

TEMPLATE

DEVIATION REQUEST FORM

PUBLICATION DATE **11.04.2021**

Version **5.0**

A. To be completed by Gold Standard

1 | Decision

1.1 | Date - 23/01/2023

1.2 | Decision

The deviation request is not approved.

The formula for Q_{manure} covers both the aspects i.e., total electricity generated as well as the amount of manure treated. Therefore, it cannot be replaced by the animal manure received by facility in base year emission calculations.

1.3 | Is this decision applicable to other project activities under similar circumstances?

No

B. To be completed by the Project Developer/Coordinating and Managing Entity and/or VVB requesting deviation (Submit deviation request form in Microsoft Word format)

2| Background information

Deviation Reference Number	DEV_339	
Date of decision	23/01/2023	
Precedent (YES/NO)	NO	
Precedent details	NA	
Date of submission	03/01/2023	
Project/PoA/VPA	Project	ID – GS1223
	<input type="checkbox"/> PoA	ID – GSXXXX
	<input type="checkbox"/> VPA	ID – GSXXXX
Project/PoA/VPA title	Sutas Karacabey Biogas Plant (GS 1223)	
Date of listing	08/01/2013 (LSC Review Final Round Date)	
GS Standard version applicable	GS4GG for 2nd CP which is validated and under GS Renewal Review Progress (1st CP were under GS ver 2.1)	
Date of transition to GS4GG (if applicable)	08/03/2021	
Date of transition to Gold Standard from another standard (e.g. CDM) (if applicable)	-	
Date of design certification/inclusion (if applicable)	28/11/2014	
Location of project/PoA/VPA	Karacabey District, Bursa Province, Turkey	
Scale of the project/PoA/VPA	<input type="checkbox"/> Microscale <input checked="" type="checkbox"/> Small scale <input type="checkbox"/> Large scale	
Gold Standard Impact Registry link of the project/PoA/VPA	https://registry.goldstandard.org/projects/details/135	
Status of the project/PoA/VPA	<input type="checkbox"/> New <input type="checkbox"/> Listed <input type="checkbox"/> Certified design <input checked="" type="checkbox"/> Certified project	
Title/subject of deviation	Revision in baseline emission calculation	
Specify applicable rule/requirements/methodology, with exact paragraph reference and version number	-	

Specify the monitoring period for which the request is valid (if applicable)	Start date: 01/12/2018 End date: 30/11/2020
Submitted by	Contact person name: M. Kemal Demirkol
	Email ID: kemal.demirkol@gte.com.tr engin.koc@gte.com.tr
	Organisation: GTE
	Project participant: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Validation and Verification body (VVB opinion shall be included, where required by the applicable rules/requirements or request is submitted by the VVB).	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes; VVB name: VVB Staff name(s):
Any previous deviations approved for the same project activity/PoA/VPA(s)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

3 | Deviation detail

3.0 | Description of the deviation:

Explanation of Current Situation

Karacabey Biogas project is also one of first of its kind projects (as biogas from manure) in Turkey and serves as a good example for other projects.

The project had a capacity of 2.134 MWe initially and registered by GS via this capacity at 12.11.2014 for the 1st CP (first crediting period of the project was between 01/09/2013-31/08/2020). Registered capacity included the units; gas engine 1, gas engine 2, heat boiler 1 and heat boiler 2.

Due to frequent problems and failure of engines in initial times, project owner has first installed a third engine as back up (without changing Mwe capacity) and later has extended the capacity to 6.402 MWe.

Meantime, we have waited for final decision of investor to apply for design change and have missed deadline for application for design change within one year of start date. Therefore,

As mentioned previously during the design change application project capacity in the current situation is 6.402 MWe.; however, due to late application for design change the extended capacity was rejected for emission reduction claim. Installation of 6 engines was mainly due to the purpose of reducing downtime and achieving continuity of electricity generation and using some engines as spare while other engines are

under maintenance or failure. Hence, 6 engines has never been operated at the same time. Afterall, a revised monitoring approach was developed, and this approach approved by GS Team (during design change review) to distinguish the emission reduction amount belonged to 2.134 MWe within 6.402 MWe as follows.

Registered EGy

"EGpy, gas engine 1" + "EGpy, gas engine 2"

Registered Qmanure

$[(EGpy, \text{ gas motor 1} + EGpy, \text{ gas motor 2}) / \text{Total electricity generation in monitoring period (MW)}] * \text{Total manure used in digesters in monitoring period} = \text{Registered Qmanure}$

Registered BGBurnt

$[(EGpy, \text{ gas motor 1} + EGpy, \text{ gas motor 2}) / \text{Total electricity generation in monitoring period (MW)}] * \text{Biogas generated in monitoring period} = \text{Registered BGBurnt}$

Registered BGBurnt-flare,y

$[(EGpy, \text{ gas motor 1} + EGpy, \text{ gas motor 2}) / \text{Total electricity generation in monitoring period (MW)}] * \text{Biogas flared in monitoring period} = \text{Registered BGBurnt-flare,y}$

Registered EGthermal,y

$[(\text{Steam generated Heat Boiler 1 in tonne} + \text{Steam generated Heat Boiler 2 in tonne}) / \text{Total steam generation in monitoring period by 6 Heat Boilers (tonne)}] * \text{Total steam generated and reported in mass balance documents} = \text{Registered EGthermal,y}$

Although the calculations based on heat and electricity are reasonable among the calculation methods of the monitoring parameters above, the formulation used for the amount of "Qmanure" causes the project to lose a large amount of emission reduction.

For example, while the total amount of manure received by the project in the ongoing 1st MR Verification studies is 70,309.474 tonne dry weight (data belonged to the priod 01/12/2018-30/11/2020), and only 11,845.631 tons dry weight could be used in the emission calculations of the emission base year. While 70,309 tonne dry matter corresponds to a reduction of approximately 160,000 tons CO₂; 11,845 tonne dry matter corresponds only 27,000 ton CO₂ emission reduction on the basis of animal manure management. The reason behind this situation is that gas engine 1 and gas engine 2 were not operated to a large extent in 2018-2020 and were kept in standby by mode since gas engines 3-4-5 and 6 were under operation. Therefore, the project is deprived of 130,000 tons of CO₂ reduction value within mentioned monitoring period.

Deviation Request

The project eliminates a significant amount of animal manure sourced methane release to the atmosphere compared to the base scenario but suffers from not benefiting from the emission reduction results of this.

Therefore, it is requested that all animal manure received by the facility for the mentioned monitoring period above (Start date: 01/12/2018; End date: 30/11/2020) be included in the base year emission calculations, instead of the formula used for monitoring of the Q manure parameter above. There is no similar request for emission calculations originating from electricity generation and heat energy generation.

3.0.1 | Deviation detail (to be completed by Project developer):

As explained above, current approved approach for excluding the capacity increase in ER calculation results in an unfair emission reduction, even lower than initial registered project design.

As per operation procedures, in order to manage aging of gas engines, existing gas engines are operated alternately to keep engine working hours similar.

Therefore, for the monitoring period mentioned above, we request;

1. Acceptance for capacity change
2. If this is not accepted, it is requested that all animal manure received by the facility for the mentioned monitoring period above (Start date: 01/12/2018; End date: 30/11/2020) be included in the base year emission calculations, instead of the formula used for monitoring of the Q manure parameter above. There is no similar request for emission calculations originating from electricity generation and heat energy generation.

3.0.2 | VVB opinion (to be completed by VVB, if applicable):

**Guidance* If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB's opinion.*

.....

3.1 | Assessment of the deviation:

**Guidance* Use the space below to describe how the deviation complies with the requirements, and, where applicable, the accuracy, completeness and conservativeness is ensured. Please include all relevant information in support of the request.*

3.1.1 | Deviation assessment (to be completed by Project developer):

N/A

3.1.2 | VVB opinion (to be completed by VVB, if applicable):

**Guidance* If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB's opinion.*

.....

3.2 | Impact of the deviation:

**Guidance* Use the space below to describe the impact of the deviation on project design, safeguarding principles assessment, SDG assessment, emissions reductions, monitoring frequency, data quality, potential risk or any other relevant aspect of the project. Please substantiate the impact assessment with relevant and verifiable data/information.*

3.2.1 | Impact assessment (to be completed by Project developer):

If the request is accepted project impact on SDG 13 become higher. In fact, the project has already making its contribution to the reduction of emissions together with the increase in capacity

3.2.2 | VVB opinion (to be completed by VVB, if applicable):

**Guidance* If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB's opinion.*

.....

3.3 | Documents:

**Guidance* List of documents provided (note that once a decision has been made by Gold Standard, this deviation form along with supporting documents will be made public on the Gold Standard website. If any of the supporting documents are confidential, please indicate here to ensure they are omitted.)*

Version number	Release date	Description
5	11.04.2022	Additional information added: <ul style="list-style-type: none"> - date of listing, design certification, transition - standard version - specific reference to a requirement deviated from - any previous deviations/design changes approved Guidance on VVB opinion
4	14.01.2021	
3	16.07.2020	
2	03.05.2018	
1	01.07.2017	Initial adoption