Hydropower:** The project site lacks a river with a continuous flow regime. The nearest river, Meriç River, is 4.5 km away and flows through Bulgaria, Greece, and Türkiye (EIA study, p.18). Given its unstable flow regime, constructing a hydropower plant with the same 15 MW capacity was not considered viable. Furthermore, wind power is more environmentally favorable, as it does not significantly impact land use. While five dams and multiple lagoons exist in the region for irrigation and flow regulation, none currently generate electricity (State Hydraulic Works).
- **Geothermal:** The country's geothermal resources suitable for electricity generation are concentrated in the western region, where three geothermal power plants are already operational.
- **Solar and Biomass:** These technologies are still in their early stages in Türkiye, with no operational plants due to inadequate incentives.

Given these limitations, using an alternative renewable energy source is not a realistic or credible alternative to the project.

No Project Activity

If no project activity is pursued, the same amount of electricity required to meet the country's growing demand will be supplied by the existing grid. This scenario aligns with the baseline scenario.

Outcome of Step 1a:

The only realistic and credible alternative scenario is that the required electricity will be generated by the existing grid, which corresponds to the baseline scenario.

Sub-step 1b: Consistency with mandatory laws and regulations:

All proposed alternatives to the project activity comply with the existing laws and regulations, as outlined in Table X below.

Relevant Laws	Number / Enactment Date	Aim and Scope
Environmental Law *Environmental Impact Assessment Regulation	Nr. 2872 / 17- 07-2008	Approval is required from the Ministry of Environment and Forestry for power plants, as per the Electricity License Regulation, ensuring compliance with environmental laws.
Electricity Market Law *Electricity License Regulation *Electricity Market Balancing and Conciliation Regulation	Nr. 4628 / 03- 03-2001	Regulates electricity generation, transmission, distribution, wholesale, and retail for legal entities. Includes two key regulations: one for generation licensing and another for market price balancing and conciliation.
Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electrical Energy	Nr. 5346 / 18- 05-2005	Promotes the use of renewable energy for electricity generation. Defines methods and principles for generating power from renewable resources in an economical and sustainable manner. Includes certification of electricity generated from renewable sources.

Energy Efficiency Law	Nr. 5627 / 02-05-2007	Establishes guidelines for improving energy efficiency in industries, power plants, residential buildings, and transport. Defines measures to enhance efficiency in electricity generation, transmission, distribution, and consumption.
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Outcome of Step 1b:

The only feasible scenario is supplying the same amount of electricity from the existing grid, ensuring full compliance with applicable laws and regulations.

Step 2 – Investment Analysis

The benchmark analysis is applied using the project's Internal Rate of Return (IRR) as the key financial indicator. The investment analysis below aims to show that “the project activity is not (a) the most economically and financially attractive”.

Sub-step 2a: Determine appropriate analysis method

A benchmark analysis was selected, using Equity IRR as the financial indicator. Equity IRR is widely accepted and appropriate for renewable energy projects in Türkiye, reflecting investor requirements for returns on equity.

Sub-step 2b – Option III: Benchmark Analysis

For the benchmark analysis, the Project Internal Rate of Return (IRR) before tax has been selected as the key financial indicator.

- **Benchmark for Wind Power Projects in Türkiye**

Currently, no standardized benchmarks exist for wind power plant projects in Türkiye. The financial credibility of such projects is typically assessed based on several factors, including:

- Cost recovery period
- Risk of delayed commissioning
- Credibility of the project owner

- **World Bank Loan Reports and Benchmark IRR**

In May 2009, the World Bank allocated a \$500 million fund to support private-sector renewable energy and energy efficiency projects in Türkiye. The loan is distributed through Turkish Industrial Development Bank (TSKB) and Turkish Development Bank (TKB) and is available for wind power projects.

According to the project appraisal report, the threshold IRR for wind power projects is set at 15%, reflecting the bankers' perspective on Equity IRR, which includes investment risks.

The Project IRR is compared against the Weighted Average Cost of Capital (WACC) to assess financial feasibility. It is important to note that the Project IRR itself is not the benchmark; rather, it serves as a reference for comparison with the WACC benchmark.

- **Weighted Average Cost of Capital (WACC)**

As recommended in the referenced tool, WACC is considered the appropriate benchmark for evaluating the Project IRR. The fundamental principle is that an investment is viable only if the expected return on capital exceeds the cost of capital.

The cost of capital represents the rate of return that could be expected from an alternative investment of similar risk. If a project carries the same level of risk as a company's core business activities, it is reasonable to use the company's average cost of capital for evaluation.

Since a company's capital structure typically includes both debt and equity, the cost of both components must be considered to accurately determine the overall cost of capital.

- **Calculation of Cost of Equity**

The cost of equity is calculated using the methodology outlined in the paper "Estimating Equity Risk Premiums" by Prof. Aswath Damodaran, a renowned finance professor at the Stern School of Business, New York University. Prof.

Damodaran is widely recognized for his contributions to valuation, corporate finance, and investment management, and many of the parameters used in this calculation are sourced from the data available on his website.

Given that Türkiye's energy market is still in its early stages of private sector participation, it is assumed that all companies investing in an emerging market face similar country risk exposure.

The expected cost of equity is calculated using the following formula:

$$\text{Expected Cost of Equity} = \text{Risk Free Rate} + \beta \times \text{Equity Risk Premium}$$

1. Choice of Risk-Free Rate

According to Prof. Damodaran's methodology, the risk-free rate should match the duration of the cash flows being discounted. In corporate finance and valuation, long-term, default-free government bonds are generally preferred as the risk-free rate.

For this analysis, the Eurobond XS0285127329, maturing on April 2, 2019, has been selected, as its duration closely aligns with the project's 10-year cash flow period.

However, historical yield values were unavailable as of the investment decision date (January 26, 2009). The closest available yield rate, sourced from Trust Bank (www.trust.ru), is dated November 14, 2008, with a yield of 9.26%, which is used as the risk-free rate.

2. Choice of Beta (β)

To estimate β (beta), publicly traded power generation and trading companies listed on the Istanbul Stock Exchange (BIST) were analysed. According to Bloomberg, the Electricity Index beta for 2008 was calculated as 0.778.

3. Choice of Equity Risk Premium (ERP)

A widely accepted method for estimating country risk is to use the sovereign credit rating assigned by rating agencies. While these ratings primarily reflect default risk, they also incorporate factors influencing equity risk.

The equity risk premium is calculated using the following formula:

$$\begin{aligned} & \text{Equity Risk Premium} \\ &= \text{Base Premium for Mature Equity Market} + \text{Country Risk Premium} \end{aligned}$$

According to Prof. Damodaran's updated 2008 data, Türkiye's equity risk premium was 12.88%.

The cost of equity calculated above is on an after-tax basis. To convert it to a before-tax basis, the following formula is applied:

$$\text{Cost of Equity (Before Tax)} = \text{Cost of Equity (After Tax)} / (1 - T_c)$$

where T_c represents the average business revenue tax.

• Parameters Used in the Calculation

The following parameters were applied in the final cost of equity estimation:

- Risk-Free Rate: 9.26%
- Beta (β): 0.778
- Equity Risk Premium (ERP): 12.88%
- Corporate Tax Rate (T_c): 20%

This structured approach ensures a robust and justifiable cost of equity estimation, aligning with industry best practices in financial valuation.

Table 2 Cost of Equity estimation parameters.

Parameter	Value	Source
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Risk-Free Rate	9.26%	Long-term Eurobond yield (XS0285127329) as of 14/11/2008
Beta (β)	0.778	Beta for electricity market in Turkiye (2008), Bloomberg
Country Risk Premium	12.88%	Prof. Damodaran, Risk Premium for Other Markets (2008) – Total Risk Premium for Turkiye
Expected Cost of Equity (After Tax)	19.28%	Calculated based on the risk-free rate, beta, and country risk premium
Corporate Tax Rate (T_n)	%20	Average business revenue tax
Expected Cost of Equity (Before Tax)	24.10%	Converted from after-tax cost using tax-adjusted formula

- **Calculation of Cost of Debt:**

The project loan is denominated in EUR, with an interest rate of 12%.

- **Calculation of WACC:**

The Weighted Average Cost of Capital (WACC) for the project is determined using the following formula:

$$WACC = CE \frac{E}{V} + CD \frac{D}{V} (1 - T_c)$$

where:

- CE = Cost of Equity
- CD = Cost of Debt
- E/V = Percentage of financing that is equity
- D/V = Percentage of financing that is debt
- T_c = Average corporate tax rate

Parameter	Value	Source
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CE, Cost of Equity	24.10%	Calculated above
E/V, Percentage of equity financing	15%	Calculated
CD, Cost of Debt	12%	Interest rate
D/V, Percentage of debt financing	85%	Calculated
V, Total Project Cost	€21,300,000	Sum of Equity (E) and Debt (D)
T _c , Average Corporate Tax Rate	20%	Not included in the calculation as project IRR is assessed on a pre-tax basis
WACC	13.82%	Calculated

Conclusion

To maintain a conservative approach, a WACC of 13.82% is accepted as the benchmark for the project.

Sub-step 2c – Calculation and Comparison of Financial Indicators

- **Guidance for Investment Analysis**

According to the "Guidance for the Assessment of Investment Analysis", investment input values should be valid and applicable at the time the project participant makes the investment decision.

- **Summary of Financial Data**

The table below presents key financial figures for the project operation:

Table 3 Summary of Financial Data

Input Name	Input Value	Reference Document	Page Number	Date of Document
Expected Electricity Generation (P90 for 20 years)	52,941.132 MWh	Micrositing Report	12	Jan.09
Total Investment	€21,300,000	Loan Agreement (Conditional)	1	12/06/2008 (Amended 24/10/2008)
Own Capital	€3,200,000	Calculated	-	-
Debt	€18,100,000	Loan Agreement (Conditional) – Payback Schedule	1	26.01.2009
Interest Rate	12%	Loan Agreement Amendment	Article 6	24.10.2008
Operation Cost for 20 Years	1.2 EUR/MWh	Wind Power Economics, EWEA Report	4	2003
Feed-in Tariff	5.5 EUR/MWh	Renewable Energy Law No. 5346	Article 6(c)	10.05.2005
Expected VER Price	3.88 EUR/tonne	State of Voluntary Carbon Markets Report	10	2024

Energy Production Risk Assessment

In the planning and financing phase of the wind farm, a risk assessment is conducted to quantify uncertainties related to energy yield predictions.

- P50 Value: The expected Annual Energy Production (AEP) at a 50% probability level.
- P75 Value: The AEP reached with a 75% probability (considered a lower-risk scenario).
- P90 Value: The AEP reached with a 90% probability (commonly used for financial calculations due to lower risk).

For the Boreas wind farm, the estimated values for 20 years are:

- P75 = 56,209 MWh (Capacity Factor: 42.8%)
- P90 = 52,941.132 MWh (Capacity Factor: 40.1%)

Banks and investors typically use P90 values as the financial base, as the risk is lower than P75.

The highest recorded capacity factor in Edirne Province (as per the General Directorate of Renewable Energy) is 40%.

Internal Rate of Return (IRR) Analysis

The pre-tax Internal Rate of Return (IRR) for the project is calculated based on the P90 and P75 values:

Table 4 Internal Rate of Return (IRR) Analysis

Scenario	IRR (Before Tax, Without VER Revenue)	IRR (Before Tax, With VER Revenue)
P90 Value (52,941.132 MWh)	8.31%	9.07%
P75 Value (56,209 MWh)	9.41%	10.15%

Conclusion

Both IRR values (8.31% for P90 and 9.41% for P75) are significantly lower than the benchmark WACC of 13.82%.

As a result, the revenue generated from the power plant is not financially attractive enough to justify the investment.

Sub-step 2d – Sensitivity Analysis

The sensitivity analysis evaluates the impact of fluctuations in key financial variables on the investment decision. The goal is to determine whether the project is financially attractive under different conditions. The variables analyzed include:

- Investment cost
- Operational cost
- Electricity generation
- Electricity price

The benchmark hitting percentage indicates the required changes in investment cost, electricity revenue, or operating costs for the project to reach the benchmark WACC of 13.82%. This helps in assessing the feasibility of making the project financially viable.

Sensitivity Analysis for Project IRR (P90 and P75 Scenarios)

Table 5 Sensitivity Analysis for Project IRR with P90

IRR without Carbon	-10%	-5%	5%	10%	Benchmark Hitting Percentage
Investment Cost	9.76%	9.00%	7.66%	7.07%	-29%
Operational Cost	8.68%	8.49%	8.12%	7.93%	-144%
Electricity Price	6.54%	7.44%	9.15%	9.98%	+32%
Electricity Generation	6.54%	7.44%	9.15%	9.98%	+32%

Table 6 Sensitivity Analysis for Project IRR with P75

IRR without Carbon	-10%	-5%	5%	10%	Benchmark Hitting Percentage
Investment Cost	10.94%	10.14%	8.74%	8.11%	-22.5%

Operational Cost	9.77%	9.59%	9.23%	9.05%	-113%
Electricity Price	7.60%	8.52%	10.28%	11.13%	+23%
Electricity Generation	7.60%	8.52%	10.28%	11.13%	+23%

Key Findings

- **P90 Scenario:** The project IRR reaches 9.76% with a 10% reduction in investment costs, which is still significantly lower than the benchmark WACC of 13.82%.
- Investment cost needs to decrease by 29% to reach the benchmark, which is not a realistic scenario.
- **P75 Scenario:** The project IRR reaches 10.94% with a 10% reduction in investment costs and 11.13% with a 10% increase in electricity prices.
- To meet the benchmark WACC of 13.82%, the investment cost must decrease by 22.5%, which is still challenging.

Operational Cost Considerations

- Operational costs primarily include maintenance expenses, which remain constant throughout the project's operational lifespan.
- To meet the benchmark, operational costs would have to be reduced to zero (100%)—an impossible scenario.
- Additionally, 44% of the operational cost would need to be recovered through extra revenue, which is highly unrealistic. The extra income needed is 13% more of the operational cost for P75.

Electricity Generation Impact

The expected annual electricity generation for 20 years is:

- P90 = 52,941.132 MWh
- P75 = 56,209 MWh

Higher wind speeds in the early years might lead to higher generation, but the

average remains stable due to turbine degradation over time.

Even with a 10% increase in electricity generation, the IRR would still fall short of the benchmark (9.98% for P90 and 11.13% for P75).

For financial viability, annual generation must increase by 31% (P90) or 23% (P75)—which equates to 69,092 MWh, an unrealistic figure.

Electricity Price Impact

- Electricity prices were regulated at the time of the investment decision, capping the price for renewable sources at 5.5 EUR cents/kWh with a 10-year purchase guarantee.
- To meet the WACC benchmark of 13.82%, the price should be between 6.7 USD cents/kWh (+23%) and 9.6 USD cents/kWh (+32%), which is unlikely under existing regulations.

Final Conclusion

- The project remains financially unattractive under current conditions.
- Even with favorable changes in investment cost, operational cost, electricity generation, or electricity price, the required adjustments to reach the benchmark WACC of 13.82% are unrealistic.

Outcome of Step 2: The project is unlikely to be financially viable.

Step 3: Barrier Analysis

This step is not applicable to the project.

Step 4: Common Practice Analysis

Sub-step 4a – Analyzing Similar Activities to the Proposed Project

According to common practice requirements, projects are considered similar if they:

- Are located in the same country or region
- Use a similar technology
- Are of comparable scale
- Operate within a similar regulatory, investment, and financial environment

Following the Common Practice Tool and Guidelines (EB69 Annex 8), the common practice analysis follows these steps:

Step 1: Define the Applicable Output Range

The applicable output range is calculated as $\pm 50\%$ of the design output or capacity of the proposed project.

Turkiye has one interconnected national electricity grid.

Power plants with an installed capacity between 7.5 MW and 22.5 MW have been selected for comparison.

Step 2: Identify Similar Plants in the Geographical Area

In the applicable geographical area, power plants that:

- Fall within the defined capacity range (7.5 MW - 22.5 MW)
- Began commercial operations before January 2009 (the project's start date)
- Are not registered under the CDM (Clean Development Mechanism) or undergoing validation

have been identified and counted.

Findings

- 102 power plants match the defined criteria.
- 70 of these are registered under voluntary emission reduction schemes (i.e., they follow carbon credit mechanisms).
- As a result, the number of non-registered plants (N_{all}) is calculated as 95.

Table 7 The Power Plants Within the Scope of Common Practice

	Project Name	Type	Capacity	Project Generation	Firm Generation	Owner
1	Seyhan II	Hydropower	7.5	33	7	EUAS
2	Aksu (Çayköy)	Hydropower	16	35	35	BOT
3	Berdan (Alarko)	Hydropower	10	44	44	BOT
4	Fethiye	Hydropower	16.5	88	88	BOT

5	Gaziler (Iğdır)	Hydropower	11.2	51	51	BOT
6	Girvelik-II/Mercan	Hydropower	11	39	39	BOT
7	Gönen	Hydropower	10.6	48	48	BOT
8	Hasanlar (Alarko)	Hydropower	9.6	42	42	BOT
9	Kısık (Ayen Enerji)	Hydropower	9.6	34	34	BOT
10	Tohma Medik (Alarko)	Hydropower	12.5	58	58	BOT
11	Bores	Wind	10.2	31	31	BOT
12	Aksen (Gaziantep)	Fuel oil	21.1	168	168	Autopro ducer
13	Akdeniz Sefa (Silifke)	Fuel oil	20	—	—	Autopro ducer
14	Milda Kağıt (Aksu Seka)	Fuel oil	8	20	20	Autopro ducer
15	Ak tekstil-1 (Gaziantep)	Fuel oil	13	87	87	Autopro ducer
16	Albayrak Turizm (Balıkesir Seka)	Fuel oil	9.3	56	56	Autopro ducer
17	OykaKağ. (Çaycuma Seka)	Fuel oil	10	70	70	Autopro ducer
18	GAP İnş. (Çay Seka Afyon)	Fuel oil	8	60	60	Autopro ducer
19	Habaş (Bilecik)	Fuel oil	18	144	144	Autopro ducer
20	IspartaMensucat	Fuel oil	10.7	85	85	Autopro ducer
21	KırkaBoraks (kırka)	Fuel oil	8.2	32	32	Autopro ducer
22	Polinas (Manisa)	Fuel oil	10	75	75	Autopro ducer
23	EtiAlüminyum (S.Şehir)	Fuel oil	11.9	35	35	Autopro ducer

24	Tüpraş (Batman)	Fuel oil	10.3	72	72	Autopro ducer
25	Tire-Kutsan (Tire)	Fuel oil	8	37	37	Autopro ducer
26	Tüpraş (Batman)	Diesel Oil	10.3	72	72	Autopro ducer
27	EtiMaden (BandırmaBora ks)	Lignite	10.7	78	78	Autopro ducer
28	EtiBor (Emet)	LPG	10.4	82	82	Autopro ducer
29	EgeBirleşikEne rji	LPG	12.8	107	107	Autopro ducer
30	Goodyear (Adapazarı)	LPG	9.6	79	79	Autopro ducer
31	Orta Anadolu Mensucat	LPG	10	65	65	Autopro ducer
32	Menderes Teks. (AkçaEnerji)	Naphta	18.7	140	140	Autopro ducer
33	Desa (Işıklar)	Naphta	10.6	70	70	Autopro ducer
34	Mensa Mensucat	Naphta	10.4	85	85	Autopro ducer
35	Toros (Mersin)	Naphta	12.1	96	96	Autopro ducer
36	Akbaşlar	Natural gas	8.7	73	73	Autopro ducer
37	AmylumNişast a (Adana)	Natural gas	14.3	80	80	Autopro ducer
38	Arenko (Denizli)	Natural gas	12.7	101	101	Autopro ducer
39	AydınÖrme	Natural gas	7.5	60	60	Autopro ducer
40	Baydemirler (beylikdüzü)	Natural gas	9.3	77	77	Autopro ducer

41	DenizliÇimento	Natural gas	14	113	113	Autopro ducer
42	Hayat Kağıt San.	Natural gas	7.5	56	56	Autopro ducer
43	Hayat temizlik	Natural gas	15	94	94	Autopro ducer
44	İgsaş (Yarımca)	Natural gas	11	76	76	Autopro ducer
45	İsko (İnegöl)	Natural gas	9.2	63	63	Autopro ducer
46	Kaleseramik (Çan. Seramik+Kale bodur)	Natural gas	21.6	157	157	Autopro ducer
47	KastamonuEnt egre	Natural gas	7.5	48	48	Autopro ducer
49	Küçükçalık Tekstil	Natural gas	8	64	64	Autopro ducer
50	MaksiEnerji (Hamoğlu)	Natural gas	7.7	62	62	Autopro ducer
51	Marmara Pamuk	Natural gas	8.7	71	71	Autopro ducer
52	MB ŞekerNişasta San. (Aksaray)	Natural gas	8.8	60	60	Autopro ducer
53	Mercedes Benz	Natural gas	8.3	68	68	Autopro ducer
54	Sarkuysan (Tuzla)	Natural gas	7.7	60	60	Autopro ducer
55	Yılıfert (TügsaşGemlik Güb.)	Natural gas	8	50	50	Autopro ducer
56	YalovaElyaf	Natural gas	12.3	—	—	Autopro ducer
57	Yongapan (Kastamonu)	Natural gas	9.7	61	61	Autopro ducer

58	Yurtbay (Eskişehir)	Natural gas	7.8	62	62	Autopro ducer
59	BandırmaAsit	Other	11.5	88	88	Autopro ducer
60	BandırmaBağf aş	Other	10	57	57	Autopro ducer
61	Ak Enerji (Yalova) İzole	Naphta	21	173	173	Private Owner
62	Ak Enerji (DeblaDenizli)	Naphta	15.6	—	—	Private Owner
63	Ak Enerji (Yalova Akal)	Natural gas	10.4	85	85	Private Owner
64	Ak Enerji (Uşak OSB)	Natural gas	15.2	—	—	Private Owner
65	Berk Enerji (Kurtköy)	Natural gas	14.8	104	104	Private Owner
66	Boz Enerji	Natural gas	8.7	60	60	Private Owner
67	Metem Enerji (Hacısıramat)	Natural gas	7.8	58	58	Private Owner
68	Metem Enerji (Peliklik)	Natural gas	11.7	89	89	Private Owner
69	NorenEnerji	Natural gas	8.7	70	70	Private Owner
70	Zorlu Enerji (Yalova)	Natural gas	15.9	122	122	Private Owner
71	ITC-KA Enerji Mamak	Waste	19.8	150	140	Private Owner
72	PS3-A-1	Fuel oil	11.4	80	80	Private Owner
73	Van Engil Gaz (Zorlu Enerji)	Diesel oil	15	75	75	Private Owner
74	Bereket (Feslek)	Hydropower	9.5	41	41	Private Owner

75	Bereket (Gökyar)	Hydropower	11.6	43	43	Private Owner
76	Alp Elektrik (Tınaztepe)	Hydropower	7.7	29	17	Private Owner
77	Cansu Elektrik (Artvin)	Hydropower	9.2	47	31	Private Owner
78 ^a	Çaldere Elektrik (Dalaman)	Hydropower	8.7	35	25	Private Owner
79 ^b	Hamzalı HES (Turkon MNG)	Hydropower	16.7	117	66	Private Owner
80	HGM Enerji (Keklicecek)	Hydropower	8.7	18	11	Private Owner
81	İç-En Elektrik (Çalkışla)	Hydropower	7.7	18	11	Private Owner
82	Kalen Enerji (Kalen II)	Hydropower	15.7	50	28	Private Owner
83	Sarmaşık I Hes (FetaşFethiye)	Hydropower	21	96	54	Private Owner
84	Sarmaşık II Hes (FetaşFethiye)	Hydropower	21.6	108	61	Private Owner
85	Enerjisa (Aksu-Şahmallar)	Hydropower	14	45	7	Private Owner
86	Enerjisa (Sugözü-Kızıldüz)	Hydropower	15.4	55	8	Private Owner
87	İçtaşYukarıMerçan	Hydropower	14.2	44	20	Private Owner
88	ÖzgürElek. K.MaraşTahta Hes	Hydropower	12.5	54	54	Private Owner
89	Tektuğ-KalealtıHes	Hydropower	15	52	11	Private Owner
90	YapısanHacılar	Hydropower	13.3	90	54	Private Owner
91	Beyköy	Hydropower	16.8	87	87	Private Owner

92	Kuzgun	Hydropower	20.9	36	0	Private Owner
93	Tercan	Hydropower	15	51	28	Private Owner
94	Çıldır	Hydropower	15.4	30	20	Private Owner
95	İkizdere	Hydropower	18.6	110	100	Private Owner
96	Mercan	Hydropower	20.4	78	48	Private Owner
97	DoğalEnerji (Burgaz)	Wind	14.9	48	43	Private Owner
98	Denizli Elek. (Karakurt Akhisar)	Wind	10.8	28	24	Private Owner
99	Baki Elektrik Şamlı Rüzgar	Wind	21	104	92	Private Owner
100	Datça RES	Wind	8.1	24	19	Private Owner
101	Menderes Jeotermal	Geothermal	8	56	56	Private Owner
102	ZorluEnerjiDenizliJeotermal	Geothermal	15	105	105	Private Owner

Step 3: Identifying Plants with Different Technologies

Power plants using technologies other than wind were counted as $N_{diff} = 95$.

Four wind power plants were registered as voluntary carbon projects and eliminated from the analysis.

Only one wind power plant, Bores WPP, was not registered under any carbon scheme but was financed through the Built-Operate-Transfer (BOT) model.

Historical Incentives for Private Sector Power Plants (No Longer Available)

- Energy Fund: Provided financial support to companies.
- Guarantee Contracts: Signed with the Undersecretariat of Treasury to ensure electricity purchases by the government.

- Long-Term Purchase Agreements: Lasted up to 99 years for BOT projects and 20 years for BOO projects.

After the Electricity Market Law (2001) came into effect, these investment models were removed, and the Energy Fund was discontinued.

Boreas WPP was operational in June 2000 and did not qualify for carbon credits. Due to its unique investment model, it was also eliminated from the list.

Step 4: Calculating the Common Practice Factor (F)

$$F = 1 - N_{diff}/N_{all}$$

$$F = 1 - 95/95 = 1 - 1 = 0$$

Since:

- F is smaller than 0.2
- $N_{all} - N_{diff} = 95 - 95 = 0$, which is smaller than 3

Outcome of Step 4:

The project activity satisfies all the criteria of "Tool for the demonstration and assessment of additionality". Therefore, the project is additional.

Milestones of the project activity is listed as below:

Table 8 Time Schedule of the Project Development

	Activity	Date
1	Feasibility study completed	2007
2	License	03/05/2007
3	EIA exemption letter	17/07/2007
4	Feasibility study revised	19/03/2008
5	Proposal for loan agreement (active with EM contract)	12/06/2008
6	Board decision for carbon asset development	04/09/2008
7	Contract agreement with EM supplier –conditional (active with down payment)	05/09/2008
8	The reservation payment for EM supplier	15/10/2008
9	Proposal for carbon asset development	17/11/2008
10	Board decision to sign the loan agreement	15/12/2008
11	The down payment done and EM contract activated (investment decision date)	26/01/2009

12	The completion date of the project lengthened to 03/09/2010	28/01/2009
13	Micrositing report completed	January 2009
14	Construction agreement for switchyard	17/02/2009
15	Consultancy agreement for VER development	10/04/2009
16	Construction agreement for the site preparation	27/04/2009
17	Agreement for cabling works	30/04/2009
18	Stakeholder meeting	29/04/2009
19	Construction agreement for turbine foundations	01/06/2009
20	Four turbine locations changed	11/09/2009
21	Site visit with the first DOE	07-09/11/2009
22	Stakeholder Feedback Round Meeting	09/11/2009
23	Commissioning date	09/04/2010
24	Second consultancy agreement with another company	30/11/2011
25	Draft validation report by the first DOE.	19/05/2011
26	Agreement with another DOE.	19/04/2012
27	Site visit with the second DOE.	09/07/2012
28	License amendment (capacity Increase to 20 MW)	26/06/2013
29	Board decision for carbon asset consideration of capacity increase	09/07/2013
30	Agreement with EM supplier for capacity increase	8/11/2013
31	Construction agreement for capacity increase	11/08/2014
32	Loan Agreement for capacity increase	19/08/2014

B.5.1 Prior Consideration

The Boreas-1 Enez Wind Power Plant has consistently included carbon revenue considerations since its inception. The initial investment decision explicitly accounted for expected revenues from carbon credit sales under Gold Standard certification. Documentation of these considerations, including initial feasibility analyses, investment board meeting notes, and early-stage consultations confirming the reliance on carbon finance, has previously been provided and validated by the Gold Standard and independent Validation and Verification Bodies (VVBs). Thus, prior consideration is clearly demonstrated and documented, fulfilling the Gold Standard's criteria for additionality for each crediting period.

B.5.2 Ongoing Financial Need

Financial Conditions at Initial Investment

The Boreas-1 Enez WPP was initially registered and financially analyzed based on expected revenues from the Turkish feed-in tariff mechanism (YEKDEM). The guaranteed tariff was approximately 5.5 EUR cents/kWh, offering financial stability for the initial 10 years.

Current Financial Conditions (Third Crediting Period)

After the YEKDEM tariff expired in 2020, the project transitioned to merchant market conditions. Currently, electricity sales occur at market-dependent rates, which fluctuate significantly and pose considerable financial uncertainty. Consequently, carbon credit revenue from Gold Standard (VER/GS-CERs) remains critical for operational sustainability.

Investment Analysis and Benchmark

A detailed investment analysis conducted for similar projects in Türkiye, including the projects recently validated by Gold Standard for subsequent crediting periods, indicates the expected equity IRR for wind investments at the time of original investment was approximately 15% according to the World Bank and Turkish Development Bank (TSKB) benchmarks.

Given the significant decrease in revenues post-feed-in tariff expiration and current merchant market volatility, the equity IRR for Boreas-1 Enez WPP is substantially below this benchmark without carbon revenue, rendering the project economically unattractive and financially uncertain.

Sensitivity Analysis

Key parameters influencing financial attractiveness are clearly identified as electricity prices, generation volume, operating costs, and investment expenditures. Sensitivity analyses conducted similarly to recent validations confirm that reasonable variations in these parameters ($\pm 10\%$) do not enable the project to surpass the established benchmark IRR. Given current market conditions, achieving an IRR close to or above benchmark without carbon revenues is clearly unrealistic, as electricity prices would need to significantly and consistently exceed historical and projected market averages.

Conclusion of Ongoing Financial Need

The sensitivity analysis and current financial conditions clearly indicate that without revenue from emission reduction certificates, Boreas-1 Enez WPP faces significant economic risk and uncertainty, clearly demonstrating ongoing financial need. Previous issuances of carbon credits under Gold Standard have contributed materially to maintaining financial viability. The sustained financial uncertainty and market risks clearly underscore the project’s dependency on continued carbon revenue, demonstrating ongoing additional

The Boreas-1 Enez Wind Power Plant continues to demonstrate ongoing financial need for Gold Standard carbon revenues, particularly following the expiration of Türkiye’s Renewable Energy Support Mechanism (YEKDEM) feed-in tariff in 2020. Since then, the project has operated under merchant market conditions, subject to market volatility and fluctuating electricity prices, significantly affecting project financial stability and returns.

A financial analysis conducted for the third crediting period clearly indicates that, in the absence of carbon credit revenues, the project's economic viability would be significantly compromised. Current market electricity price volatility increases the project's financial risk, making additional revenue from carbon credits critical for ensuring operational continuity and covering operational expenditures (OPEX) such as turbine maintenance, personnel costs, and associated overhead expenses.

Updated financial analyses (such as IRR or cash flow analyses), comparing scenarios with and without carbon revenue, clearly show that the project's economic viability depends directly on income derived from Gold Standard carbon credits. This clearly demonstrates that the Boreas-1 Enez WPP continues to meet the "ongoing financial need" criterion and confirms the project's continued additionality under the current market and financial conditions.

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 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	Number of employees

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

Goal 7 Affordable and Clean Energy

The project generates electricity from renewable energy sources, utilizing wind as the primary power source, and aims to contribute to Türkiye's growing electricity demand through a sustainable and low-carbon technology. By supplying electricity to the grid, the project displaces an equivalent amount of electricity that would otherwise be generated by a grid primarily dominated by fossil fuel-fired power plants.

Net Generation (MWh) = Electricity Supplied to the Grid (MWh) – Electricity Consumption from the Grid (MWh)

The net generation and internal consumption identified and approved by authorized EPIAS.

The project is expected to generate 52,941.132 MWh annually, contributing to Sustainable Development Goal (SDG) Target 7.2 and its corresponding Indicator 7.2.1.

Goal 8 Decent Work and Economic Growth

The project has created employment opportunities that would not have been possible under the baseline scenario. During the operational phase, the project employs 10 full-time personnel, contributing to local economic development and job creation. With the exception of one individual, all employees are recruited from the local village community, thereby contributing to local employment and fostering positive socio-economic impacts within the region. This localized employment strategy not only ensures stable income for local households but also strengthens the village economy through increased spending and economic circulation within the region. The provision of formal, full-time employment opportunities contributes to the reduction of rural unemployment and underemployment, aligning with SDG Target 8.5, which aims to achieve full and productive employment and decent work for all. By integrating members of the local population into its workforce, the project enhances social inclusion and promotes long-term economic resilience in the surrounding community.

The project aligns with the following Sustainable Development Goal (SDG) targets and indicators:

- Target 8.5 – By 2030, achieve full and productive employment and decent work for all women and men, including young people and persons with disabilities, and ensure equal pay for work of equal value.
- Indicator 8.5.2 – Unemployment rate, by sex, age, and persons with disabilities.

The achievement of Target 8.5 will be monitored through Social Security Institution (SGK) records during the verification process, ensuring accurate tracking of full-time employment.

Due to social conditions in the project area, the employment of women and persons with disabilities has not been feasible. However, the project remains committed to promoting fair and inclusive labor practices within its operational framework.

Goal 13 Climate Action

The project is estimated to achieve an annual emission reduction of 32,049 tonnes of CO₂ equivalent (tCO₂e). In addition to mitigating greenhouse gas

emissions, the project facilitates technology transfer by utilizing wind energy as a sustainable power source.

By displacing fossil fuel-based electricity generation, the project contributes to environmental improvement both regionally and nationally. The reduction in fossil fuel combustion enhances air quality and helps mitigate the adverse effects of climate change. Through the deployment of renewable technologies and wind-based electricity generation, the project supports sustainable and climate-friendly development.

The project aligns with the following Sustainable Development Goal (SDG) target and indicator:

- Target 13.3 – Enhance education, awareness, and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning.
- Indicator 13.3.2 – Number of countries that have communicated the strengthening of institutional, systemic, and individual capacity-building to implement adaptation, mitigation, and technology transfer, and development actions.

Project Emissions

Project emissions occur due to the use of diesel generators at the project site, primarily for auxiliary power supply during grid outages or maintenance periods. These emissions are calculated in accordance with the CDM Methodological Tool 03: "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion" (Version 03.0)⁷.

Carbon dioxide (CO₂) emissions resulting from fossil fuel combustion in process *j* are calculated by multiplying the quantity of fuel consumed by the applicable CO₂ emission coefficient, as defined in the following equation:

⁷ UNFCCC. (2011). Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion (Version 03.0). Clean Development Mechanism Methodological Tool. URL: <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-03-v3.pdf>

$$PE_{FC,j,y} = \sum FC_{i,j,y} \times COEF_{i,y}$$

Where:

- $PE_{FC,j,y}$ = Are the CO₂ emissions from fossil fuel combustion in process j during the year y (tCO₂/yr)
- $FC_{i,j,y}$ = Is the quantity of fuel type i combusted in process j during the year y (mass or volume unit/yr)
- $COEF_{i,y}$ = Is the CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)
- i = Are the fuel types combusted in process j during the year y

For diesel fuel, Option B from the methodological tool has been applied, as project-specific data such as the net calorific value and CO₂ emission factor are not available. In the absence of such data, default values provided by the IPCC 2006 Guidelines have been used to ensure a conservative and standardized estimation approach. The CO₂ emission coefficient is calculated as:

$$COEF_{i,y} = NCV_{i,y} \times EF_{CO2,i,y}$$

Where:

- $COEF_{i,y}$ = Is the CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)
- $NCV_{i,y}$ = Is the weighted average net calorific value of the fuel type i in year y (GJ/mass or volume unit)
- $EF_{CO2,i,y}$ = Is the weighted average CO₂ emission factor of fuel type i in year y (tCO₂/GJ)
- i = Are the fuel types combusted in process j during the year y

Thus,

$$COEF_{i,y} = 0.043^8 \times 0.0741^9 = 0.0031863 \text{ tCO}_2/\text{kg}$$

This value represents the amount of CO₂ emitted per kilogram of diesel combusted.

To convert this coefficient to represent emissions per liter of diesel, the result must be multiplied by the density of diesel (0.83 kg/liter), as follows:

$$COEF_{diesel(liter)} = 0.0031863 \times 0.83 = 0.0026446 \text{ tCO}_2/\text{liter}$$

This final value (0.0026446 tCO₂/liter) is used when calculating project emissions from diesel fuel consumption measured in liters.

At the facility, the diesel generator is activated approximately 9 days per year due to grid (TEİAŞ) electricity outages. On average, around 25 liters of diesel is consumed per day during these periods, resulting in an estimated annual diesel consumption of approximately 225 liters.

$$0.0026446 \text{ tCO}_2/\text{liter} \times 225 \text{ liters} = 0.595 \text{ tCO}_2/\text{y}$$

$$PE_y = 0.595 \text{ tCO}_2$$

Leakage

As per the AMS-I.D "Grid-Connected Renewable Electricity Generation" Version 18.0 methodology, leakage emissions are considered to be zero for renewable energy generation project activities.

Therefore,

$$LE_y = 0$$

⁸Chapter 1: Introduction. In 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy. Intergovernmental Panel on Climate Change.

⁹Chapter 2: Stationary Combustion. In 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy. Intergovernmental Panel on Climate Change.

Emission Reductions

As per the AMS-I.D "Grid-Connected Renewable Electricity Generation" Version 18.0 methodology, emission reductions are calculated using the following approach:

$$ER_y = BE_y - PE_y - LE_y$$

$$ER_y = 32,050 - 0.595 - 0 = 32,049 \text{ tCO}_2/\text{y}$$

B.6.2 Data and parameters fixed ex ante

SDG13

Data/parameter	$EF_{CM,y}$
Unit	tCO ₂ /MWh
Description	Combined margin CO2 emission factor for the project electricity system in year y
Source of data	Turkish Ministry of Energy and Natural Resources ³
Value(s) applied	0.6054 tCO ₂ /MWh
Choice of data or Measurement methods and procedures	The emission factor applied for the baseline scenario is the grid emission factor calculated and published by the Ministry of Energy and Natural Resources ³
Purpose of data	Calculation of baseline emissions
Additional comment	

53,099.42

B.6.3 Ex ante estimation of SDG Impact

- **Operating Margin ($EF_{grid, OM,y}$): 0.7108 tCO₂/MWh** as published by the 3on November 26, 2024.
- **Build Margin emission factor ($EF_{grid,BM,y}$): 0.2895 tCO₂/MWh** as published by the Republic of Turkiye Ministry of Energy and Natural Resources for the year 2022 on November 26, 2024.
- **Combined Margin emission factor ($EF_{grid,CM,y}$):**

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times 0.75 + EF_{grid,BM,y} \times 0.25$$

$$EF_{grid,CM,y} = 0.7108 \times 0.75 + 0.2895 \times 0.25$$

$$= \mathbf{0.6261 \text{ tCO}_2/\text{MWh}}$$

The combined margin CO2 emission factor has also been published by the Republic of Türkiye Ministry of Energy and Natural Resources for the year 2022 on November 26, 2024, as **0.6054 tCO₂/MWh**. These updated values will be used for calculating the baseline emissions.

Baseline Emissions

As per the AMS-I.D "Grid-Connected Renewable Electricity Generation" Version 18.0 methodology, baseline emissions include only CO2 emissions from electricity generation in power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions are to be calculated as follows:

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

where:

- BE_y = Baseline emissions in year y (t CO2)
- $EG_{PJ,y}$ = 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)
- $EF_{grid,y}$ = Combined margin CO2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (t CO2/MWh)

Therefore;

$$BE_y = 52,941.132 \times 0.6054 = 32,050 \text{ tCO}_2/\text{y}$$

Project Emissions

Project emissions occur due to the use of diesel generators at the project site, primarily for auxiliary power supply during grid outages or maintenance periods. These emissions are calculated in accordance with the CDM Methodological Tool 03:

"Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion"
(Version 03.0)¹⁰.

Carbon dioxide (CO₂) emissions resulting from fossil fuel combustion in process j are calculated by multiplying the quantity of fuel consumed by the applicable CO₂ emission coefficient, as defined in the following equation:

$$PE_{FC,j,y} = \sum FC_{i,j,y} \times COEF_{i,y}$$

Where:

- $PE_{FC,j,y}$ = Are the CO₂ emissions from fossil fuel combustion in process j during the year y (tCO₂/yr)
- $FC_{i,j,y}$ = Is the quantity of fuel type i combusted in process j during the year y (mass or volume unit/yr)
- $COEF_{i,y}$ = Is the CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)
- i = Are the fuel types combusted in process j during the year y

For diesel fuel, Option B from the methodological tool has been applied, as project-specific data such as the net calorific value and CO₂ emission factor are not available. In the absence of such data, default values provided by the IPCC 2006 Guidelines have been used to ensure a conservative and standardized estimation approach. The CO₂ emission coefficient is calculated as:

$$COEF_{i,y} = NCV_{i,y} \times EF_{CO2,i,y}$$

Where:

¹⁰ UNFCCC. (2011). Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion (Version 03.0). Clean Development Mechanism Methodological Tool. URL. <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-03-v3.pdf>

- $COEF_{i,y}$ = Is the CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)
- $NCV_{i,y}$ = Is the weighted average net calorific value of the fuel type i in year y (GJ/mass or volume unit)
- $EF_{CO_2,i,y}$ = Is the weighted average CO₂ emission factor of fuel type i in year y (tCO₂/GJ)
- i = Are the fuel types combusted in process j during the year y

Thus,

$$COEF_{i,y} = 0.043^{11} \times 0.0741^{12} = 0.0031863 \text{ tCO}_2/\text{kg}$$

This value represents the amount of CO₂ emitted per kilogram of diesel combusted.

To convert this coefficient to represent emissions per liter of diesel, the result must be multiplied by the density of diesel (0.83 kg/liter), as follows:

$$COEF_{diesel(liter)} = 0.0031863 \times 0.83 = 0.0026446 \text{ tCO}_2/\text{liter}$$

This final value (0.0026446 tCO₂/liter) is used when calculating project emissions from diesel fuel consumption measured in liters.

At the facility, the diesel generator is activated approximately 9 days per year due to grid (TEİAŞ) electricity outages. On average, around 25 liters of diesel is consumed per day during these periods, resulting in an estimated annual diesel consumption of approximately 225 liters.

$$0.0026446 \text{ tCO}_2/\text{liter} \times 225 \text{ liters} = 0.595 \text{ tCO}_2/\text{y}$$

$$PE_y = 0.595 \text{ tCO}_2$$

¹¹Chapter 1: Introduction. In 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy. Intergovernmental Panel on Climate Change.

¹²Chapter 2: Stationary Combustion. In 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy. Intergovernmental Panel on Climate Change.

Leakage

As per the AMS-I.D "Grid-Connected Renewable Electricity Generation" Version 18.0 methodology, leakage emissions are considered to be zero for renewable energy generation project activities.

Therefore,

$$LE_y = 0$$

Emission Reductions

As per the AMS-I.D "Grid-Connected Renewable Electricity Generation" Version 18.0 methodology, emission reductions are calculated using the following approach:

$$ER_y = BE_y - PE_y - LE_y$$

$$ER_y = 32,050 - 0.595 - 0 = 32,049 \text{ tCO}_2/\text{y}$$

The net electricity generated is continuously measured by a power meter at the grid interface and recorded on a monthly basis. EPIAŞ records serve as the primary source for verifying the exact electricity generation of the project and the electricity imported from the grid. To ensure accuracy, the quantity of net electricity delivered to the grid is cross-checked against meter reading records (OSF forms – OSOS), which are provided to the company by TEİAŞ.

$$\begin{aligned} & \text{Net electricity generation supplied by the project plant to the grid [MWh]} \\ &= \text{Electricity supplied to the grid [MWh]} \\ &- \text{Electricity consumption from the grid [MWh]} \end{aligned}$$

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

Net Benefit to SDG 7

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
01.05.2025	0	35,521.926	35,521.926
2026	0	52,920.420	52,920.420
2027	0	52,920.420	52,920.420
2028	0	52,920.420	52,920.420

2029	0	52,920.420	52,920.420
2030	0	52,920.420	52,920.420
2031	0	52,920.420	52,920.420
30.04.2032	0	17,543.482	17,543.482
Total	0	370,587.927	370,587.927
Total number of crediting years		7	
Annual average over the crediting period		0	52,941.132
			52,941.132

Net Benefit to SDG 13

YEAR		BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
01.05.2025		21,505	0.399	21,504
2026		32,038	0.595	32,037
2027		32,038	0.595	32,037
2028		32,038	0.595	32,037
2029		32,038	0.595	32,037
2030		32,038	0.595	32,037
2031		32,038	0.595	32,037
30.04.2032		10,621	0.197	10,620
Total		224,354	4.167	224.346
Total number of crediting years			7	
Annual average over the crediting period		32,050	0.595	32,049

Net Benefit to SDG 8

YEAR		BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
01.05.2025		0	10	10
2026		0	10	10
2027		0	10	10
2028		0	10	10

2029	0	10	10
2030	0	10	10
2031	0	10	10
30.04.2032	0	10	10
Total	0	10	10
Total number of crediting years		7	
Net Impact per Year	0	10	10

If the project had not been implemented, employment opportunities for workers would not have been created. Therefore, the project's impact on this SDG is quantified as 1.

The positions at the wind farm require skilled labor, which is ensured through adequate training. Attendance records or training certificates will be presented during the verification process to confirm compliance. Furthermore, the project guarantees a safe and healthy work environment, ensuring that workers are not exposed to unsafe or hazardous conditions.

B.7. Monitoring plan

B.7.1 Data and parameters to be monitored

SDG 13

Data / Parameter	ER _y
Unit	tCO ₂ /y
Description	In accordance with AMS I.D, baseline emissions encompass CO ₂ emissions resulting from electricity generation in power plants that are displaced due to the implementation of the project activity. These baseline emissions are equivalent to the emission reductions achieved and are determined by multiplying the net electricity generated by the project activity with the combined margin CO ₂ emission factor applicable to grid-connected power generation in year Y.

Source of data	Both measured and calculated emission reductions will be determined based on EPIAŞ records for net electricity generation and the grid emission factor of 0.6054 tCO ₂ /MWh, as published by Turkish Ministry of Energy and Natural Resources.
Value(s) applied	32,049 tCO ₂ /y
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	The calculation of the combined margin CO ₂ emission factor, and consequently the baseline emissions, supports the demonstration of the project's contribution to SDG Target 13.3, which focuses on enhancing education, raising awareness, and strengthening human and institutional capacity for climate change mitigation, adaptation, impact reduction, and early warning.
Additional comment	

SDG 7

Data / Parameter	EGpj, grid, y
Unit	MWh/y
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Source of data	Direct measurement (EPIAS)
Value(s) applied	The annual electricity fed to the grid is estimated as 52,941.132 MWh/y
Measurement methods and procedures	The net electricity generated is continuously measured by a power meter at the grid interface and recorded on a monthly basis. EPIAŞ records serve as the primary source for verifying the exact electricity generation of the project and the imports from the grid. To ensure accuracy, the quantity of net electricity delivered to the

	grid is cross-checked against meter reading records (OSF forms – OSOS), which are provided to the company by TEİAŞ. To ensure that only the electricity generation corresponding to the registered 15 MW capacity is considered for emission reduction calculations, the project monitors the output of the original six Nordex N90 turbines separately. The generation data used for the calculations is based solely on these turbines, and any additional generation from turbines installed after registration is excluded. Metering and monitoring practices have been set up to clearly distinguish between the registered and non-registered capacity, ensuring compliance with Gold Standard requirements. To obtain actual values based on the registered capacity of the power plant (15 MW), the ratio between feasibility studies of the registered and added capacities will be taken into account. Consequently, baseline emissions will be determined based on the adjusted net electricity supplied to the grid.																		
Monitoring frequency	Monthly <table> <tr> <th></th> <th>Main Power Meter</th> <th>Back-up Power</th> </tr> <tr> <td>Manufacturer</td> <td>EMH</td> <td>EMH</td> </tr> <tr> <td>Serial Number</td> <td>5316624</td> <td>5316625</td> </tr> <tr> <td>Date of Installation</td> <td>26/11/2015</td> <td>26/11/2015</td> </tr> <tr> <td>The Test Date of the Meter</td> <td>02/12/2017</td> <td>02/12/2017</td> </tr> <tr> <td>Accuracy of meter</td> <td>0.2S class</td> <td>0.2S class</td> </tr> </table>		Main Power Meter	Back-up Power	Manufacturer	EMH	EMH	Serial Number	5316624	5316625	Date of Installation	26/11/2015	26/11/2015	The Test Date of the Meter	02/12/2017	02/12/2017	Accuracy of meter	0.2S class	0.2S class
	Main Power Meter	Back-up Power																	
Manufacturer	EMH	EMH																	
Serial Number	5316624	5316625																	
Date of Installation	26/11/2015	26/11/2015																	
The Test Date of the Meter	02/12/2017	02/12/2017																	
Accuracy of meter	0.2S class	0.2S class																	
QA/QC procedures	A backup meter is utilized to cross-check accuracy, and both meters undergo periodic testing to ensure reliability. The metering devices comply with the technical requirements outlined in the Communiqué for																		

	Metering Devices to be Used in the Electricity Market, which specifies the minimum accuracy standards that must be met, categorized according to the installed capacity. Periodic testing and maintenance of these meters fall under the responsibility of TEİAŞ. Since TEİAŞ meters are sealed by TEİAŞ, the project proponent has no authority to intervene with these devices. - The net electricity exported/supplied to the grid is determined as the difference between the measured quantities of grid electricity export and import. EPIAŞ records are cross-checked against meter reading protocols (OSOS-OSF forms) to ensure data accuracy. - In addition to metering devices, each wind turbine's generation is continuously monitored, and the data is securely stored through a SCADA system for comprehensive tracking and verification.
Purpose of data	In support of SDG Target 7.2, which aims to substantially increase the share of renewable energy in the global energy mix by 2030, the calculation of emission reductions is based on the net electricity generated by the project and its displacement of fossil-fuel-based power generation.
Additional comment	

SDG8

Data/parameter	Number of employees
Unit	Number
Description	Number of people permanently working for the operation of the project
Source of data	Social Security System (SGK)
Value(s) applied	10 employees
Measurement methods and procedures	SGK records of employees are provided during each monitoring period

Monitoring Frequency	Yearly
QA/QC Procedures	SGK records of employees are provided during each monitoring period.
Purpose of data	In alignment with SDG Target 8.5, which aims to achieve full and productive employment and ensure decent work for all individuals—including women, men, young people, and persons with disabilities—by 2030, the project supports equitable economic opportunities and fosters fair compensation practices, including equal pay for work of equal value.
Additional comment	

Data/parameter	a) Number of employees to be trained for the construction and operation of the plant b) Fair wage, working hours and occupational injuries
Unit	a)N/A b) N/A
Description	a) Enhancement of Workplace Safety for Labor Providers The project proponent is committed to improving workplace safety for labor providers. Workers benefit from comprehensive training on construction health and safety. As part of this commitment, one health and safety training session will be conducted annually to ensure ongoing awareness and compliance with best practices. b) Social Security Conditions for Employees Employees are provided with social security benefits, ensuring their access to essential protections, including healthcare, workplace accident coverage, and other entitlements that contribute to their overall well-being and job security.
Source of data	a) The number of training sessions conducted and employee participation are systematically monitored and documented through Training Records b) Employee social security coverage is recorded and verified through Social Security Records
Value(s) applied	a)Training and attendance certificates have been b) Social Security Records

Measurement methods and procedures	N/A
Monitoring Frequency	Yearly
QA/QC Procedures	N/A
Purpose of data	In alignment with SDG Target 8.8, which seeks to protect labor rights and promote safe and secure working environments for all workers—including migrant workers, particularly women migrants, and those in precarious employment—the project implements a structured monitoring system. This includes tracking training sessions, employee attendance, and workplace conditions through Training Records and Social Security Records, ensuring compliance with occupational health and safety standards and labor rights regulations.
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 storage. The consultant will utilize the monitored data to calculate emission reductions and prepare the monitoring report accordingly.

Please find the operational structure of the Boreas-1 Enez Wind Power Plant outlined below:

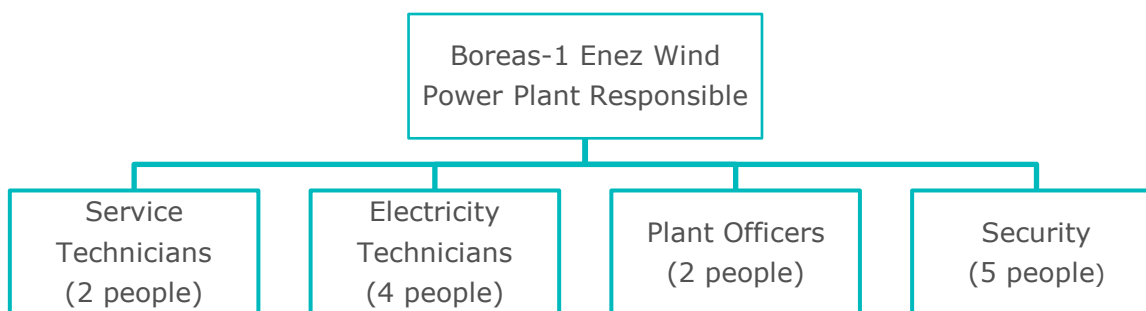


Figure 5 SGK records of employees are provided during each monitoring period.

According to the applied methodology, both the electricity supplied to the national grid by the project and the electricity consumed by the project activity must be monitored. Net electricity generation is determined as the difference between the electricity supplied and consumed and is used for emission reduction calculations.

Two power meters are installed at the grid interface of the project:

- One serves as the main meter, while the other is a backup meter for cross-checking purposes.
- Both meters are jointly inspected and sealed to prevent interference by any party.

To determine the actual electricity generation of the added units, the expected generation of the registered capacity is used as a reference. The proportion of the

added capacity is applied to estimate the actual generation, which is then subtracted from the total project activity generation.

Monitoring and Data Reporting

- The transmission line capacity connected to the project is 154 kVA.
- The accuracy class for the main power meter is 0.2S, as specified in the Communiqué for Power Meters.
- The backup meter maintains the same 0.2S accuracy class.
- Calibration is conducted annually, in accordance with standard procedures (IEC-EN 60687), by either TEİAŞ or the meter provider on behalf of TEİAŞ.
- The most recent calibration was performed on 02/12/2017.
- Electricity generation data is recorded hourly by personnel and remotely monitored by Trakya Load Dispatching Center (TEİAŞ).
- At the end of each month, readings are submitted via email to Babaeski TEİAŞ Office and Trakya Load Center for validation and approval.

EPIAŞ Reporting and Financial Settlement

- The Project Owner enters the expected electricity generation daily on the EPIAŞ website, the financial settlement center for TEİAŞ.
- EPIAŞ data is accessible via a unique user ID and password.
- Any difference between expected and actual generation (imbalance) is financially accounted for at the end of each month.
- Electricity generation data is reported on a monthly basis.

Data Archiving and Crediting Period

- EPIAŞ records will be the primary source for net electricity generation values, while meter reading forms (OSF forms) issued by TEİAŞ will be used for cross-checking.
- All monitored data will be electronically archived by the Project Owner and retained for at least two years after the end of the last crediting period.

Given that the installed capacity of the project activity has been increased with the addition of two units, the net electricity generation of the registered capacity will be monitored by comparing the expected generation of these additional units.

Table 9 Environmental and Social Indicators for Project Monitoring

No	Indicator	Explanation
1	Air Quality	The indicator is stated to be monitored during the construction phase.
2	Water quality and quantity	Domestic wastewater is collected by the designated entities by the municipality. From the start date of the project activity, the process is handled according to the regulations of Ministry of Environment and Urbanization.
3	Soil Condition	The indicator is stated to be monitored during the construction phase.
4	Other pollutants (Noise level)	There has not been any complaint on noise, since the project started operation. Additionally, the nearest village is approximately 1km far from the Project field.
5	Other pollutants(Solid waste)	The indicator is stated to be monitored during the construction phase.
6	Biodiversity	The indicator is stated to be monitored during at the end of the first and second year of operation.
8	Livelihood of the poor	Various contributions and donations to local community have done by the project owner and the related proofs were submitted to the DOE regarding the first crediting period. The project owner use its best efforts to help in case of any need from the villagers.
9	Livelihood of the poor	
11	Human and institutional capacity	

SECTION C. DURATION AND CREDITING PERIOD

C.1. Duration of project

C.1.1 Start date of project

26/01/2009 (Date of the validation of EM contract with the second down payment and bank letter)

C.1.2 Expected operational lifetime of project

49 years

C.2. Crediting period of project

C.2.1 Start date of crediting period

Start date of the third crediting period: 01/05/2025

Due to a delay in the initiation of the second crediting period, there has been a disruption in the continuity of the crediting timeline. Delay in the completion of re-validation beyond the last date of current certification cycle shall result in a reduction of any issuance of Certified Products and/or Impact Statements available during following certification cycle. Accordingly, the start date of the third crediting period is May 01, 2025, as indicated on the GS Assurance Platform.

Even though the commissioning date of the power plant is 09/04/2010 , the crediting period starts two years before the registration date as per the GS guidelines.

C.2.2 Total length of crediting period

7 years, renewed twice

SECTION D. SUMMARY OF SAFEGUARDING PRINCIPLES AND GENDER SENSITIVE ASSESSMENT

D.1 Safeguarding Principles that will be monitored

A completed Safeguarding Principles Assessment is in [Appendix 1](#), ongoing monitoring is summarised below.

PRINCIPLES	MITIGATION MEASURES ADDED TO THE MONITORING PLAN
Human Rights (P.1)	The project respects internationally proclaimed human rights and does not engage in or support human rights abuses. Stakeholder concerns are monitored through engagement processes. A grievance mechanism is in place to address any issues raised by affected communities.

Gender Equality and Women's Empowerment (P.2)	The project ensures equal opportunities for men and women in participation, decision-making, and benefit-sharing. Gender-sensitive policies are in place, and training programs support inclusivity.
Community Health and Safety (P.3)	Risk assessments identify and address potential health and safety impacts on local communities. Pollution, contamination, and public health indicators are monitored. Emergency preparedness plans are established, and local stakeholders are informed of safety measures.
Cultural Heritage, Indigenous People, Displacement, and Resettlement (P.4)	The project avoids impacts on cultural heritage sites and respects indigenous rights. Displacement risks are managed through consultation and compensation measures if necessary.
Corruption (P.5)	Anti-corruption measures are integrated into project operations, with financial transactions and procurement procedures monitored to ensure compliance with ethical standards.
Economic Impacts (P.6)	The project promotes local employment and complies with labor rights standards. Potential negative economic consequences are identified and addressed through stakeholder engagement and economic sustainability strategies.
Climate and Energy (P.7)	The project aligns with climate goals by reducing GHG emissions. Energy efficiency measures are in place to minimize environmental impact.
Water (P.8)	Water resource management prevents negative impacts on natural water flows and water body stability. Erosion control measures are implemented where needed.
Environment, Ecology, and Land Use (P.9)	Biodiversity conservation measures protect endangered species, natural habitats, and ecosystem services. Waste management practices comply with environmental standards.

Human Rights (P.1)	The project respects internationally proclaimed human rights and does not engage in or support human rights abuses. Stakeholder concerns are monitored through engagement processes. A grievance mechanism is in place to address any issues raised by affected communities.
Gender Equality and Women's Empowerment (P.2)	The project ensures equal opportunities for men and women in participation, decision-making, and benefit-sharing. Gender-sensitive policies are in place, and training programs support inclusivity.
Community Health and Safety (P.3)	Risk assessments identify and address potential health and safety impacts on local communities. Pollution, contamination, and public health indicators are monitored. Emergency preparedness plans are established, and local stakeholders are informed of safety measures.
Cultural Heritage, Indigenous People, Displacement, and Resettlement (P.4)	The project avoids impacts on cultural heritage sites and respects indigenous rights. Displacement risks are managed through consultation and compensation measures if necessary.

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 ensures that all employment opportunities are open to both men and women, based on qualifications and job requirements, without gender-based discrimination. The project provides technical training programs to develop skilled labor, ensuring that both men and women have access to learning opportunities.
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	Access to project participation and benefits is not restricted based on gender. The BOREAS project ensures equal opportunities for both men and women, in accordance with non-discrimination principles.
Question 2 - Explain how the project aligns with existing country policies, strategies and best practices	The project does not engage in, nor is it complicit in, any form of discrimination based on gender, race, religion, sexual orientation, or any other basis. Turkiye has ratified the International Labour Organization (ILO) Convention, with Articles 100 and 111 specifically addressing non-discrimination and equal treatment in employment. Additionally, the Project Owner adheres to Article 5/8425 of the Labour Law, which explicitly prohibits discrimination on the grounds of gender, race, religion, sexual orientation, or any other basis in the workplace.
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

During the verification period, follow-up interviews were conducted by the VVB to assess the accuracy and reliability of the information provided. The key topics covered in the interviews included:

- Installed technology and monitoring equipment (e.g., electricity meters)
- Project implementation and operational aspects
- Assessment of the baseline scenario
- Staff training procedures
- Calibration procedures for monitoring equipment
- Monitoring system and data management
- Data collection, recording, and reporting procedures
- QA/QC procedures
- Compliance with GS eligibility criteria
- Emission reduction calculations values
- Evaluation of ex-post parameter
- Feedback from local stakeholders regarding project implementation

A site visit was conducted on 15/05/2024, during which local stakeholders confirmed that they had been informed about the project activity prior to its implementation. No complaints were raised by the interviewed local stakeholders during the visit. The discussions covered the following aspects:

- Potential noise and shadow concerns related to the project activity
- Communication methods between the project developer and employees
- Local employment opportunities (Stakeholders expressed satisfaction with the job opportunities created by the project)

Furthermore, it was confirmed that a grievance mechanism is in place, and this was acknowledged by the interviewed stakeholders. No concerns were raised regarding its accessibility or effectiveness during the on-site visit on 15/05/2024.

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 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 exist.
GS Contact (mandatory)	help@goldstandard.org
Other	Project Owner: Boreas Enerji Üretim Sistemleri Sanayi ve Ticaret A.Ş. Address: Ahmet Adnan Saygun Cad. Kultur Mah. Venus Sok. 1/15 Besiktas Tel: +90 212 265 78 01 E-Mail: ozanorsan@boreas.com.tr Justification: This information has been explained to the local people and provided in the Continuous Input / Grievance Expression Process Book

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.

SOCIAL SAFEGUARDING PRINCIPLES		
Reference requirement	Question	Response
P.1 Human Rights		
P.1.1.1 	Does the project developer, its representatives and the Project disrespect internationally proclaimed human rights?	☐ YES ☒ NO
P.1.1.1 	Is the project involved or complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights?	☐ YES ☒ NO
P.1.1.2 	Have local communities or individuals raised human rights concerns regarding the project (e.g., during the stakeholder engagement process, grievance processes, public statements)?	☐ YES ☒ NO
P.1.1.3 	Is there a risk that rights-holders (e.g., Project-affected stakeholders) do not have the capacity to claim their rights?	☐ YES ☒ NO
P.1.1.3 	Does this project undermine national or regional measures for the realisation of the right to development?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements. N/A		
Would the project potentially involve or lead to:		
P.1.1.1 	adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalised groups?	☐ YES ☐ POTENTIALLY ☒ NO
P.1.1.2 	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalised or excluded individuals or groups, including persons with disabilities?	☐ YES ☐ POTENTIALLY ☒ NO
P.1.1.3 	restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalised individuals or groups, including persons with disabilities?	☐ YES ☐ POTENTIALLY ☒ NO
P.1.1.3 	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	☐ YES ☐ POTENTIALLY

		☒ NO
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Briefly describe below how the project incorporates a human rights-based approach.

For example, by describing how the project design:

- is informed by human rights analysis, including from UN human rights mechanisms (human rights treaty bodies, universal periodic review, special procedures)
- includes measures to assist the government to realise (respect, protect and fulfil) human rights under international law and to implement human rights-related standards in national law (whichever is higher)
- enhances the availability, accessibility and quality of benefits and services for potentially marginalised individuals and groups, and to increase their inclusion in decision-making processes that may impact them (consistent with the non-discrimination and equality human rights principle)
- provides reasonable accommodations to strengthen inclusivity and accessibility of project benefits and services to persons with disabilities.

The project integrates a human rights-based approach by ensuring inclusivity, accessibility, and compliance with international and national human rights frameworks.

The project is informed by human rights analysis from relevant UN human rights mechanisms, including treaty bodies, the Universal Periodic Review, and special procedures. This ensures adherence to globally recognized human rights principles.

It incorporates measures that assist national and local governments in fulfilling their human rights commitments under international law. The project aligns with both national and international human rights-related standards, applying the higher standard when discrepancies exist.

P.2 | GENDER EQUALITY AND WOMEN'S EMPOWERMENT

P.2.1.1 	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g., during the stakeholder engagement process, grievance processes, public statements)?	☐ YES ☒ NO
P.2.1.2 	Does the project undermine the principles of non-discrimination, equal treatment, and equal pay for equal work?	☐ YES ☒ NO
P.2.1.2 	Does the project prevent men and women from having equal opportunities to participate in identified tasks and activities, whether through paid work, volunteer work, or community contributions, as appropriate?	☐ YES ☒ NO
P.2.1.2 	Does the project limit the participation of women or men based on pregnancy, maternity/paternity leave, or marital status?	☐ YES ☒ NO
P.2.1.2 	Is information about project objectives being communicated in a way that is inappropriate for the local context and not tailored to the methods of understanding of both women and men, which could hinder their participation?	☐ YES ☒ NO
P.2.1.3 	Has the project assessed gender risks without referencing the country's gender strategy or equivalent national commitment?	☐ YES ☒ NO

P.2.1.4 	Has expert stakeholder(s) been involved, and has their input been requested for the project design on gender equality and women's empowerment?	☐ YES ☒ NO
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If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

N/A

Would the project potentially involve or lead to:

P.2.1.1 	adverse impacts on gender equality and/or the situation of women and girls?	☐ YES ☐ POTENTIALLY ☒ NO
P.2.1.1 	exacerbation of risks of gender-based violence? For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.	☐ YES ☐ POTENTIALLY ☒ NO
P.2.1.2 	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	☐ YES ☐ POTENTIALLY ☒ NO
P.2.1.2 	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well-being.	☐ YES ☐ POTENTIALLY ☒ NO

Briefly describe below how the project is addressing any identified risk to gender equality and women's empowerment.

The project guarantees equal opportunities for women and men in both volunteer and employment roles, ensuring fair treatment and access to resources.

The project owner actively promotes the engagement of both men and women, recognizing the importance of diverse participation in decision-making and implementation.

Participation in the project and access to its benefits are equally available to both women and men without restrictions, fostering an inclusive environment that supports gender equality in all aspects of the project's activities.

[P.3 | COMMUNITY HEALTH AND SAFETY](#)

P.3.1.1 	Does the project involve potential risks to the health and safety of affected communities during its life cycle?	☐ YES ☒ NO
P.3.1.2 	Does the project involve any potential risks to the workers' safety and health?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

N/A

Would the project potentially involve or lead to:

P.3.1.1 	construction and/or infrastructure development (e.g., roads, buildings, dams)?	☐ YES ☒ NO
P.3.1.2 	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	☐ YES ☐ POTENTIALLY ☒ NO
P.3.1.2 	harm or losses due to failure of structural elements of the project (e.g., collapse of buildings or infrastructure)?	☐ YES ☐ POTENTIALLY ☒ NO
P.3.1.2 	risks of water-borne or other vector-borne diseases (e.g., temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	☐ YES ☐ POTENTIALLY ☒ NO
P.3.1.2 	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g., explosives, fuel and other chemicals during construction and operation)?	☐ YES ☐ POTENTIALLY ☒ NO
P.3.1.2 	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g., food, surface water purification, natural buffers from flooding)?	☐ YES ☐ POTENTIALLY ☒ NO

Briefly describe below how the project is addressing any identified risk related to community health and safety.

The project prioritizes community health and safety by implementing measures to minimize potential risks. It ensures compliance with health and safety regulations, conducts risk assessments, and applies mitigation strategies to prevent accidents and hazards. The project promotes safe working conditions, provides training on safety protocols, and ensures access to necessary healthcare resources for workers and affected communities. Additionally, it includes emergency response plans, pollution control measures, and infrastructure designs that prioritize public well-being. Continuous monitoring and stakeholder engagement help address any emerging health and safety concerns effectively.

P.4 | CULTURAL HERITAGE, INDIGENOUS PEOPLE, DISPLACEMENT AND RESETTLEMENT

P.4.1 | Sites of Cultural and Historical Heritage

P.4.1.1 	Does the project involve altering, damaging, or removing sites, objects, or structures of significant cultural heritage?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

N/A

Would the project potentially involve or lead to:		
P.4.1.1 	activities adjacent to or within a cultural heritage site?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.1.1 	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.1.1 	alterations to landscapes and natural features with cultural significance?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.1.1 	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	☐ YES ☐ POTENTIALLY ☒ NO
P.4.1.2 	utilisation of tangible and/or intangible forms (e.g., practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.1.2 	If answer to question above is "YES" or "POTENTIALLY" - are the communities made aware of their right under the law, scope and nature of proposed development and its potential consequences?	☐ YES ☐ NO ☒ NA
P.4.1.3 	If answer to question above is "YES" - does the project provide equitable sharing of benefits from commercialisation of such knowledge, innovation, or practice, consistent with their customs and traditions?	☐ YES ☐ NO ☒ NA
P.4.1.4 	If answer to question above is "YES" - are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
P.4.1.4 	If answer to question above is "YES", has project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA
If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.		
N/A		
P.4.2 Forced Eviction and Displacement		
P.4.2.1 	Does the project involve any risks related to involuntary relocation of people?	☐ YES ☒ NO

If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

N/A

Would the project potentially involve or lead to:

P.4.2.1 	risk of forced evictions or involuntary relocation of people?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.2.2 	temporary or permanent and full or partial physical displacement (including people without legally recognisable claims to land)?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.2.2 	economic displacement (e.g., loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.2.2 	If answer to question above is "YES" or "POTENTIALLY", - has the project developed Resettlement Action Plan or Livelihood Action Plan in consultation and agreement with affected individual, group or community? - has the project integrated Resettlement Action Plan or Livelihood Action Plan into the Project design?	☐ YES ☐ NO ☒ NA
P.4.2.3 	If answer to question above is "YES" - are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
P.4.2.3 	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.4.3 | LAND TENURE AND OTHER RIGHTS](#)

P.4.3.1 	Does the project involve any risks related to identifying and managing legitimate tenure rights that may be affected by the project?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

N/A

Would the project potentially involve or lead to:

P.4.3.1 	impacts on or changes to land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.3.1 	uncertainties with regards to land tenure, access rights, usage rights or land ownership? Examples include, but are not limited to water access rights, community-based property rights and customary rights.	☐ YES ☐ POTENTIALLY ☒ NO
P.4.3.2 	Changes in legal arrangements, if yes, are the changes done in line with relevant laws and regulations?	☐ YES ☐ NO ☒ NA
P.4.3.2 	Changes in legal arrangements, if yes, are these changes agree with free, prior and informed consent of the involved stakeholders?	☐ YES ☐ NO ☒ NA
P.4.3.3 	Does some other entity (other than the project developer) hold uncontested land title for the entire Project Boundary?	☐ YES ☒ NO ☐ NA
P.4.3.4 	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☒ NO ☐ NA
P.4.3.4 	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA
P.4.3.5 	Have project developer in consultation with stakeholders established a functioning mechanism to receive, process, resolve, communicate and record grievances?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.4.4 | INDIGENOUS PEOPLES](#)

P.4.4.1 	Does the project involve Indigenous People within the Project area of influence who may be affected directly or indirectly by the Project?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project potentially involve or lead to:

P.4.4.1 	affect areas where indigenous peoples are present (including project area of influence)	☐ YES ☐ POTENTIALLY ☒ NO
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P.4.4.1	affect areas, land and territory claimed by indigenous peoples?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.4.1	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.4.7	If answer to above questions is "YES" or "POTENTIALLY", - Is it determined that the proposed project may affect the rights, lands, resources, or territories of indigenous people? - Has an "Indigenous People Plan" (IPP) or "Indigenous People Plan Framework" been elaborated and included in the project documentation? - Was the plan developed in accordance with the effective and meaningful participation of indigenous peoples and in accordance with UNDP Guidelines?	☐ YES ☐ NO ☒ NA
P.4.4.3	risk of forcibly removing indigenous people from their lands and territories?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.4.4	utilisation and/or commercial development of natural resources on lands and territories claimed by indigenous peoples? Consider, and where appropriate ensure, consistency with the answers under Principle 4.1 above	☐ YES ☐ POTENTIALLY ☒ NO
P.4.4.5 P.4.4.6	If answer to question above is "YES" or "POTENTIALLY" - Did the project obtain free, prior and informed consent from indigenous people before taking their cultural, intellectual, religious, and/or spiritual property? - Does the project ensure that the indigenous people receive an equitable sharing of benefits resulting from the use of their traditional knowledge and practices? ? - Does the project ensure that the sharing of benefits resulting from the use of indigenous peoples' traditional knowledge and practices is culturally appropriate and inclusive? - Does the project ensure that the provision of equitable sharing of benefits does not impede land rights or equal access to basic services including	☐ YES ☐ NO ☒ NA

	health services, clean water, energy, education, safe and decent working conditions, and housing?	
P.4.4.8 	Does the project lack appropriate feedback and grievance channels for Indigenous Peoples and their representatives?	☐ YES ☐ NO ☒ NA
P.4.4.8 	Has a grievance mechanism not been established at the beginning of programme or project implementation with due consideration given to customary dispute settlement mechanisms among the Indigenous Peoples concerned and will it remain operational throughout the project cycle?	☐ YES ☐ NO ☒ NA
P.4.4.9 	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☒ NO ☐ NA
P.4.4.9 	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.5 | CORRUPTION](#)

P.5.1.1 	Does the project involve, or is it complicit in, contributing to or reinforcing corruption or corrupt projects?	☐ YES ☒ NO
P.5.1.1 	Does the project have a risk of encouraging bribery, kickbacks, or other unethical behavior?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

ECONOMIC SAFEGUARDING PRINCIPLES

[P.6 | ECONOMIC IMPACTS](#)

[P.6.1 | LABOUR RIGHTS AND WORKING CONDITIONS](#)

P.6.1.1 	Does the project involve, facilitate, or condone forced labor, or pose a potential risk of forced labor?	☐ YES ☒ NO
P.6.1.1 	Does the project violate any labor or health and safety laws, international obligations, or ILO conventions?	☐ YES ☒ NO
P.6.1.2 	Does the project violate the principles of equal opportunity and fair treatment in its employment decisions?	☐ YES ☒ NO

P.6.1.3 	Does the project violate national laws, if available regarding non-discrimination in employment?	☐ YES ☒ NO
P.6.1.4 P.6.1.5 	Does the project allow child labor?	☐ YES ☒ NO
P.6.1.7 P.6.1.8 	Does the project have insufficient processes and measures in place to ensure the safety and health of project workers?	☐ YES ☒ NO
P.6.1.9 	Does the project have insufficient measures to safeguard and support vulnerable project workers, such as women, people with disabilities, migrant workers, and young workers, and to prevent any kind of harassment, abuse, bullying, or exploitation, including gender-based violence (GBV)?	☐ YES ☒ NO
P.6.1.10 	Does the project have no grievance mechanism available for workers to voice workplace concerns? Is information about this mechanism not provided to workers at the time of recruitment, or is it not easily accessible?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project potentially involve or lead to:

(NOTE: APPLIES TO BOTH PROJECT AND CONTRACTOR WORKERS)

P.6.1.1 	use of forced labour?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.1 	working conditions that do not meet national labour laws and international commitments?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.1 	working conditions that may deny freedom of association and collective bargaining?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.1 	absence of documented working agreements with all individual workers <i>if such agreements do not exist, or do not address working conditions and terms of employment, the project developer shall provide reasonable working conditions and terms of employment.</i>	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.1 	use of migrant workers? <i>if engaged, the developer shall ensure that they are engaged substantially equivalent terms and conditions to non-migrant workers carrying out similar work.</i>	☐ YES ☐ POTENTIALLY ☒ NO

P.6.1.1 	having no arrangements for basic services ¹³ for workers? <i>the project developer shall put in place and implement policies on the quality and management of the accommodation and provision of basic services in a manner consistent with the principles of non-discrimination and equal opportunity. Workers' accommodation arrangements should not restrict workers' freedom of movement or of association</i>	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.2 	any form of discrimination or harassment based on factors unrelated to job requirements, such as gender, race, nationality, ethnicity, social or indigenous origin, religion or belief, disability, age, or sexual orientation?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.2 	any form of discrimination in any aspect of employment, such as recruitment, compensation, working conditions, training, job assignment, promotion, termination, or discipline?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.2 	harassment, intimidation, and/or exploitation, especially in regard to women?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.3 	discriminatory working conditions and/or lack of equal opportunity where national law provides provision to address non-discrimination in employment?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.4 	use of child labour? (including third-party engaged workers)	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.4 	inadequate and verifiable mechanisms for age verification?	☐ YES ☒ NO
P.6.1.7 	no processes and measures in place for the safety and health of project workers?	☐ YES ☒ NO
P.6.1.7 	No provision of safety and health training provisions, including on the proper use and maintenance of personal protective equipment conducted by competent persons and the maintenance of training records?	☐ YES ☒ NO
P.6.1.7 	No provision to record and document accidents, diseases, incidents, and any resulting injuries, illnesses, or deaths?	☐ YES ☒ NO

¹³ Basic services requirements refer to minimum space, supply of water, adequate sewage and garbage disposal system, appropriate protection against heat, cold, damp, noise, fire, and disease-carrying animals, adequate sanitary and washing facilities, ventilation, cooking and storage facilities and natural and artificial lighting, and in some cases basic medical services.

P.6.1.8 	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	☐ YES ☒ NO
P.6.1.9 	No measures to protect vulnerable project workers from harassment, exploitation, and gender-based violence (GBV)? This includes women, people with disabilities, migrant workers, and young workers.	☐ YES ☒ NO
P.6.1.10 	No grievance mechanism available for workers to voice workplace concerns.	☐ YES ☒ NO
P.6.1.11 	No measures for due diligence and the establishment of policies and procedures to manage and monitor the performance of third-party employees in the project?	☐ YES ☒ NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.6.2 |NEGATIVE ECONOMIC CONSEQUENCES](#)

P.6.2.1 	Is there a risk of project failure during implementation or after project certification due to a lack of financial resources?	☐ YES ☒ NO
P.6.2.2 	Does the project have potential negative impacts or pose a risk to the local economy?	☐ YES ☒ NO
P.6.2.2 	Are there any potential risks or negative impacts this project may have on vulnerable or marginalised social groups, despite the benefits it may bring?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.6.2.2 	economic impacts (negative/detrimental) to the local economy?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.2.2 	negative economic consequences during and after project implementation, e.g., for vulnerable and marginalised social groups in targeted communities?	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.7 |CLIMATE AND ENERGY](#)

P.7.1 | GHG EMISSIONS

P.7.1.1	Does the project have a risk of increasing greenhouse gas emissions over the Baseline Scenario?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.7.1.1	increase greenhouse gas emissions over the Baseline Scenario?	☐ YES ☐ POTENTIALLY ☒ NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

P.7.2 | ENERGY SUPPLY

P.7.2.1	Does the project pose a risk to the availability and reliability of energy supply to other users?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.7.2.1	negative impact on the availability and reliability of energy supply to other users?	☐ YES ☐ POTENTIALLY ☒ NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

P.8 | WATER

P.8.1 | IMPACT ON NATURAL WATER PATTERNS/FLOWS

P.8.1.1	Does the project increase water usage to a level that will not allow for the maintenance of environmental flows?	☐ YES
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		☒ NO
P.8.1.1 	Does the project result in the discharge of wastewater that does not meet the required standard for beneficial reuse and could therefore negatively impact the environmental flow?	☐ YES ☒ NO
P.8.1.1 	Does the project have the potential risk to exceed the rate of recharge for the groundwater source?	☐ YES ☒ NO
P.8.1.1 	Does the project involve any processes or activities that could contaminate the groundwater and render it unsuitable for use?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.8.1.1 	affect the natural or pre-existing pattern of watercourses, groundwater and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	☐ YES ☐ POTENTIALLY ☒ NO
P.8.1.1 	Wastewater discharge of quality that does not meet the required standard for beneficial reuse?	☐ YES ☐ POTENTIALLY ☒ NO
P.8.1.1 	significant extraction, diversion of ground water? For example, construction of dams, reservoirs, river basin developments, groundwater extraction	☐ YES ☐ POTENTIALLY ☒ NO
P.8.1.2 	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.8.2 | EROSION AND/OR WATER BODY INSTABILITY](#)

P.8.2.1 	Does the project have a risk of negatively impacting the catchment and has it been assessed and addressed?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.8.2.2 -	negatively impact on the catchment area?	
P.8.2.5 	<i>If yes, Erosion prevention measures, including soil and slope protection measures, must be implemented before project commencement. These measures should involve natural terracing, infiltration strips, permanent ground cover, hedge and tree rows, and effective slope length assessment. Regular reassessment of these measures is necessary.</i>	☐ YES ☐ POTENTIALLY ☒ NO
P.8.2.6 	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

P.9 | ENVIRONMENT, ECOLOGY AND LAND USE

P.9.1 | LANDSCAPE MODIFICATION AND SOIL

P.9.1.1 -	Is there any risk of soil resource degradation or loss of ecosystem services provided by soils in the project?	
P.9.1.3 	<i>If yes, the project shall maintain healthy soils by minimising negative impacts on soil health, productivity, structure, and water retention. Steps to minimise soil degradation include crop rotation, composting, using N-fixing plants, and reducing tillage and ecologically harmful substances.</i>	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.9.1.4 	production, harvesting, and/or management of living natural resources by small-scale landholders and/or local communities?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.1.4 	if answer to above question "yes" or "potentially", does project adopt appropriate and culturally sensitive sustainable resource management practices?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

P.9.2 | VULNERABILITY TO NATURAL DISASTER

<u>P.9.2.1 </u>	Does the project have any risks associated with natural or man-made hazards that could result from land use changes due to the project?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

<u>P.9.2.2 </u>	any potential risks that require emergency preparedness and response planning?	☐ YES ☐ POTENTIALLY ☒ NO
<u>P.9.2.2 </u>	if answer to above question "yes" or "potentially", did the project developer disclose appropriate information about emergency preparedness and response to affected communities?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

P.9.3 | BIOSAFETY AND GENETIC RESOURCES

<u>P.9.3.1 </u>	Does the project involve the transfer, handling, and use of genetically modified organisms/living modified organisms that may result in adverse effects on biological diversity?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

<u>P.9.3.1 </u>	the transfer, handling and use of genetically modified organisms/living modified organisms (GMOs/LMOs) that result from modern biotechnology	☐ YES ☐ POTENTIALLY ☒ NO
<u>P.9.3.1 </u>	If answer to above question is "yes" has a risk assessment by a competent Expert stakeholder been carried out in accordance with Annex iii of the Cartagena protocol on biosafety to the convention on biological diversity?	☐ YES ☐ NO ☒ NA

P.9.3.2 	If answer to above question is "yes" has any risks identified in the risk assessment?	☐ YES ☐ NO ☒ NA
P.9.3.3 	Forestry (for example Afforestation/Reforestation) involving GMO planting? <i>Note - Forestry projects (for example Afforestation/Reforestation) involving GMO planting are not eligible for Certification under Gold Standard for the Global Goals.</i>	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.9.4 | RELEASE OF POLLUTANTS](#)

P.9.4.1 	Does the project have a risk of releasing pollutants to air, water, and land in routine, non-routine, or accidental circumstances?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.9.4.1 	any potential risk of pollutant release that cannot be avoided?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.4.3 	If answer to above question is "Yes" or "potentially", has the project identified all potential pollution sources that may degrade the quality of soil, air, surface, and groundwater in the project area?	☐ YES ☐ NO ☒ NA
P.9.4.2 	If answer to above question is "Yes" or "potentially", do the pollution prevention and control technologies and practices applied during the project life cycle align with national regulations or international best practices?	☐ YES ☐ NO ☒ NA
P.9.4.3 	If answer to above question is "Yes", is there a monitoring plan to ensure that mitigation measures are implemented, and resources are protected?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

P.9.5 | HAZARDOUS AND NON-HAZARDOUS WASTE

P.9.5.1 	Does the project involve the generation of waste materials (both hazardous and non-hazardous)?	☐ YES ☒ NO
P.9.5.3 	Does the project involve risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	☐ YES ☒ NO
P.9.5.5 	Does the project involve the use of any chemicals or materials subject to international bans or phase-outs?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.9.5.1 	the generation and management of waste materials?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.5.1 	treatment, destruction, or disposal of waste material?	☐ YES ☒ NO ☐ NA
P.9.5.1 	If answer to above question is "Yes", does the project involve an environmentally friendly method that includes appropriate control of emissions and residues resulting from the handling and processing of waste material?	☐ YES ☐ NO ☒ NA
P.9.5.3 	risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	☐ YES ☒ NO ☐ NA
P.9.5.3 	If answer to above question is "yes", does project has measures in place to address health risks?	☐ YES ☐ NO ☒ NA
P.9.5.4 	Involve manufacture, trade, and use of chemicals and hazardous materials subject to international bans or phase-outs due to their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

P.9.6 | PESTICIDES & FERTILISERS

P.9.6.1 	Does the project involve the use of chemical pesticides?	☐ YES ☒ NO
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P.9.6.5 	Does the project involve purchase, store, manufacture, trade or use products that fall in Classes IA (extremely hazardous) and IB (highly hazardous)	☐ YES ☒ NO
P.9.6.6 	Does the project use fertilisers, and if so, are measures being taken to minimise their use and nutrient losses to the environment?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.9.6.1 	chemical pesticides use for pest management?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.6.4 	If answer to question above is "yes" or "potentially", does project has documented Chemical Pesticides Policy in place?	☐ YES ☐ NO ☒ NA
P.9.6.5 	purchase, store, use, manufacture, or trade in Class II (moderately hazardous) pesticides?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.6.5 	If answer to question above is "yes" or "potentially", does project has appropriate controls on manufacture, procurement, or distribution and/or use of these chemicals?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.9.7 | HARVESTING OF FORESTS](#)

P.9.7.1 	Does the project have a risk of unsustainable forest management, including timber harvesting?	☐ YES ☒ NO
P.9.7.1 	Does the project pose a risk of depleting biodiversity and ecosystem functionality in areas where improved forest management is undertaken?	☐ YES ☒ NO
P.9.7.1 	Does the project risk not meeting requirements for environment-friendly, socially beneficial, and economically viable plantations using native species whenever possible?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

[P.9.8 | FOOD SECURITY](#)

P.9.8.1 	Does the project involve the risk of negatively influencing access to and availability of food for people affected?	☐ YES ☒ NO
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If the answer to the question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.9.8.1 	modification of the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	☐ YES ☐ POTENTIALLY ☒ NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.9.9 | ANIMAL WELFARE](#)

P.9.9.1 	Does the project involve any risks to animal welfare? Animal welfare shall be ensured by providing access to water and food, appropriate environment, humane treatment, and staff training. Evidence of mistreatment will be treated as an immediate non-conformity.	☐ YES ☒ NO
P.9.9.2 	Does the project involve any potential risk of excessive or inadequate use of veterinary medicines?	☐ YES ☒ NO
P.9.9.4 	Does the project involve the risk of administering synthetic growth promoters, including hormones?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.9.9.1 	animal husbandry or harvesting of fish populations or other aquatic species? ¹⁴	☐ YES ☐ NO ☒ NA
P.9.9.1 	limiting access for animals to basic needs like drinking water, adequate food, daylight, appropriate shelter etc.?	☐ YES

¹⁴ 'Involve' means if the project mechanism and/or impact(s) are achieved via changing animal husbandry practices in some way.

		☐ POTENTIALLY ☒ NO
P.9.9.3 	inadequate measures to isolate sick animals and control the spread of disease, especially zoonotic diseases?	☐ YES ☐ NO ☒ NA
P.9.9.5 	inadequate low-stress methods, equipment, and facilities that facilitate calm animal movement.	☐ YES ☐ NO ☒ NA
P.9.9.6 	inadequate measures to ensure that animals are exposed to the least stress possible during transportation and slaughtering?	☐ YES ☐ NO ☒ NA
P.9.9.7 	inappropriate spacing per animal and stocking rates per land unit?	☐ YES ☐ NO ☒ NA
P.9.9.8 	inadequate measures to address the specific needs of aquatic animals?	☐ YES ☐ NO ☒ NA
P.9.9.9 P.9.9.10 	primary production of living natural resources such as animal husbandry, aquaculture, and fisheries? If the answer is yes, implement industry-standard sustainable management practices in line with to one or more relevant and credible standards and utilise available technologies.	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.9.10 | HIGH CONSERVATION VALUE AREAS AND CRITICAL HABITATS](#)

P.9.10.1 	Does the project have the risk of negatively impacting HCV areas and/or critical habitats?	☐ YES ☒ NO
P.9.10.2 	Does the project in the project area or area of downstream impacts have risks to the following: native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells), habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:		
P.9.10.1	identified habitats as HCV areas and or Critical habitats?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.10.1	If answer to above question is "yes", does the project have any risks that could negatively impact the catchment, project success, and surrounding HCV and ecological assets, as well as any measurable adverse impacts on the criteria or biodiversity values for which the critical habitat was designated, and on the ecological processes supporting that biodiversity?	☐ YES ☐ NO ☒ NA
P.9.10.1	If answer to above question is "yes", is a robust, appropriately designed, and long-term Habitats and Biodiversity Action Plan absent which will make the project unable to achieve net gains of those biodiversity values for which the critical habitat was designated?	☐ YES ☐ NO ☒ N/A
P.9.10.2	Does the project area or area of downstream impacts have native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells), habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.10.2	If the answer to the above question is "yes", will the project have any adverse effects on these areas?	☐ YES ☐ No ☒ NA
P.9.10.3	If the answer to above question is "yes", does the project has opportunities to minimise unwarranted conversion or degradation of the habitat and to enhance the habitat as part of its development?	☐ YES ☐ No ☒ NA
P.9.10.4	Is the project applying Land Use & Forest Activity Requirements and managing a minimum 10% of the project area to protect or enhance the biological diversity of native ecosystems following HCV approach as per the given requirements?	☐ YES ☐ No ☒ NA
P.9.10.5	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.9.11 | ENDANGERED SPECIES](#)

P.9.11.1	Does the project lead to the reduction or negative impact on any recognised Endangered, Vulnerable or Critically Endangered species?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.9.11.2 	distortion of habitats of endangered species?	☐ YES ☐ POTENTIALLY ☒ NA
P.9.11.2 	If answer to the above question is "yes", does the project plan to protect and enhance them?	☐ YES ☐ POTENTIALLY ☐ NO ☒ N/A
P.9.11.2 	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

[P.9.12 | INVASIVE ALIEN SPECIES](#)

P.9.12.1 	Does project introduce any alien species (not currently established in the country or region of the project) into new environments?	☐ YES ☒ NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

N/A

Would the project involve or lead to:

P.9.12.1 	risk of introducing any alien species with a high risk of invasive behaviour regardless of whether such introductions are permitted under the existing regulatory framework?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.12.1 	risk of potential accidental or unintended introductions including the transportation of substrates and vectors (such as soil, ballast, and plant materials) that may harbour alien species.	☐ YES ☐ POTENTIALLY ☒ NO
P.9.12.2 	risk of spreading alien species into areas in which they have not already been established?	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

N/A

APPENDIX 2 - CONTACT INFORMATION OF PROJECT DEVELOPER(S)

Organization name	Boreas Enerji Üretim Sistemleri Sanayi veTicaret A.Ş.
Registration number with relevant authority	
Street/P.O. Box	Ahmet Adnan Saygun Cad. Kultur Mah. Venus Sok.
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Country	Turkiye
Telephone	+90 212 265 78 01
E-mail	+90 212 265 78 21
Website	http://www.boreas.com.tr/
Contact person	
Title	Vice Chairman
Salutation	Mr.
Last name	Orsan
Middle name	Ozan
First name	Sabri
Department	
Mobile	
Direct tel.	
Personal e-mail	ozanorsan@boreas.com.tr

APPENDIX 3 - LUF ADDITIONAL INFORMATION

Risk of change to the Project Area during Project Certification Period:	
Risk of change to the Project activities during Project Certification Period:	
Land-use history and current status of Project Area:	
Socio-Economic history:	
Forest management applied (past and future)	
Forest characteristics (including main tree species planted)	
Main social impacts (risks and benefits)	
Main environmental impacts (risks and benefits)	
Financial structure	
Infrastructure (roads/houses etc):	
Water bodies:	
Sites with special significance for indigenous people and local communities - resulting from the Stakeholder Consultation:	
Where indigenous people and local communities are situated:	
Where indigenous people and local communities have legal rights, customary rights or sites with special cultural, ecological, economic, religious or spiritual significance:	

APPENDIX 4 - DESIGN CHANGES

A4.1. Details of proposed or actual design change

>>

A4.2. Describe the impacts of design change on the following

a. Additionality

>>

b. Applicability of methodology and other methodological regulatory documents with which the project activity has been certified

>>

c. Compliance with the monitoring plan of the applied methodology

>>

d. Level of accuracy and completeness in the monitoring of the project activity compared with the requirements contained in the registered monitoring plan

>>

e. Scale of the project activity

>>

f. Stakeholder consultation

>>

g. Sustainable development criteria

>>

h. Safeguarding assessment

>>

i. Compliance with applicable legislation

>>

j. **Only for LUF Projects:** Transparent summary of all approved changes in Project Area, Eligible Area and accompanying changes in ex-ante emissions removals.

DATE OF APPROVED DESIGN CHANGE (MM/DD/YYYY)	PROJECT AREA (HA)		ELIGIBLE AREA (HA)		EX-ANTE ESTIMATE (TCO ₂ E)	
	INCREASE OR DECREASE ?	VALUE (HA)	INCREASE OR DECREASE?	VALUE (HA)	INCREASE OR DECREASE ?	PERCENTAGE (%)

DOCUMENT HISTORY

Version	Date	Remarks
1.5	29 June 2023	Editorial changes to match V2.1 of the Safeguarding Principles Requirements
1.4	21 June 2023	Editorial changes to match V2.0 of the Safeguarding Principles Requirements
1.3	14 April 2023	Integrated the design change memo as annex of the document. Editorial changes
1.2	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Inclusion criteria table added Gender sensitive requirements added Prior consideration (1 yr rule) and Ongoing Financial Need added Safeguard Principles Assessment as annex and a new section to include applicable safeguards for clarity Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on Stakeholder Consultation information required Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.1	24 August 2017	Updated to include section A.8 on 'gender sensitive' requirements
1.0	10 July 2017	Initial adoption