

Bolu Landfill Gas to Energy Project, Turkey (GS 764)

3-Week Issuance Review Period under GS Version 2 VER

This document is the GS synthesis of the comments and requests for clarification/corrective action received during the 3-week issuance review period.

Information on the request	
Requested by:	CEV Marmara Enerji Üretim San. Ve Tic. Ltd. Sti. i
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Submission History	
Date of submission:	05/07/2017
Date of GS feedback - I round:	19/07/2017
Date of PP's response - I round:	19/09/2017
Date of GS feedback - II round:	29/09/2017

Project summary	
Project Type:	Landfill gas to electricity generation
Project Size:	Small
Project Location:	Turkey
Methodology Applied:	AMSIII.G "Landfill Methane Recovery" version o6
Project Start Date:	11/11/2010
GS Registration Date:	12/08/2011
GS Crediting Period Start Date:	12/08/2011
Project details: The Bolu Landfill Gas to Energy Project contributes to the reduction of greenhouse gas through destruction and avoidance of methane in the landfill area. The project activity developed by CEV Marmara Enerji Üretim San. Ve Tic. Ltd. Şti., is a landfill gas recovery and utilization project at the site of Bolu Landfill Area in Bolu Province, Turkey. Bolu landfill is the main landfill of the Bolu city, with more than 150,000 inhabitants. It started operations in 1992 and currently holds in excess of 2 million tonnes of waste. In 2008, the disposed waste amount reached 42,926 tonnes, corresponding to 160-180 t/day on average. Currently the project activity is operational with one gas engine with a capacity of 1.1 MWe. The project activity is planned to destroy methane through landfill gas extraction from the landfill area. The landfill gas is furthermore used for the purpose of electricity generation via gas engines. The electricity generated is delivered to the national grid system, substituting the baseline energy fuel which is mainly based on fossil fuels. The first Monitoring period is through 12/08/2011 to 31/07/2016. During this first monitoring period, the total emission reduction achieved is 44,180 tCO ₂ eq	

Monitoring Period Information	
1 st GS Monitoring Period:	01/11/2014 – 31/07/2016
Amount of GS credits under review:	28,149 tCO ₂
Vintage Break (Not provided)	
01/11/2014 to 31/12/2014	1,215 tCO ₂
01/01/2015 to 31/12/2015	15,496 tCO ₂
01/01/2016 to 31/07/2016	11,438 tCO ₂

Document(s) provided and reviewed (I Round):

- PDD (_BoluLFG-PDD-SSC-v4-20120711-final.pdf)

- GS Passport (_BoluLFG-Passport-v6-20121023-final .pdf)
- Verification Report (GS_VER_REP_Bolu_Landfill_16TQ21MD_Rev_1.1Aao6o42017 .pdf)
- Monitoring Report (GS764 Bolu Landfill Project MR v4 wotc o2o32017.doc)
- Emission Reduction Sheet (Bolu ER calculation v2 o6o12017.xls)
- Emission Reduction Sheet (Bolu ER calculation v3 o3o72017.xls)
- Monitoring Report (GS764 Bolu Landfill Project MR v5 wotc o3o72017.doc)
- Verification Repor (GS_VER_REP_Bolu_Landfill_16TQ21MD_Rev_1.1Aao6o42017%2o.pdf)

Document(s) provided and reviewed (II Round):

- Monitoring Report (GS764 Bolu Landfill Project MR v6 wotc 28o82017.doc)
- Verification Report (GS_VER_REP_Bolu_Landfill_16TQ21MD_Rev_1.1Aao6o42017%2o.pdf)
- Supporting Document (T.C BOLU BELEDİYE BAŞKANLIĞI temizlik işler müd. sızıntı suyu bertarafı.pdf)

Review results and conclusions: The GS has reviewed the submitted project and identified a number of areas where additional information is necessary for the project to be in line with the Gold Standard requirements.

Comment/Request 1.	Project Information
1)	The PP shall provide vintage wise breakup of the emission reductions in the monitoring report and the DOE shall also provide the vintage wise breakup in the verification report from 01/11/2014 – 31/07/2016.
Response by Project Proponent (round 1):	
1)	MR has been revised accordingly
Response by DOE (round 1):	
1)	MR is confirmed and the verification report is revised accordingly.
Response by GS (round 2):	
1.	The request/comment is closed.

Comment/Request 2.	Emission Reduction Monitoring
1)	The PP shall provide descriptions and units for FITo01_AI;CH4_AI; FITo01_AI(Cumulative) etc. in tabs Bolu 2012, 2013, 2014,2015,2016 RAW and correct date format as it shows 2001, 2004, 2009 as years.
2)	The PP shall reduce 2% of the emission reductions to account for the inaccuracy in measurements of the mass flow meters. The DOE shall also verify and confirm the same in the GS verification report.
Response by Project Proponent (round 1):	
1)	The descriptions belong to the raw data as extracted from the SCADA system. The monitoring report refers to the correct descriptions and units. The RAW data is "stitched" together from +1000 documents (since the export results in excel files each for each day) and the program used to stitch the excel files together creates a mixed format of dates (where days are confused with years and months as days etc.) Although we are sorry for the inconvenience, there is no solution within our reach.
2)	The accuracy class should not be considered as inaccuracy of the meter. The calculations are in line with methodology, tools and requirements.
Response by DOE (round 1):	
2)	Since the calibration certificates are still valid in this monitoring period, there is no need to take into account the error margin of the counters.
Response by GS (round 2):	
1.	The request/comment is closed.
2.	The request/comment is closed.

Comment/Request 3. Sustainable Development Monitoring
1) The PP shall provide evidence in support of the information stated regarding SO ₂ , NOX, VOC along with gas measurement report for H ₂ S concentration, sample copy of leachate management record, pictures of staff using safety equipment, employment benefits evidence for few staff on sample basis. The DOE shall confirm if the same has been checked and verified or not.
Response by Project Proponent (round 1):
1) SO ₂ , NOX and VOC have been calculated based on fixed parameters as registered by GS and monitored and verified LFG and electricity data already. As explained under the Monitoring Report The leachate is collected and sent to treatment by Municipality. The official document shared with the DOE has been also shared with the DOE. There are no parameters under the Monitoring plan linked to employment benefits.
Response by DOE (round 1):
1) Air quality parameters have been calculated as per the given values in registered PDD. There is no need to give gas measurement report since the "way of monitoring" was explained as calculation. It is clearly explained in E.8.8 of the verification report that the leachate management record provided by Bolu Municipality was seen and confirmed. The pictures of staff using safety equipment and employment benefits evidence for few staff on sample basis should be discussed during the validation or re-validation process not verification, since no parameter is given under Monitoring Plan in registered Passport.
Response by GS (round 2):
1. The request/comment is closed.

Comment/Request 4. Grievance Mechanism
1) The PP shall share information about any feedback or grievance received from stakeholder and share picture of the grievance register.
Response by Project Proponent (round 1):
1) No grievance mechanism is defined under the registered Passport. Please note that this is developed based on an older version of GS. However currently the project activity is under the process of renewing its crediting period where a grievance period has been introduced.
Response by DOE (round 1):
Response by GS (round 2):
1. The request/comment is closed.

Comment/Request 5. Verification Report
1) The verification report needs to be revised as per the latest version of the monitoring report. Hence, the DOE shall
Response by DOE (round 1):
1) The necessary changes are made in the verification report, version 1.2.
Response by GS (round 2):
1. The request/comment is closed.

Conclusion - The GS is of the opinion that 28,149 VERs (Monitoring Period – 01/11/2014 – 31/07/2016) can be issued/labelled after the above clarifications and/or corrective actions have been taken care of in a satisfactory way.