

**Gold Standard for the Global Goals
Transition Annex**
*(To be used by all GS CDM/VER stand alone projects and PoAs, Micro
Scale stand alone projects and Micro PoAs)*



Version 1 – September 2017

Gold Standard®

KEY PROJECT INFORMATION

Title of Project/PoA/Activity:	AY-YILDIZ 15 MW WPP
GS ID of the project/PoA/activity:	GS 634 ¹
GS Version:	GS4GG
Brief description of Project:	The Ay-Yıldız Wind Power Project is located within the boundaries of Bandırma District of Balıkesir province of Turkey. Project has been commissioned in 01/09/2009 with 5 turbines, each having 3 MWe capacity and 15MWe total installed capacity. In 2017, addition of four new turbine each having 3.3MW capacity has been approved and permission for increasing total installed capacity to 28.2 MWe has been granted. In final layout of the project, total number of turbine installed has been 9 turbines (5×3MWe+4×3.3MWe) with total installed capacity of 28.2 MWm/MWe. Total expected generation has increased from 51.32 GWh to 98.7 GWh after extension. With this extension, expected total emission reduction has increased from 30,997 tCO ₂ e to 56,176 tCO ₂ e.
Project type: Energy/Land Use	Energy
For Renewable Energy Projects – intention to apply RECs Labels (y/n)	No
GS Stream (CDM/VER):	VER
Scale (large/scale/micro):	Large Scale
GS Registration Date:	05/07/2010
GS Crediting period start date:	1st crediting period: 01/09/2009 2nd crediting period: 23/11/2017
CDM Registration Date:	-
CDM Crediting period start date:	-
Project Developer:	Akenerji Elektrik Üretim A.Ş.
Project Representative:	EKI Energy Services Limited
Project Participants and any communities involved:	1 - Akenerji Elektrik Üretim A.Ş. 2 - EKI Energy Services Limited
Host Country/Location:	Turkey/Balıkesir
Methodologies applied:	ACM0002 - "Grid connected electricity generation from renewable sources" – Version 20.0 ²
SDG Impacts:	1 – SDG 7 Affordable and Clean Energy 2 – SDG 8 Decent Work and Economic Growth 3 – SDG 13 Climate Action
Estimated amount of SDG Impact (GSVERs and others)	1 – SDG 7: Affordable and Clean Energy-The electricity generation is predominantly composed by fossil fuel-fired power plants in Turkey. The project is expected to generate 98.7 GWh of clean energy per annum. 2 – SDG 8: Decent Work and Economic Growth-The project provides employment to between 5 people and minimum 1 training to be conducted. 3 – SDG 13: Climate Action-The project would lead to reduction of approximately 56,176 tCO ₂ e per annum

¹ <https://registry.goldstandard.org/projects/details/1100>

² <https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQC0PIWPGWDN8ED5PG>

SECTION A Sustainable Development Goals (SDG) outcomes

A.1 Relevant target for each of the three SDGs

SDG	Target	Indicator
13 (Climate Action)	13.2: Integrate climate change measures into national policies, strategies and planning	13.2.1 Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change
8 (Decent Work and Economic Growth)	8.5. By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	8.5.2. Unemployment rate, by sex, age and persons with disabilities
8 (Decent Work and Economic Growth)	8.6. By 2020, substantially reduce the proportion of youth not in employment, education or training	8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training
7 (Affordable and Clean Energy)	7.2. By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption

A.2 Explanation of methodological choices/approaches for estimating the SDG outcome

SDG Goal	Methodological choices/approaches for estimating the SDG outcome
SDG 7 –Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable and modern energy for all	Measurement Method: - Electricity produced and utilized for sell to national grid is monitored through energy meter. Net electricity will be calculated by state electricity board and O&M operator on monthly basis and provided in the share certificate/monthly report or equivalent. The other parameters used for net electricity supplied to grid are mentioned in monitoring plan. QA/QC Process: This parameter is monitored monthly and value of parameter will be cross checked with invoices. The meters will be calibrated on regular frequency.
SDG 8 – Decent Work and Economic Growth: Promote inclusive and sustainable economic growth, employment and decent work for all	Measurement Method: - Employment generation is monitored through staff register for employment details or HR records QA/QC Process: This parameter is based on records, data and no any QA/QC procedure required. The DOE can confirm this parameter with interview with PP or Site in charge or employees for training and employment generation.
SDG 13 – Climate Action : Take urgent action to combat climate change and its impacts	Measurement Method: - The emission reductions achieved will be the product of net electricity generated and the grid emission factor. Electricity generation volume will be checked by EPIAŞ monthly readings whereas TEI AŞ monthly reading reports will be employed for cross-checking purpose. Besides, received waste amounts will be also checked.

QA/QC Process: This parameter is calculated, and no any QA/QC procedure required.

Baseline Emission:

As per the approved methodology ACM0002, Version 20.0 CDM Sectoral Scope: 01, baseline emissions for the project activity are calculated by multiplying the net quantity of electricity supplied by this project activity ($EG_{PJ,y}$) with the CO₂ baseline emission factor for the electricity displaced due to the project ($EF_{grid,CM,y}$) as follows:

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

where;

$EF_{grid,CM,y}$	=	Combined margin CO ₂ emission factor for grid connected power generation in year y calculated using the latest version of "TOOL 07: Tool to calculate the emission factor for an electricity system" (tCO ₂ /MWh)
$EG_{PJ,y}$	=	Net electricity supplied to the Turkish grid (MWh)
BE_y	=	Baseline emissions in year y (tCO ₂ e)

Project Emission:

As per the applied methodology: "For all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected."

Since the project is classified as a renewable energy project, project emission is neglected.

Therefore;

$$PE_y = 0$$

Where:

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

Leakage Emissions:

As per the applied methodology: "No leakage emissions are considered. The emissions potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport etc.) are neglected."

Therefore;

$$LE_y = 0$$

Emission Reductions:

Emission reductions are calculated as follows: $ER_y = BE_y - PE_y - LE_y$

Thus;

$$ER_y = BE_y$$

A.3 Data and parameters fixed ex ante for monitoring contribution to each of the three SDGs

Relevant SDG Indicator	SDG 7.2.1 Renewable energy share in the total final energy consumption
Data/parameter	EG_y
Unit	MWh
Description	Net Electricity delivered to the grid by the Ay-Yıldız WPP in year y
Source of data	For gross generation, imported values, internal consumption and net generation which not including low-cost/must run power plants in year y followed documents are used which can be checked via shared link: https://www.teias.gov.tr/ "Türkiye Brüt Elektrik Enerjisi Üretiminin Üretici Kuruluşlar ve Birincil Enerji Kaynaklarına göre Yıllar İtibariyle Gelişimi (2006-2015)" "Türkiye Elektrik Enerjisinin Üretim-İthalat-İhracat ve Brüt Talebinin Yıllar İtibariyle Aylık Dağılımı (2003-2015)" "Türkiye Elektrik Enerjisi Üretim Tüketim ve Kayıplarının Yıllar İtibariyle Gelişimi (1993-2015)"

Value(s) applied	For 2013: 171,166,713 For 2014: 198,349,070 For 2015: 178,430,451 547,946,234 MWh net electricity generation between 2013-2015
Choice of data or Measurement methods and procedures	Data from Grid Operator has been used
Purpose of data	Calculation of baseline emissions or baseline net GHG removals by sinks
Additional comment	-

Relevant SDG Indicator	13.2.1 Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change																
Data/parameter	EF _{CO₂, i, y}																
Unit	tCO ₂ /GJ																
Description	CO ₂ emission factor of fossil fuel type i in year y																
Source of data	For EF of fossil fuels, IPCC values at the lower limit have been used. ³																
Value(s) applied	<table border="1"> <thead> <tr> <th>FUEL SOURCE</th><th>(tCO₂/T_i)</th></tr> </thead> <tbody> <tr> <td>Coal</td><td>89.5</td></tr> <tr> <td>Lignite</td><td>90.9</td></tr> <tr> <td>Fuel Oil</td><td>75.5</td></tr> <tr> <td>Diesel</td><td>72.6</td></tr> <tr> <td>LPG</td><td>61.6</td></tr> <tr> <td>Naphtha</td><td>69.3</td></tr> <tr> <td>Natural Gas</td><td>54.3</td></tr> </tbody> </table>	FUEL SOURCE	(tCO ₂ /T _i)	Coal	89.5	Lignite	90.9	Fuel Oil	75.5	Diesel	72.6	LPG	61.6	Naphtha	69.3	Natural Gas	54.3
FUEL SOURCE	(tCO ₂ /T _i)																
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Diesel	72.6																
LPG	61.6																
Naphtha	69.3																
Natural Gas	54.3																
Choice of data or Measurement methods and procedures	TEIAS, the Turkish Electricity Transmission Company is the official source for the related data, thus providing the most up-to-date and accurate information available.																
Purpose of data	Calculation of project emissions or actual net GHG removals by sinks																
Additional comment	According to the applied tool, IPCC default values at lower limit of 95% confidence interval can be used. Although, the actual emission reduction is expected to be higher due to high EF of fuels consumed in existing power plants, IPCC values have been used for conservativeness as requested by the methodology.																

Relevant SDG Indicator	SDG 7.2.1 Renewable energy share in the total final energy consumption														
Data/parameter	FC _{i,i,y}														
Unit	Tons or 1000 m³ for gases														
Description	Amount of fuels consumed by thermal power plants for electricity generation in terms of fossil fuel type i in year y														
Source of data	TEIAS Statistics ⁴														
Value(s) applied	<table><tr><th>Fuel Type</th><th>2013</th><th>2014</th><th>2015</th><th>Total 2013-2015</th></tr><tr><td></td><td colspan="4">Ton or 1000 m³ (for gas)</td></tr></table>	Fuel Type	2013	2014	2015	Total 2013-2015		Ton or 1000 m³ (for gas)							
Fuel Type	2013	2014	2015	Total 2013-2015											
	Ton or 1000 m³ (for gas)														

³ http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf

⁴ <https://teias.gov.tr/>

	Hard Coal	12,105,930	14,501,934	16,629,492	43,237,356
	Lignite	47,120,306	57,696,139	49,940,131	154,756,576
	Fuel Oil	573,534	754,283	516,912	1,844,729
	Diesel Oil	129,359	119,988	238,388	487,735
	LPG	0	0	0	0
	Naphtha	0	0	0	0
	Natural Gas	22,909,746	25,426,014	20,914,868	69,250,628
Choice of data or Measurement methods and procedures	Data from Grid Operator has been used				
Purpose of data	Calculation of project emissions or actual net GHG removals by sinks				
Additional comment	-				

Relevant SDG Indicator	13.2.1 Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change																		
Data/parameter	NCV _{i,y}																		
Unit	GJ/t or GJ/m ³ (for gas)																		
Description	Net calorific value (energy content) of fossil fuel type i in year y																		
Source of data	Own calculation based on data source from National Electricity Transmission Company (TEIAS) Statistics																		
Value(s) applied	<table><tr><th>Fuel Type</th><th>NCV (GJ/t or GJ/m3 (for gas))</th></tr><tr><td>Hard Coal</td><td>23.95</td></tr><tr><td>Lignite</td><td>7.17</td></tr><tr><td>Fuel Oil</td><td>42.58</td></tr><tr><td>Diesel Oil</td><td>43.79</td></tr><tr><td>LPG</td><td>0</td></tr><tr><td>Naphtha</td><td>0</td></tr><tr><td>Natural Gas</td><td>37.48</td></tr></table>			Fuel Type	NCV (GJ/t or GJ/m3 (for gas))	Hard Coal	23.95	Lignite	7.17	Fuel Oil	42.58	Diesel Oil	43.79	LPG	0	Naphtha	0	Natural Gas	37.48
Fuel Type	NCV (GJ/t or GJ/m3 (for gas))																		
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Fuel Oil	42.58																		
Diesel Oil	43.79																		
LPG	0																		
Naphtha	0																		
Natural Gas	37.48																		
Choice of data or Measurement methods and procedures	Data has been calculated from Grid Operator's (TEIAS) statistics. The calculation is done by dividing heating values of the fuel type i consumed over its quantity. Heating value of fuel consumed: https://www.teias.gov.tr/ Türkiye Termik Santrallerinde Kullanılan Yakıtların Isı Değerlerinin Üretici Kuruluşlara Dağılımı (2006-2015) Quantity of fuel consumed: https://www.teias.gov.tr/ Türkiye Termik Santrallerinde Kullanılan Yakıt Miktarlarının Üretici Kuruluşlara Dağılımı (2006-2015)																		
Purpose of data	Data used for OM and BM calculation																		
Additional comment	-																		

SECTION B Safeguarding Principles Assessment

B.1 Analysis of social, economic and environmental impacts

Safeguarding principles	Assessment questions	Assessment of relevance to the project (Yes/potentially/no)	Justification	Mitigation measure (if required)
3.0 SOCIAL & ECONOMIC SAFEGUARDING PRINCIPLES AND REQUIREMENTS 3.1 Principle 1 – Human Rights	1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights. 2. The Project shall not discriminate with regards to participation and inclusion.	NO	The Project is not in conflict with the economic livelihood of the local community. The Project does not cause any human rights abuse and respects internationally proclaimed human rights issue. Further, the Project meets the local labor law requirements thus does not cause any human rights abuse. Turkey has ratified the United Nations Human Rights Rules and regulations. The project does not involve any conflict with livelihood of local people and respect all human rights. Stakeholder consultation had been carried out to take their opinion. The host country prohibits discrimination on the basis of a person's race, sex, religion, place of birth, or social status.	Not Applicable
3.2 Gender Equality and Women's Rights	1. The Project shall complete the following gender assessment questions in order to inform Requirements 2-4, below: • Is there a possibility that the Project might reduce or put at risk women's access to	NO	Turkey is a party to the Convention on the Elimination of All Forms of Discrimination Against Women since 1981, as well as to its Optional Protocol since	Not Applicable

	or control of resources, entitlements and benefits? • Is there a possibility that the Project can adversely affect men and women in marginalised or vulnerable communities (e.g., potential increased burden on women or social isolation of men)? • Is there a possibility that the Project might not take into account gender roles and the abilities of women or men to participate in the decisions/designs of the project's activities (such as lack of time, child care duties, low literacy or educational levels, or societal discrimination)? • Does the Project take into account gender roles and the abilities of women or men to benefit from the Project's activities (e.g., Does the project criteria ensure that it includes minority groups or landless peoples)? • Does the Project design contribute to an increase in women's workload that adds to their care responsibilities or that prevents them from		2002⁵. Article 10 of the Turkish Constitution bans any discrimination, state or private, on the grounds of sex. Turkey has ratified ILO convention 100 and 111 and discrimination based on gender or any other basis is illegal in Turkey⁶.	
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⁵ <https://www.mfa.gov.tr/convention-on-the-elimination-of-all-forms-of-discrimination-against-women.en.mfa>

⁶ <http://www.ilo.org/ankara/lang--tr/index.htm>

	engaging in other activities? • Would the Project potentially reproduce or further deepen discrimination against women based on gender, for instance, regarding their full participation in design and implementation or access to opportunities and benefits? • Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and priorities of women and men in accessing and managing environmental goods and services? • Is there a likelihood that the proposed Project would expose women and girls to further risks or hazards? 2. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women. Specifically, this shall include (not exhaustive): • Sexual harassment and/or any forms of violence against women – address the multiple risks of gender-based violence, including sexual exploitation			
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	or human trafficking. • Slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls. • Restriction of women's rights or access to resources (natural or economic). • Recognise women's ownership rights regardless of marital status – adopt project measures where possible to support to women's access to inherit and own land, homes, and other assets or natural resources. 3. Projects shall apply the principles of nondiscrimination, equal treatment, and equal pay for equal work, specifically: • Where appropriate for the implementation of a Project, paid, volunteer work or community contributions will be organised to provide the conditions for equitable participation of men and women in the identified tasks/activities. • Introduce conditions that ensure the participation of women or men in Project activities and benefits based on pregnancy, maternity/paternit			
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	y leave, or marital status. • Ensure that these conditions do not limit the access of women or men, as the case may be, to Project participation and benefits. 4. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks.			
3.3 Principle – Community Health, Safety and Working Conditions	The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community.	No	The project is renewable energy technology and does not have exposure to increased health risks and shall not adversely affect the health of the workers and the community. Necessary health and safety measures will be taken during construction and operation phase, relevant staff will be trained to be able to work with safety. The project is in compliance with all relevant local and national laws.	Not Applicable
3.4.3 Land Tenure and Other Rights	1. Does the Project require any change to land tenure arrangements and/or other rights? 2. For Projects involving land-use tenure, are there any uncertainties with regards land tenure, access	No	No Expropriation has been conducted on any private land involved in project activity. Land has been utilised by PP directly from the owner of the land through direct negotiation of commercial terms. There has not been	Not Applicable

	rights, usage rights or land ownership? Examples include, but are not limited to water access rights, community-based property rights and customary rights.		involvement of any government agency in the acquiring the land. The land is acquired on mutual consent between private land owner and PP, thus there are no any issues of dissatisfaction of private land owner. The Project Developer hold uncontested land title for the entire Project Boundary to complete Project Design Certification. The land rights are with project developers.	
3.4.4 Indigenous Peoples	Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples	No	The project is located at site where there are no any peoples residing. The project is located at barren land.	Not applicable
3.5 Principle 5 – Corruption	(a) Does not recognise Projects that engage in, contribute to or reinforce corruption of any kind. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects.	No	The project is renewable energy technology and does not contribute to or reinforce corruption of any kind. Indulgence in corruption is an illegal activity in the host country and the local labor compliance takes into account of the same.	Not Applicable
3.6.2 Negative Economic Consequences	Does the project cause negative economic consequences during and after project implementation,	No	The project does not cause negative economic consequences during and after project implementation.	Not Applicable

	e.g. for vulnerable and marginalised social groups in targeted communities?			
4.1.1 Emissions	Will the Project increase greenhouse gas emissions over the Baseline Scenario?	No	The project is a greenfield renewable energy project with net emission reductions.	Not Applicable
4.1.2 Energy Supply	Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	No	The project does not require any large amount of electricity or energy.	Not Applicable
4.2.1 Impact on natural water patterns and flow	Will the Project 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?	No	Within the project area, there are no areas defined and foreseen to be protected within the scope of the Wetlands Protection Regulation dated 17.05.2005 and numbered 25818 ⁷ .	Not Applicable
4.2.1 Erosion and/or water body stability	Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion?	No	The project will not directly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion.	Not Applicable
4.2.3 Landscaped modification and soil	Does the Project involve the use of land and soil for	No	Only potential impact to soil would be observed due to construction	Not Applicable

⁷ <https://leap.unep.org/countries/tr/national-legislation/regulation-wetlands>

	production of crops or other products?		activities of the project, and these negligible impacts are not permanent.	
4.3.2 Vulnerability to Natural Disaster	Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	No	The project area is not a place to specific extreme climatic conditions and harmful natural events such as earthquake.	Not Applicable
4.3.3 Genetic Resources	Could the Project be negatively impacted by the use of genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development)?	No	There is no relevance between GMO and a wind power project.	Not Applicable
4.3.4 Release of pollutants	Could the project potentially result in the release of pollutants to the environment?	No	The project activity is a wind farm activity that does not release any pollutants to the environment.	Not Applicable
4.3.5 Hazardous and Non-hazardous Waste	Will the Project involve the manufacture, trade, release, and/or use of hazardous and non-hazardous chemicals and/or materials?	Yes	There may be oil wastes generated at the project site. According to the "Waste Oil Control Regulation" ⁸ waste oil shall be taken by the licensed recycling firms.	Waste oil will be disposed via licensed recycling firms.
4.3.6 Pesticides and fertilizers	Will the Project involve the application of pesticides and/or fertilisers?	No	The project activity is a wind farm activity and there is no operation which requires pesticide fertilizer use.	Not Applicable

⁸ <https://www.resmigazete.gov.tr/eskiler/2019/12/20191221-1.htm>

4.3.7 Harvesting of forests	Will the Project involve the harvesting of forests?	No	There has been a minor forestation during the construction phase however it has been concluded by obeying the associated law ⁹ .	Not Applicable
4.3.8 Food	Does the project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No	This is not relevant since project activity is a wind farm activity.	Not Applicable
4.3.9 Animal Husbandry	Will the Project involve animal husbandry?	No	The project does not involve any operation that distrupts husbandry and agriculture in the region.	Not Applicable
4.3.10 High Conservation Value Areas and Critical Habitats	Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	No	The Project does not affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified.	Not Applicable
4.3.11 Endangered Species	1. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? 2. Does the Project potentially impact other areas where endangered species may be present through transboundary affects?	No	1. There are no endangered species identified as potentially being present within the Project boundary. 2. The Project does not impact other areas where endangered species may be present through transboundary affects.	Not Applicable

⁹ Forest Permission of the Project

Adherence to the Gold Standard Gender Equality Guidelines and Requirements:

The PP has followed the Mandatory Gender-Sensitive Requirements. The project activity is in compliance with Gender Safeguarding Principles and requirements and gender sensitive stakeholder consultation. As per Gender equality requirements guidelines, the below questions are explained

Question 1:

Does the project reflect the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy? Explain how.

Response – As per Gender Policy Foundational gender-sensitive requirement - This strengthens Gold Standard's 'do no harm' approach and addresses safeguards to prevent or mitigate adverse impacts on women or men and girls and boys. Such action is mandatory for all projects seeking Gold Standard certification and includes compliance with the gender 'do no harm' safeguards, gendergap analysis and gender sensitive stakeholder consultations.

The project activity involves the all stakeholders consultation irrespective of gender and everybody can participate to give feedback for the project activity.

Question 2:

Does the project align with existing country policies, strategies and best practices? Explain how.

Response – There are number of laws in Turkey which supports gender equality and prohibiting the discrimination and violence against women.

The project follows national policies and each employee will treat equally irrespective of gender. The HR policies and CSR activities are implemented with participation of both men and women.

Question 3:

Does the project address the questions raised in the Gold Standard Safeguarding Principles & Requirements document? Explain how.

Response –As per Gold Standard Safeguarding Principles & Requirements document, Gender Equality and Women's Rights are justified in table of safeguarding principles assessment. Please refer the same table.

Question 4:

Does the project apply the Gold Standard Stakeholder Consultation & Engagement Procedure Requirements? Explain how.

Response – the project activity applies the Gold Standard Stakeholder Consultation & Engagement Procedure Requirements. The project has done two rounds of stakeholder consultation. During local stakeholder consultation process, wide range of community representatives were invited which ensure equal and effective participation of women and men in consultation, and that gender issues are fully factored into comprehensive social and environmental impact assessments.

Further to ensure continuous stakeholder engagement and taking into consideration the inputs/ suggestions from local stakeholders a grievance register has been placed at project site wherein the stakeholders can record their comments or feedbacks related to the project activity which if found adequate, are being addressed by the project owner. Also to consider the inputs from global stakeholders, the PP will circulate Annual Reports wherever applicable.

SECTION C Monitoring plan

C.1 Data and parameters to be monitored

Relevant Indicator/Safeguarding Principle	SDG	SDG 7.2.1 Renewable energy share in the total final energy consumption
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Data / Parameter	$EG_{\text{facility},y}^{10}$
Unit	MWh
Description	Net Electricity generated and delivered to the grid by the project in year y
Source of data	Electricity meter(s)
Value(s) applied	Estimated annual generation forming the basis for emission reduction calculation is 98.7 GWh.
Measurement methods and procedures	Generation data are being recorded continuously by two metering energy meters whose serial numbers are 51255642 (main meter) and 51222783 (auxiliary meter). These records provide the data for the monthly invoicing to TEIAS. Generation is being recorded via remote reading system. The quantity of electricity supplied by the project plant/unit to the grid (UEVM) and the quantity of electricity delivered to the project plant/unit from the grid (UECM) is being measured. Net generation is being calculated via subtracting energy delivered by the project activity to the grid and internal consumption by the project activity.
Monitoring frequency	Continuous measurement / Monthly recording
QA/QC procedures	Maintenance and calibration of the metering devices (located at the project site) has been made on 24/10/2009 and sealed by Başkent Elektrik Dağıtım A.Ş.. In case of significant different between two devices, maintenance will be done before waiting for periodical maintenance according to regulations of TEIAS. No maintenance/calibration has been required during monitoring period. Meters used in the plant is 0.5S class. As per the regulations, meters should not require calibration before 10 years.
Purpose of data	Calculation of baseline emissions or baseline net GHG removals by sinks
Additional comment	-

Relevant Indicator/Safeguarding Principle	SDG SDG 7.2.1 Renewable energy share in the total final energy consumption
Data / Parameter	Decrease dependency on fossil fuel
Unit	GWh
Description	The project helps to decrease the dependency of imported fossil fuels (like Natural Gas, coal etc.) through increasing use of local resources.
Source of data	-
Value(s) applied	-
Measurement methods and procedures	Generation data are being recorded continuously by two metering energy meters whose serial numbers are 51255642 (main meter) and 51222783 (auxiliary meter). These records provide the data for the monthly invoicing to TEIAS. Generation is being recorded via remote reading system. The quantity of electricity supplied by the project plant/unit to the grid (UEVM) and the quantity of electricity delivered to the project plant/unit from the grid (UECM) is being measured. Net generation is being calculated via subtracting energy delivered by the project activity to the grid and internal consumption by the project activity.
Monitoring frequency	Annually
QA/QC procedures	Maintenance and calibration of the metering devices (located at the project site) has been made on 24/10/2009 and sealed by Başkent Elektrik Dağıtım A.Ş.. In case of significant different between two devices, maintenance will be done before waiting for periodical maintenance according to regulations of TEIAS. No maintenance/calibration has been required during monitoring period. Meters used in the plant is 0.5S class. As per the regulations, meters should not require calibration before 10 years.

¹⁰ PDD pg.32

Purpose of data	To ensure that the project helps to decrease the dependency of imported fossil fuels
Additional comment	-

Relevant Indicator/Safeguarding Principle	SDG 13.2.1 Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change
Data / Parameter	SO ₂ and NO _x emissions by thermal power plants
Unit	Tones
Description	SO ₂ and NO _x emissions reductions achieved by the project activity
Source of data	Turkish Greenhouse Gas Inventory and electricity generation values of project
Value(s) applied	-
Measurement methods and procedures	By generation figures and invoices provided by project owner
Monitoring frequency	Annually
QA/QC procedures	Total SO ₂ and NO _x emissions due to fossil fuel combustion for electricity generation data will be obtained from latest published National GHG Inventory Report. Total electricity generation will be monitored and will be compared against the national inventory data to determine how much SO ₂ and NO _x emissions are avoided.
Purpose of data	To improve air quality through preventing fossil fuel combustion for heat and electricity generation
Additional comment	-

Relevant Indicator/Safeguarding Principle	SDG 13.2.1 Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change
Data / Parameter	Records for transport of wastewater
Unit	-
Description	Disposal of wastewater as required by the Law on Water Pollution Control
Source of data	Project owner
Value(s) applied	-
Measurement methods and procedures	By assessing disposal methods during site visits and checking waste disposal records
Monitoring frequency	Annually
QA/QC procedures	Accumulated wastewater would be removed by an authorized company or Municipality.
Purpose of data	To ensure wastewater is kept and stored under confined conditions and disposed in line with the regulations.
Additional comment	-

Relevant Indicator/Safeguarding Principle	SDG 13.2.1 Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change
Data / Parameter	Impact on Bird population
Unit	Number of effected species
Description	Impact of project on birds will be monitored through experts and measures will be taken accordingly if necessary.
Source of data	Site visit observations and expert studies

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Value(s) applied	-
Measurement methods and procedures	Monitoring of birds will be followed out within scientific perspective on site as per advised on letter from General Directorate of Nature Protection and National Parks
Monitoring frequency	Annually
QA/QC procedures	-
Purpose of data	To ensure that no species are under threat
Additional comment	-

Relevant Indicator/Safeguarding Principle	SDG 8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training
Data / Parameter	Number of trainings
Unit	Number
Description	Number of trainings sessions held
Source of data	Training certificates or training attendance records
Value(s) applied	-
Measurement methods and procedures	Training certificates or training attendance records
Monitoring frequency	Once for each monitoring period
QA/QC procedures	Training certificates or training attendance records are provided during each monitoring period.
Purpose of data	Monitoring the trainings to justify contribution to SDG 8.
Additional comment	-

Relevant Indicator/Safeguarding Principle	SDG 8.5.2. Unemployment rate, by sex, age and persons with disabilities
Data / Parameter	Number of employments
Unit	Number
Description	Number of people permanently working for the operation of the project
Source of data	Social Security System (SGK)
Value(s) applied	5
Measurement methods and procedures	Social Security System (SGK) records
Monitoring frequency	Once for each monitoring period
QA/QC procedures	SGK records of employees are provided during each monitoring period.
Purpose of data	To monitor SDG 8 Contributions
Additional comment	-

Relevant Indicator/Safeguarding Principle	SDG 8.5.2. Unemployment rate, by sex, age and persons with disabilities
Data / Parameter	Numbers of locally recruited staff
Unit	Number
Description	Number of people permanently working for the operation of the project
Source of data	Social Security System (SGK)
Value(s) applied	-
Measurement methods and procedures	Social Security System (SGK) records
Monitoring frequency	Annually

QA/QC procedures	SGK records of employees are provided during each monitoring period.
Purpose of data	To monitor SDG 8 Contributions
Additional comment	-

Relevant Indicator/Safeguarding Principle	SDG 13.2.1 Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change
Data / Parameter	ER _y
Unit	tCO ₂ e
Description	Emission reductions by the project activity in year y (t CO ₂ /yr). In accordance with ACM0002, baseline emissions include CO ₂ from electricity generation in power plants that are displaced due to the project activity. And baseline emissions correspond to emission reductions and are calculated as the net electricity generated by the project activity, multiplied with combined margin CO ₂ emission factor for grid connected power generation in year y.
Source of data	Both measured and calculated Emission reductions are calculated as considering the EPIAS records for the net electricity generated and the emission factor for the grid, 0.5690 tCO ₂ /MWh, calculated using the TEIAS annual data.
Value(s) applied	Estimated annual emission reduction is 56,176 tCO ₂ e.
Measurement methods and procedures	Refer actual ER Sheet for the same
Monitoring frequency	N.A.
QA/QC procedures	Please check section B.7.3 in the registered PDD for the monitoring plan.
Purpose of data	Calculation of combined margin CO ₂ emission factor and thus the baseline emissions-to demonstrate contribution to SDG Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
Additional comment	-

C.1.1 Other elements of monitoring plan (if applicable)

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

In order to demonstrate the emission reduction, the only required data is the net electricity delivered to the grid by the project activity and internal combustion for the auxiliary diesel generator. Data for the carbon content of the diesel fuel has been calculated from Türkiye Elektrik İletim A.Ş. (TEIAS) web page.

Net electricity generation has been measured and recorded by both TEIAS. Generation data collected during crediting period will be submitted to the carbon consultant who will be responsible for calculating the emission reduction subject to verification.

The monitoring system organization chart is shown in Figure below, in which the authority and responsibility of project management are defined.

Team Members include;

Plant Manager: Overall responsibility of compliance with monitoring plan

Electrical Engineer: Responsible for day to day running of plant, recording and monitoring of relevant data and periodic reporting

Accounting Manager: Responsible for keeping data about power sales, invoicing and purchasing.

EKI Energy Services Ltd.: Responsible for emission reduction calculations, preparing monitoring report and periodical verification process.

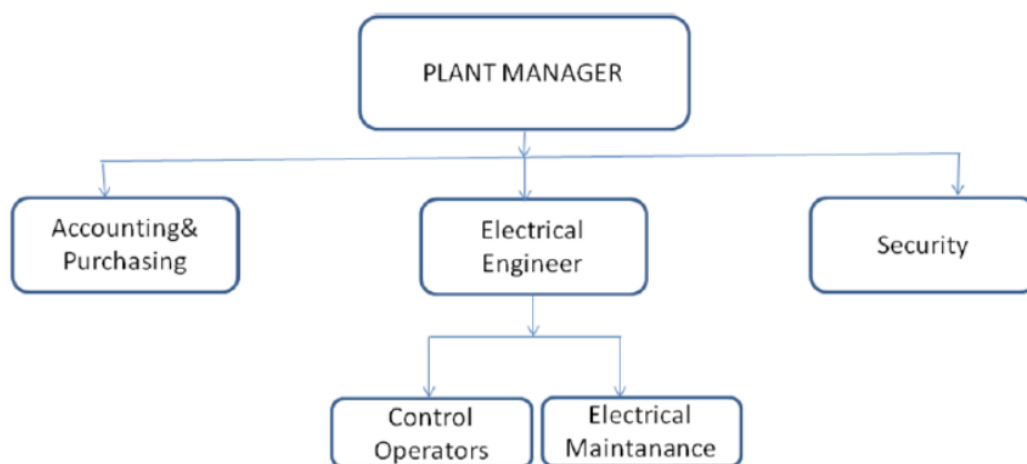


Figure 1. Operational structure of Ay-Yıldız WPP

Installation of meter and data monitoring has been carried out according to the regulations by TEIAS. Two metering devices (one of them used as spare) have been used for monitoring the electricity generated by the power plant. Data from metering devices will be recorded by TEIAS monthly and form the basis for invoicing. In addition to the two metering devices, generation of the Ay-Yıldız WPP has been cross checked from TEIAS – PMUM web site(<http://pmum.teias.gov.tr>)¹¹ which is accessible using a password provided to electricity generation companies.

Further, The calibration and maintenance of the meters will be carried out in line with the By law on Metering and Metering Devices¹².

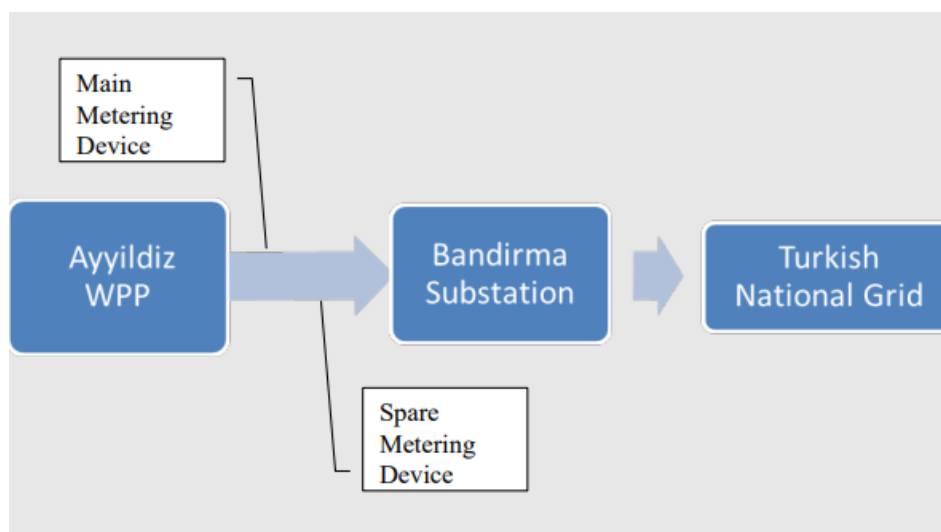


Figure 2. Electricity Generation Monitoring & Transmission Plan

The net electricity fed to the grid is measured continuously and recorded monthly by the TEIAS and plant staff. For consistency, recorded data has been compared with PMUM records and the most conservative data set has been used for emission reduction calculations. Calibration of the metering devices having meter serial numbers as 53064316 (main meter) & 53064340 (backup meter) has been made by TEIAS and sealed during first operation of the plant. However, the previous set of meters had been replaced with new ones by TEIAS which have remote reading feature on 28/12/2015 and later 04/11/2016. Also, the metering devices are kept in sealed glass containers, which prevent outside interventions apart from TEIAS. Currently, Main (LANDIS+Gyr

¹¹ PMUM: Market Financial Settlement Center, operator of Turkish Electricity Market controlled by Turkish Electricity Transmission Company(TEIAS)

¹²

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

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E650-51255642) and Back-Up (LANDIS+Gyr E550-51222783) are installed in the plant. They have been installed on 04/11/2016 and their factory calibration date is 10/08/2015, which has 10 years validity until 09/08/2025.

SECTION D Duration and crediting period

D.1 Duration of project

D.1.1 Start date of project

Start date of project is 01/03/2009.

Start date for capacity extension is 11/04/2016.

D.1.2 Expected operational lifetime of project

The expected economic lifetime of the project is more than 50 years; however, as per the generation license issued, project will be operated by project proponent for about 45 years after the construction and delivered to Government at the end of license period.

D.1 GS Crediting period of the project/activity

D.2.1 Start date of the ongoing GS crediting period

23/11/2017

D.2.3 End date of the ongoing GS crediting period

22/11/2024

This is the second crediting period of seven years, and to be renewed once.

D.2.3 Total length of the GS crediting periods

7 years

SECTION E Stacking of new assets

Not applicable.

Appendix 1. Contact information of project participants

Organization name	Akenerji Elektrik Üretim A.Ş.
Registration number with relevant authority	-
Street/P.O. Box	Miralay Sefik Street
Building	15
City	Istanbul
State/Region	-
Postcode	-
Country	Turkey
Telephone	(0090) 212 249 82 82
Fax	(0090) 212 249 73 55
E-mail	carbon.offset@akenerji.com.tr
Website	http://www.akenerji.com.tr/
Contact person	Özlem Palabıyık
Title	Manager
Salutation	Mrs.
Last name	Palabıyık
Middle name	-
First name	Özlem
Department	Strategy
Mobile	-
Direct fax	-
Direct tel.	-
Personal e-mail	-

Organization name	EKI Energy Services Limited
Registration number with relevant authority	NA
Street/P.O. Box	EnKing Embassy, Plot 48, behind vrindavan hotel, Part II, Vijay Nagar
Building	-
City	Indore
State/Region	Madhya Pradesh
Postcode	452010
Country	India
Telephone	+91 (0) 731 42 89 086
Fax	-
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Website	https://enkingint.org/
Contact person	Manish Dabkara
Title	CMD & CEO
Salutation	Mr.
Last name	Dabkara
Middle name	-
First name	Manish
Department	
Mobile	
Direct fax	

Direct tel.	
Personal e-mail	