

Gold Standard for the Global Goals Annual Report



March 2018 - Version 1.1

Project Title	Samsun Landfill Gas to Energy Project, Turkey
Gold Standard ID	GS935
Date of Annual Report	31/03/2022
Date of Design Certification	v09 21/01/2020
Date of Transition Approval (Transition Projects only)	n.a
Date of Last Verification	05/09/2019 to 30/04/2021

A/R Projects Only - If the project is certified according to the Forest Stewardship Council (FSC), the Certification Status replaces the completion of this template. Please provide the FSC Audit Report and provide a reference to this supporting document in this template. In addition, please provide evidence on how the project demonstrates conformity to Gold Standard Safeguarding Principle 4.2.1 on Water (FSC Certification is not deemed as evidence that this Principle is met). For further guidance refer to the section "FSC Dual Certification" in the Land Use and Forests Activity Requirements.

Please outline how your project meets each of the following requirements, referring to any supporting documentation where necessary.

1 – Annual Reporting

Please include the following information

(a) a summary of the recent activities, events and actions related to the Project:

Samsun Landfill Gas is invested by “Samsun Aydan Enerji Üretim ve Tic. A.Ş.”. Operator of the landfill is the municipality. The old landfill has been filled in 2008 and the new landfill site, where the project is situated at, is in use since 2008. The first filled lot of the Samsun disposal area is about 37,000m² from 6m waste filling level in north west and south east ends of the landfill in the middle - direction north east it is increasing to a level of about 18m in the south west around 12-15m actual highness. A main pipe for is prepared from the leachate tank under the road and leads ends at a prepared area for the gen sets and booster station of about 300m². In 2009, the expected disposed waste amount was 182,500 tonnes, corresponding to an average of 500 t/day.

The capacity increased to 8.4 MWe on dd. 24/03/2016. The project collects the wastes regularly and help the decreases irregular distribution areas in Turkey. Commissioning of the additional capacity is 22/05/2018

Prior to the proposed project activity, the wastes are left to decay within Samsun landfill site and methane is emitted to the atmosphere without any control or utilization. The baseline scenario is the same as the existing scenario, i.e. atmospheric release of the landfill gas and power supply by the grid. With the proposed project, LFG generated in the involved landfill site will be captured by newly constructed LFG collection and utilization system. All the captured LFG is combusted to produce electricity for export to the grid. A flare device installed to destroy excess LFG when the LFG generation amount exceeds the utilization capacity of the LFG power generators.

Exact timing and installed power of this expansion work depends on the actual LFG generation on site, the Project design as of commissioning phases;

Phase 1: Capacity 2.4 MWe – 09/03/2012 (1st and 2nd Gas Engines (2 x 1.2 Mwe)

Phase 2: Capacity 3.6 MWe – 27/09/2013 (3th Gas Engine (1.2 Mwe)

Phase 3: Capacity 6.0 MWe – 27/09/2014 (4th and 5th Gas Engines (2x 1.2 Mwe)

Phase 4: Capacity 8.4 MWe – 22/05/2018 (6th and 7th Gas Engines (2x 1.2 Mwe)

The Project activity has been located within the already existing landfill site, where the waste is transported from the city and the leachate is collected and stored. The Municipality has leased the building plot within the landfill site to the Project owner, on which the Project owner can build and operate the Project.

The proposed Project does not involve any operations on site, it will solely install the vertical and horizontal pipes to collect the LFG efficiently and generate power from collected LFG.

The extraction system shall include a network of vertical gas extraction wells, dewatering units and gas transport pipelines connected to a main collector system. The gas has been driven to gas engine and the flare via an aspiration system. "Samsun Aydan Enerji Üretim ve Tic. A.Ş." also has Biogas utilization application but this part has not been included to project boundary. Biogas and LFG blends in same pipe and goes to the electricity generators.

The electricity energy produced from LFG is calculated based on conservative assumptions and measurements. The generation will depend on the quantity of the LFG.

The project has supply the Turkish National Grid (hereafter referred to as „the Grid“) with zero emission energy, generated by the LFG . Electricity currently generated by the grid is relatively carbon intensive, with a combined margin emission factor of 0.3953 tCO₂ tCO₂/MWh. The connection point of the project activity is Kavak 31.5 KV TM-39 TRA-DM.

The amount of annual production is 16,665.344 MWh and emission reduction are 6,587 tCO₂ during this 2019 year from electricity.

The main equipment used in the Project is gas engines with the following specifications

Table : Technical details of installed methane destruction equipment

Equipment	Specifications
Gas Engine	Manufacturer: Deutz
Number of Units	7
Blower	Capacity: 1.23 MWm, 1.2 MWe Efficiency at full capacity: 40.4% Type: Packaged in container
Flare	Manufacturer: Conveco It has been designed for combustion of 500 Nm ³ /h of biogas and complete retention of flame inside combustion

chamber.

(b) a clear statement on how stakeholders may provide inputs/grievances:

List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.

This is the first year-2019 of the second crediting period and there is no input received via the Continuous Input and Grievance Mechanism Logbook at the end of 2019.

Report on any stakeholder mitigations that were agreed to be monitored.

They were agreed no SDG monitoring parameter to be monitored when the local stakeholders meeting.

No legal contest that has arisen with the project during the monitoring period. The project owner has talked with villager and headman of Aşağı Avdan village continuously and checked the logbook. The Continuous Input and Grievance Mechanism logbook was given to the headman of Aşağı Avdan village as agreed with villager during LSC. So, if whenever local stakeholders have a complaint or a request, they can be able to fill in the grievance book which can be located at a headman office of Aşağı Avdan village

Stakeholders can provide comments via The Continuous Input and Grievance Mechanism logbook, phone and email access. The Continuous Input and Grievance Mechanism logbook is in the headman village of Aşağı Avdan village. The phone (+90 212 258 18 20 and +90 216 355 09 68) and email of cagla@ruzgardanismanlik.net and erol@arier.com.tr is provided to contact.

1) The Continuous Input and Grievance Mechanism Logbook. This logbook can find at the headman village of Aşağı Avdan village. All stakeholders have access to provide feedback related with this project on this book. The contact information of Cagla Balci Eris and project owner is listed first page of the logbook. On each page that follows there is one table, incl. Date, Comment, Response from project owner and Response Date, etc. Stakeholders are allowed to make anonymous comments should they wish.

2) Telephone access. Stakeholders can also provide comments via phone. The telephone number of project owner (+90 212 258 18 20) and project representative of Cagla Balci Eris (+90 216 355 09 68) is provided to contact. Calls received are logged and recorded in the same way as the comment book mentioned above, with

the date, comment and project response recorded for each call. Stakeholders are not required to give their personal information.

3) Email access. Email address of Mrs.Cagla Balci Eris of Ruzgar Danismanlik (cagla@ruzgardanismanlik.net) and project owner erol@arier.com.tr) is provided as well for stakeholders to provide comments in the internet. Emails comments received are logged and recorded in the same way in the Continuous Input and Grievance Mechanism Logbook, with the date, comment and project response recorded for each message. As with all the methods, stakeholders are not required to give their personal details when they wish to make a comment.

(c) a list of all inputs/grievances that have been received since last Annual Report together with their respective answers/actions

No comments or grievances have been received since 05/09/2019. This is the first Annual Report of the project as above explanation.

See Section 2 - Inputs/Grievances Template Report

(d) any incidents or events that may impact the Outcomes/Impacts delivered to date (in terms of loss) or the ongoing Performance of the Project.

N/A. No incidents or events that may impact the Outcomes/Impacts delivered to date (in terms of loss) or the ongoing Performance of the Project occurred since 05/09/2019.

(e) any legal contest or dispute that has arisen

Provide details of any legal contest that has arisen with the project during this year 2019.

(f) any updates to the Key Project Information, Project Design Document, Monitoring & Reporting Plan and any other supporting documentation

N/A. The Key Project Information, Project Design Document, Monitoring & Reporting Plan and any other supporting documentation are not changed/updated.

(g) a brief descriptive summary of all monitoring information collected during the year

Two electricity meters are adopted in the monitoring system of the project. The meters have been installed at the interconnection point to the grid for monitoring the electricity delivered to the grid.

According to the Turkish Law and Regulations, the methods of monitoring the net electricity fed to the grid and quality control and assures are explained below:

The main and spare meter readings are recorded monthly and cross-checked whether calibration is required. The capacity of the transmission line connected is 34 kVA, the accuracy class for power meters have been defined in the Communiqué for Power Meters as 0.2s or 0.5 s class. The calibration is implemented in accordance with the related standard procedures. The periodical maintenance is under the responsibility of YEDAŞ and has been fixed as once in 10 years. It is under the responsibility of YEDAŞ. Since YEDAŞ meters are sealed by YEDAŞ, the project proponent cannot intervene with the devices. The net electricity export/supplied to a grid is the difference between the measured quantities of the grid electricity export and the import. Data measured by meters are crosschecked with the records.

Data is stored electronically, during the crediting period and at least two years after the last issuance of credits for the solar power project activity in the concerning crediting period. The Project Participant is responsible for storage of data received from the measuring devices.

Since 05/09/2019, electricity meters readings are as follows (unit: KWh):

Month	EG (ID 8) Net electricity supplied to the grid [kWh]
5th September 2019	3,541,318
October 2019	4,538,658
November 2019	4,519,846
December 2019	4,386,375
TOTAL	16,827,161

Continuous measurement and at least monthly recording. (Remote automatic meter reading system-OSOS).

Information of the meters are listed as followed:

	Electricity Meter (Primary)	Electricity Meter (Secondary)
Manufacturer	MAKEL	ELSTER
Model	C510.AMT.5851	A1500
Serial number	65001340	436730
Date of installation	04/10/2017	21/12/2011
Date of initial calibration	07/09/2016	20/12/2011

(h) list of stakeholders (with contact details) who will receive the 'Annual Report'

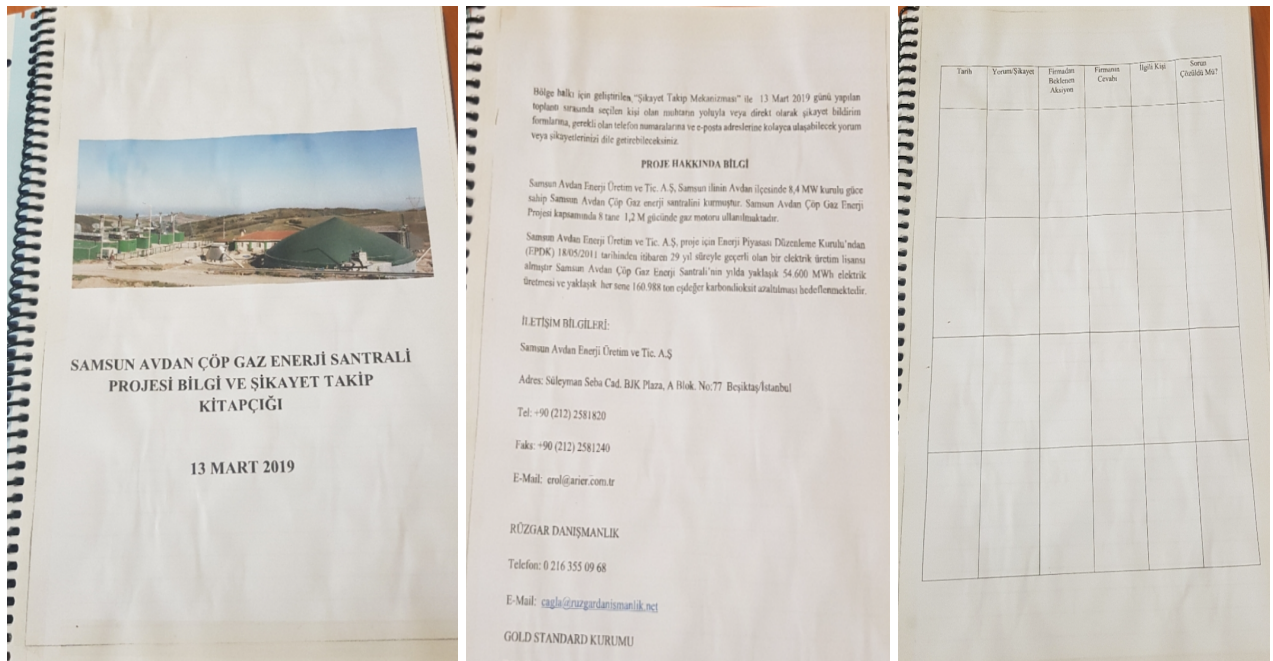
The annual report will be put together with Continuous Input and Grievance Mechanism Comment Book on the headman village of Aşağı Avdan village, stakeholders can review it and give comments, if any.

(i) any update of the 'Project Participants & Secured Titles' (in case of changes)

N/A. The Project Participants & Secured Titles is not changed/updated.

2 – Inputs/Grievances Template Report

Date	Comment	Action requested from project owner	Response from project owner	Person designated with responsibility by project owner	Issue resolved?
	Explanation of problem or comment.	What would the stakeholder like to see change/stay the same.	Explanation from the project of what they will do in response to the comment. This may be an explanation as to why the project is unable to respond/does not see the problem as necessary to address.	Identification of who will take responsibility for responding AND monitoring of the issue.	This could be confirmation from the person who made the complaint, or the project.



3 - Declaration of correct project information

Project Owner Organization	Samsun Avdan Enerji Üretim ve Ticaret A.Ş.
Registration number with relevant authority	743067-Trade Registration Number
Full Address (including Country)	Vişnezade Mah Süleyman Seba Cd. No:48, BJK Plaza Türkali 34357 Beşiktaş/İSTANBUL TURKEY
Website	https://www.samsunavdan.com.tr
Email address	info@samsunavdan.com.tr

I hereby certify and declare that, to the best of my knowledge, the project complies with the project information submitted to The Gold Standard.

First name	Çağla
Last name	Balcı Eriş
Position	Project Representative-Consultant
Place, Date and Signature	Istanbul, TURKEY 31/03/2022