TEMPLATE

DEVIATION REQUEST FORM

PUBLICATION DATE **11.04.2021**
Version **5.0**

A. To be completed by Gold Standard

1| Decision

1.1 | Date - 10/04/2023

1.2 | Decision

The deviation request to take into account the actual amount of manure fed to the biodigesters (which are registered units in the PDD) to calculate baseline emissions is **approved.**

The project developer shall:

a. Ensure that the amount of manure considered for claiming emission reduction for methane avoidance does not exceed the maximum design treatment capacity of the biodigesters stated in the registered PDD.
b. Ensure that the maximum energy generation claimed is limited to the approved capacity in the registered PDD and excludes the new generation capacity that was not approved as part of design change request.
c. Document the deviation request, its implications, and GS' decision in the appropriate section of the GS Monitoring Report (for the relevant MP).

The verifying VVB shall, through appropriate means at its disposal, evaluate the project's compliance with the above condition and provide its opinion in the Verification Report.

The Certification body shall review both the project developer's response and the VVB's assessment/opinion of the same and take appropriate steps.

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_384	
Date of decision	10/04/2023	
Precedent (YES/NO)	No	
Precedent details	NA	
Date of submission	09/03/2023	
Project/PoA/VPA	Project	ID – GS1207
	☐ PoA	ID – GSXXXX
	☐ VPA	ID – GSXXXX
Project/PoA/VPA title	Sutas Aksaray Biogas Plant (GS 1207)	
Date of listing	03/09/2012 (LSC Final Review 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	Aksaray Province, Turkey	
Scale of the project/PoA/VPA	☐ Microscale ☒ Small scale ☐ Large scale	
Gold Standard Impact Registry link of the project/PoA/VPA	https://registry.goldstandard.org/projects/details/129	
Status of the project/PoA/VPA	☐ New ☐ Listed ☐ Certified design ☒ 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	End date

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 ☒ No ☐
Validation and Verification body (VVB opinion shall be included, where required by the applicable rules/requirements or request is submitted by the VVB).	Yes ☐ No ☐ If yes; VVB name: VVB Staff name(s):
Any previous deviations approved for the same project activity/PoA/VPA(s)?	Yes ☐ No ☒

3| Deviation detail

3.1 | Description of the deviation:

Explanation of Current Situation
Aksaray Biogas project is the first and still only biogas project from Turkey, issuing VER certificates. 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 with the intention of further extension to 14 MWe. EIA has been amended for 14Mwe however, due to uncertainties about manure supply in the region and installation of other biogas projects in the neighbourhood, investment decision has been delayed and eventually further extension to 14Mwe has been cancelled.
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, gas motor 1 + EGpy, gas motor 2)/ Total electricity generation in monitoring period (MW)] * Total manure used in digesters in monitoring period = Registered Qmanure*

Registered BGburnt

*[(EGpy, gas motor 1 + EGpy, gas motor 2)/ Total electricity generation in monitoring period (MW)] * Biogas generated in monitoring period = Registered BGburnt*

Registered BGburnt-flare,y

*[(EGpy, gas motor 1 + EGpy, gas motor 2)/ Total electricity generation in monitoring period (MW)] * Biogas flared in monitoring period = Registered BGburnt-flare,y*

Registered EGthermal,y

*[(Steam generated Heat Boiler 1 in tonne + Steam generated Heat Boiler 2 in tonne)/ Total steam generation in monitoring period by 6 Heat Boilers (tonne)] * Total steam generated and reported in mass balance documents = 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.

The reason for this loss is that, instead of taking into account the actual amount of manure fed to the anaerobic digester 1-2, which are the registered units of the project, all manure taken to the facility are processed with the electricity generation rate of gas engine 1 and 2 in all gas engines while calculation manure based baseline emission calculations (as it could be understood from the "Registered Q manure" formula presented above).

To sum up, project owner continiously records the amount of manure fed up to Digester 1-2. To remember again, Digester 1 and 2 are GS registered units of the Project. Hence the records of Digester 1 and Digester 2 could be used to calculate baseline emissions due to manure management.

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 to use the actual amount of manure fed into the Digester 1 and Digester 2 for baseline emission calculations. Project owner continuously

recorded the amount of manure fed up to Digester 1-2. To remember again, Digester 1 and 2 are GS registered units of the Project.

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

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

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

Therefore, in renewal of crediting period, we request;

1. Acceptance for capacity change in second crediting period
2. If this is not accepted, animal manure fed up to digesters 1 and 2 (which are registered units) to 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.

3.1.2 | 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.*

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3.2 | 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.*

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

N/A

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.*

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3.3 | 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.*

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

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3.3.2 | 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.*

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3.4 | 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: - 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