



NANCHANG ZHONGLAN
HUANNENG TECHNICAL SERVICE
CO. LTD. MAIYUAN LFG POWER
GENERATION PROJECT
(VCS PROJECT ID: 2358)



Report ID	CTISC-NC-CBN-202408008
Project title	Nanchang Zhonglan Huanneng Technical Service Co. Ltd. Maiyuan LFG Power Generation Project
Project ID	2358
Verification period	01-May-2022 to 31-August-2024(both days included)
Original date of issue	05-November-2024
Most recent date of issue	18-March-2025
Version	3.0

VCS Standard Version	4.7
Client	Climate Bridge (Shanghai) Ltd.
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Summary:	

CTI Certification Co., Ltd. (hereafter referred to as "CTI Certification") has been commissioned by Climate Bridge (Shanghai) Ltd. to perform the verification of project activity "Nanchang Zhonglan Huanneng Technical Service Co. Ltd. Maiyuan LFG Power Generation Project" (hereafter referred to as "the project activity") and reported in the Verification Report.

The project activity is a landfill gas recovery and power generation project located in the Nanchang Maiyuan landfill in Shuangling village, Jiaoqiao town, Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi province, P.R China, of which the main purpose is to use landfill gas for electricity generation. The total installed capacity of the project activity is 6.402 MW, consisting of 6 sets of 1.067 MW generators. The project uses LFG from the Nanchang Maiyuan landfill site for power generation. During the 10 years fixed crediting period (01/01/2019 to 31/12/2028 (both days included)), the annual power supplied to Central China Power Grid (CCPG) by the project is expected to be 30,788MWh. The Project can reduce GHG emissions by replacing the electricity generated by fossil fuel fired power plants of Central China Power Grid (CCPG). Meanwhile by utilization the landfill gas recovered by project, the project activity avoids the emission of methane that would be generated under landfill condition. It's estimated that the project activity could achieve average annual GHG emission reductions of 155,699 tCO₂e during the crediting period.

CTI Certification has performed the verification of the emission reductions reported for the project activity "Nanchang Zhonglan Huanneng Technical Service Co. Ltd. Maiyuan LFG Power Generation Project" (VCS Project ID: 2358) for the monitoring period 01-May-2022 to 31-Aug-2024, to review and determine the monitored reductions in GHG emissions that have occurred as a result of the project activity. These emission reductions are claimed as Verified Carbon Units (VCUs) under the Verified

Carbon Standard (VCS) version 4.7.

The verification was performed based on VCS Program Guide version 4.4 and VCS Standard version 4.7 for the VCS projects, as well as criteria given to provide for consistent project operations, monitoring, and reporting. The verification was conducted by means of document review, follow-up interviews and site inspections, and the resolution of outstanding issues. During the verification, 3 Clarification Requests (CLs) were raised and successfully closed. No Corrective Action Request (CAR) nor Forwarded Action Request (FAR) was raised.

In CTI Certification's opinion, the GHG emission reductions reported for the project in the monitoring report (Version 4.0, dated 17/03/2025) are fairly stated. The GHG emission reductions of the period were calculated correctly based on approved methodology ACM0001 "Flaring or use of landfill gas" (Version 19.0) and the monitoring plan contained in the PD (version 2.0 dated 26/12/2020).

Request for issuance of VCUs shall be made by the project proponent to an approved VCS Program Registry based on the requirements set out under the most recent version of the VCS Program Guidelines clause on VCS Registration.

The verification of reported emission reductions is based on the information made available to CTI and the engagement conditions detailed in this report.

Hence, CTI Certification is able to certify that the emission reductions from the "Nanchang Zhonglan Huanneng Technical Service Co. Ltd. Maiyuan LFG Power Generation Project" during the monitoring period from 01-May-2022 to 31-Aug-2024 is amount to 174,138 tCO₂e.

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1 INTRODUCTION

1.1 Objective

Verification is the periodic independent review and ex-post determination by an accredited verification body of the monitored reductions in GHG emissions that have occurred because of the registered VCS project activity during a defined verification period.

A verification statement is the written assurance by a verification body that, during a specific period, a project activity achieved the emission reductions as verified.

The objective of this verification is to verify and provide a verification statement of emission reductions reported for the “Nanchang Zhonglan Huanneng Technical Service Co. Ltd. Maiyuan LFG Power Generation Project” for the period 01-May-2022 to 31-Aug-2024.

1.2 Scope and Criteria

The scope of the verification is:

- To verify that actual monitoring systems and procedures follow the monitoring systems and procedures described in the monitoring plan;
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emissions reduction data is free from material misstatement;
- To verify that reported GHG emissions data is sufficiently supported by evidence.

The criteria of the verification are:

- VCS Program Guide (version 4.4) /42/
- VCS Standard (version 4.7) /41/ and other relevant requirements defined by Verra;
- The approved methodology ACM0001 (Version 19.0) /44/applied by the project;
- All information and references relevant to the project activity’s resulting in emission reductions.

The verification shall ensure that reported emission reductions are complete and accurate to be verified.

1.3 Level of Assurance

The verification report expresses a conclusion with a reasonable level of assurance about whether the reported GHG emissions reduction data is free from material misstatement. CTI Certification applied a materiality threshold of 5% (for projects with $ER \leq 300,000$ tCO₂e per year) with respect to emission or misstatements concerning reported quantities as per VCS standard (i.e. para 3.10.2 and 4.1.10 (4) of VCS Standard, version 4.7).

1.4 Summary Description of the Project

Project title:	Nanchang Zhonglan Huanneng Technical Service Co. Ltd. Maiyuan LFG Power Generation Project
Project proponent and other entities involved	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.(Project proponent) Climate Bridge (Shanghai) Ltd. (Consultancy)
Project location:	Nanchang Maiyuan landfill in Shuangling village, Jiaoqiao town, Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi province, P.R China. Geographic coordinates: east longitude 115°46'49" and north latitude 28°44'6".
VCS Project ID:	2358
Applied methodology:	ACM0001, Flaring or use of landfill gas, Version 19.0
Scope	Scope 1: energy industries (renewable-/non-renewable sources) and Scope 13: Waste handling and disposal
VCS project crediting period:	01/01/2019 to 31/12/2028(the 10-year fixed VCS crediting period)
3 rd VCU verification period:	01-May-2022 to 31-Aug-2024

The project activity is a landfill gas recovery and power generation project located in Nanchang Maiyuan landfill in Shuangling village, Jiaoqiao town, Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi province, P.R China, of which the main purpose is to use landfill gas for electricity generation. The total installed capacity of the project activity is 6.402 MW, consisting of 6 sets of 1.067 MW generators. The project uses LFG from the Nanchang Maiyuan landfill site for power generation. During the 10 years fixed crediting period, the annual power supplied to CCPG by the project is expected to be 30,788 MWh. The Project can reduce GHG emissions by replacing the electricity generated by fossil fuel fired power plants of Central China Power Grid (CCPG). Meanwhile by utilization the landfill gas recovered by project, the project activity avoids the emission of methane that would be generated under landfill condition. It's estimated that the project activity could achieve average annual GHG emission reductions of 155,699 tCO₂e during the crediting period.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification was performed through means of the following three phases in accordance with the requirement of the PD (version 2.0 dated 26/12/2020), the applied methodology, and the VCS Standard (version 4.7) and other relevant VCS requirements:

- A desk review of the monitoring report and all support documents;
- Follow-up interviews with project stakeholders and site inspection;
- The resolution of outstanding issues and the issuance of the verification report and statement.

The following sections outline each step in more detail.

The verification of the emission reductions has assessed all factors and issues that constitute the basis for emission reductions from the project. These include:

- The emission reduction calculations and the relevant data records;
- The calibration and maintenance records for the monitoring instruments; The management systems to support the project operation and monitoring.

2.2 Document Review

Based on the requirements of competency, experience and qualified sectoral scopes, CTI Certification appointed a verification team in accordance with CTI Certification's internal procedures.

Function	Name	Technical competence	Task Performance*
Team Leader	Feng Tian	1.1, 1.2, 8.1, 13.1, 13.2	☒ DR ☒ SV ☒ RP ☐ TR
Team member	Zhang Qixin	1.2, 13.2	☒ DR ☒ SV ☒ RP ☐ TR
Technical Reviewer	Lin Shunrong	1.2, 3.1, 13.1, 13.2, 14.1, 15.1	☒ DR ☐ SV ☐ RP ☒ TR

*DR=Document review; SV=Site visit; RP=Reporting; TR=Technical review

In addition to the VER/VCU monitoring report /1/, PD (version 2.0 dated 26/12/2020) /9/ and emission reduction calculation spreadsheet /2/, the following documents also were assessed as a part of the verification audit:

- Monitoring report for 1st monitoring period and Verification report for 1st monitoring period /10/;
- Monitoring report for 2nd monitoring period and Verification report for 2nd monitoring period /11/

- Baseline and monitoring methodology ACM0001 applied by the project /44/;
- Relevant decisions, clarifications and guidance from the Verra /41/-/43/; and
- Other information and references relevant to the project activity.

During the desk review, CTI Certification has applied standard auditing techniques to assess the quality of information provided. The following activities were performed:

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures; and

An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

2.3 Interviews

The objective of the interview process was to solicit important information from personnel related to project and relevant to the verification process. Onsite interviews and information discussions were conducted with project proponent, staff of Nanchang Zhonglan Huanneng Technical Service Co. Ltd., local officer from government, local residents and VCS project development consultant. The interviews were performed by the assessment team on-site within the project area in Shuangling village, Jiaoqiao town, Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi province and the following is a list of the main interviewees and subject.

Interviewed personnel	Role	Organization	Date	Subject	Team member
Tang Hai	Plant Manager	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.	24/09/2024-25/09/2024,	Operation of the project activity;	Feng Tian Zhang Qixin
Yan Wenyan	Staff			Implementation of the monitoring plan of the project activity;	
Yu Ming	Staff			Data collection and data achievement;	
				Calibration of monitoring equipment;	
				No net harm assessment;	
				SDGs contribution.	
Xu Shuilong	Villager	Shuangling village, Jiaoqiao town,		The impact of the project activity;	
				Comments from local	

Zhang Shunmei	Villager	Nanchang Economic and Technological Development Zone	stakeholders; SDGs contributions Safeguards and Stakeholder Engagement
Sun Guohui	Officer	Jiangxi Environmental Protection Bureau	Environment inspection, waste water control, SDGs control, sewage inspection, law breach enforcement
Li Shuhui	Project Manager	Climate Bridge (Shanghai) Ltd.	Data collection and ER calculation.

2.4 Site Visits

On 24/09/2024-25/09/2024, CTI Verification team visited Nanchang Zhonglan Huanneng Technical Service Co. Ltd. and performed the on-site validation at the project location. The interviewed personnel and objective are listed in above table. During the site inspection, the project was inspected and documents evidence were checked, details as following table,

Duration of on-site inspection: 24/09/2024-25/09/2024				
No.	Activity performed on-site	Site location	Date	Team member
1.	Opening meeting Interview with PP Representative, local officers, local residents and Operation Staff	Project Owner's office in Shuangling village, Jiaoqiao town, Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi province	24/09/2024	Feng Tian Zhang Qixin
2	On-site inspection Project site, farms, interview, power plant, water treatment facility, monitoring facilities	Shuangling village, Jiaoqiao town, Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi province	25/09/2024	
3	Documents check	Project Owner's office in Shuangling village, Jiaoqiao town, Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi province	25/09/2024	

4	Finding Summary	Project Owner's office in Shuangling village, Jiaoqiao town, Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi province	25/09/2024	
5	Close Meeting	Project Owner's office in Shuangling village, Jiaoqiao town, Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi province	25/09/2024	

During the on-site assessment, CTI Certification has applied standard auditing techniques to assess the quality of information provided, the implementation and current situation of the project activity, evaluate data management, monitoring system, QA/QC system, project technology and equipment, training provided, and monitoring etc.

2.5 Resolution of Findings

As an outcome of the verification process, the team can raise different types of findings.

Where a non-conformance arises the assessment team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

The assessment team shall raise a Clarification Request (CL) if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met.

The verification team identified 3 CLs and no CAR in this monitoring period. The CLs were satisfactorily addressed by the project proponents in the updated monitoring report Version 4.0, dated 17/03/2025), refer to Appendix 5 for further details.

2.5.1 Forward Action Requests

A forward action request (FAR) is issued for actions if the monitoring and reporting require attention and/or adjustment for the next monitoring period.

CTI Certification confirmed that there was no FAR identified in the validation report and verification report /9/ and previous verification report /10/ , and no FAR was raised during this verification.

2.6 Eligibility for Validation Activities

The PD of the project activity was validated by LGAI Technological Center, S.A. (Applus+ Certification) on 27/12/2020 /10/. The proposed monitoring period from 01-May-2022 to 31-Aug-2024 is the 3rd VCS verification, and CTI Certification just undertook verification activities for the project according to the VCS Program Guide under Scope 1 and 13. This section is thus not applicable.

3 VALIDATION FINDINGS

3.1 Methodology Deviations

By checking the registered PD and previous MR if any, and site visit interviewing with project proponent, it is confirmed that there were no project description deviations identified by CTI Certification to this monitoring period.

The verification team assessed through onsite inspection and document review that all physical features of the proposed project activity including data monitoring, reporting and collecting systems have been implemented in accordance with the monitoring plan included in the registered PD (version 2.0 dated 26/12/2020) /9/. The validation process has assessed all factors and issues that constitute the basis for emission reductions from the project according to the applicable CDM methodology ACM0001 (Version19.0). There was not any methodology deviation applied to this project.

3.2 Project Description Deviations

By checking the registered VCS PD/9/, Monitoring report for 2nd monitoring period/11/ and on-site visit interview with project owner, a project description deviation was identified in relation with ex-ante parameter “ density of greenhouse gas CH₄ in the gaseous stream at normal conditions ($\rho_{i,n}$)” during the second monitoring period, which has been approved by VERRA in the .Verification report by CTI for 2nd monitoring period/11/.

In the registered VCS PD (version 2.0 dated 26/12/2020)/9/, the value of parameter $\rho_{i,n}$ was 0.71338 kg /m³. However, parameter $\rho_{i,n}$ was calculated via equation (9) and (10) in "Tool to determine the mass flow of a greenhouse gas in a gaseous stream" and was determined to be

$$\rho_{i,n}=101,325\text{Pa} \times 16.04\text{kg/kmol}/ (8314\text{Pa. m}^3/\text{kmol. K} \times 273.15\text{K}) = 0.71566 \text{ kg gas i/m}^3$$

As explained by PP, the value in the registered VCS PD was a clerical error. CTI confirmed that this deviation will increase the accuracy of emission reductions calculation without affecting the applicability of the methodology, additionality or the appropriateness of the baseline scenario and meet all appropriate rules and requirements of VCS standard.

3.3 New Project Activity Instances in Grouped Projects

The project was not a grouped project; hence this clause is not applicable.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No

4 VERIFICATION FINDINGS

4.1 Project Details

Item	Evidence gathering activities, evidence checked, and assessment conclusion:
Audit history	The PD of the project activity was validated by LGAI Technological Center, S.A. (Applus+ Certification) on 27/12/2020 /10/. The 1 st monitoring period covers 01/01/2019 to 28/02/2021, verified by LGAI Technological Center, S.A. (Applus+ Certification). The 2 nd monitoring period covers 01/03/2021 to 30/04/2022, verified by CTI Certification Co., Ltd. The proposed monitoring period from 01-May-2022 to 31-Aug-2024 is the 3 rd VCS verification, and CTI Certification just undertook verification activities for the project according to the VCS Program Guide under Scope 1 and 13. Combined with the 2 nd monitoring period, the total year of verification undertaken by CTI Certification is no longer than 6 consecutive years and therefore it is confirmed that section 4.1.27 of VCS Standard version 4.7 have been met.
Double counting and participation under other GHG programs	CTI Certification checked public information from the UNFCCC website /24/, Gold Standard Registry /27/, Chinese Certified

	Emission Reduction Mechanism (CCER) /28/ and interviewed with project owner during site visit, it is confirmed that except VCS scheme, the project has not been participated or been rejected under any other GHG programs since validation. Hence, it is confirmed that the emission reductions resulted from the project during this monitoring period are not likely to be double counted with other GHG programs. Furthermore, as per "Implementation Plan for the Total Set and Distribution of National Carbon Emissions Trading Allowances (Thermal Power Industry)" /22/ issued by Ministry of Ecology and Environment of P. R. China, China has a national emissions trading scheme covering thermal power generation industry. By checking "List of key emissions in the national carbon emissions transaction quota management" /23/ issued by Ministry of Ecology and Environment of P. R. China, the project proponent is not included in the mandatory emission control scheme and thus no emission cap was enforced for the project proponent. Therefore, the verification team confirmed that the project only applies VCUs under VCS, and no rejection from VCS occurs, there are no other forms of environmental credits applied or issued for the project activity, the emission reductions resulted from the project during this monitoring period would only apply for VCUs.
No double claiming with emissions trading programs or binding emission limits	Via interview with the project developer and based on above assessment as well as through checking Chinese Emission Trading System (Chinese ETS) /26/, it is confirmed that the project has not created double claiming with emissions trading programs or binding emission limits.
No double claiming with other forms of environmental credit	Via interview with the project developer and based on above assessment as well as through checking the REC Mechanism database of China /25/, statement on double counting /35/ provided by project proponent, it is confirmed that the project has not created any other form of environmental credit.
Supply chain (scope 3) emissions double claiming	The Project can reduce GHG emissions by utilization the recovered landfill gas provided by Nanchang Maiyuan landfill site (waste management service), avoiding the emission of methane that would be generated under landfill condition; and by replacing the electricity generated by fossil fuel fired power plants of Central China Power Grid (CCPG). For LFG power generation projects, the GHG emission reductions come from avoiding CO ₂

	emissions from those fossil fuel-based power plants connected to the grid and avoiding GHG emissions from releasing LFG into atmosphere at the landfill site, and does not happen in a supply chain. Therefore, it is confirmed that the Supply Chain (Scope 3) Emissions are not applicable for the project activity. The assessment team confirmed that this section is not applicable for the project activity.
Sustainable development contributions	By checking registered VCS PD/9/, the Electricity Transaction Notes (ETNs) /8/, Staff roster /32/, China's National Plan on Implementation of the 2030 Agenda for Sustainable Development /29/ and 17 SDGs defined by UNDP, interviewing with stakeholders during site visit, the verification team confirmed that the project activity would contribute sustainable development in the region and China's Sustainable Development Goals (SDG). The specific sustainable development goals that the project activity could achieve have been listed as follows: - SDG7 "Ensure access to affordable, reliable, sustainable and modern energy for all" - 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" Project Level indicator: Renewable energy supplied to the power grid.: the project activity will provide clean and renewable energy source through making use of landfill gas, displacing the power generation of fossil fuel power plants by using renewable energy sources, reducing fossil fuel consumption in CCPG. This contributes to one of the China's actions for promoting sustainable developing, "By 2030, increase the share of non-fossil fuels in primary energy consumption to about 20 percent". During this monitoring period, 35,592.755 MWh of electricity from clean and renewable sources through making use of landfill gas was delivered to CCPG. By checking the monitoring reports for the previous monitoring periods from VERRA website, it is confirmed that the cumulative contributions for the period from 01-January-2019 onwards were 177,068.599 MWh of electricity from clean and renewable sources through making use of landfill gas has been delivered to CCPG. Thus, the contribution to SDG 7 has been confirmed.. - SDG8 "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" - 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”, Project Level indicator: The number of long-term jobs by the implementation of the project. The project activity increases 11 long term employment opportunities for the management, operation and maintenance of the power plant. By checking the Staff Roster /32/, the number of employees during the monitoring period was confirmed to be 11, and employees range in age from 26 to 52 years old who are equally paid for equal work in accordance with labor laws.. This contributes to one of the China’s actions for promoting sustainable developing, “Increase labor force participation rate through implementation of the classification policy. Vigorously enforce the Law on Promotion of Employment”. Thus, the contribution to SDG 8 has been confirmed.

- SDG13 “Take urgent action to combat climate change and its impacts”- 13.2 “Integrate climate change measures into national policies, strategies and planning” -- 13.2.2 “Total greenhouse gas emissions per year”, Project Level indicator: Tonnes of greenhouse gas emissions avoided or removed. the project will recover and destroy landfill gas that would otherwise be released directly into the atmosphere, effectively reducing GHG emissions and air pollution in the surrounding area and decreasing odour nuisance and minimizing health risks of residents. Meanwhile, the project activity can increase the safety on the landfill through Proper extraction and utilization of the landfill gas, which minimizes the potential for LFG migration on site and reduce the explosion risks of landfill gas. This contributes to achieve one of China’s stated sustainable development priorities “Actively adapt to climate change and strengthen resistance capacity to climate risks in agriculture, forestry, water resources and other key fields, as well as cities, coastal regions and ecologically vulnerable areas”. During this monitoring period, total GHG emission reductions were 174,138 tCO₂e. By checking the emission reductions of previous monitoring periods through VERRA website, it is confirmed that the cumulative contributions for the period 01-January-2019 onwards were 907,293 tCO₂e. Thus, the contribution to SDG 13 has been confirmed.

Additional information relevant to the project

There is no any commercially sensitive information that has been excluded from the public versions of project documents conforms with the VCS Program requirements on what may be excluded.

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	It was confirmed that the stakeholder makeup has not changed since validation, stakeholders of this project during the operation phase include Residents of the nearby village, staff of Nanchang Zhonglan Huanneng Technical Service Co. Ltd. and Relevant administrative staff of the local government. The process(es) used to identify stakeholders likely impacted by the project conforms is with the relevant Program requirements.
Legal or customary tenure/access rights	No special Legal or customary tenure/access rights, observed. The project activities do not involve alterations to the existing legal or customary tenure/access rights of stakeholders, indigenous people (IPs), local communities (LCs), or customary rights holders, as the land is already designated for industrial purposes/15/.
Stakeholder diversity and changes over time	Through interviews, CTI confirms the diversity of stakeholders: the staff of the project, the local residents of nearby village, and the local government are affected by the project activity directly. Through interviews with Project managers, CTI confirmed that employees are mainly residents around the Project location, and the project has no other impact expect increase their impacts. Through interviews with the farmers where the Project is located, CTI confirmed that the farmers around the Project live in different villages and they have different social networks and ways of interacting. Through interviews with local governments, CTI confirmed that government departments are responsible for regulating and approving the operation of the project. Departments may come from different backgrounds with different expertise and experience, and different government departments may have different policies and regulations. Therefore, CTI has checked that it is reasonable to conclude that

	members of each group will adjust over time, but that their groups will not change much socially, economically, culturally, etc.
Expected changes in well-being	The project is expected to improve local environment, increase clean electricity supply and provide work opportunities. As justified above, during this monitoring period, 35,592.755 MWh of electricity from clean and renewable sources through making use of landfill gas was delivered to CCPG. In addition, the number of employees during the monitoring period was confirmed to be 11.
Location of stakeholders	The location of the project site is Shuangling village, Jiaoqiao town, Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi province. Through on-site investigation, it is confirmed that Stakeholders in this project located at the project site and within a few kilometers of it.
Location of resources	The project does not involve stakeholder territories and resources or customary use rights of stakeholders.

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Ongoing consultation	Through on-site visits and interviews with stakeholders, CTI confirmed that PP has established a mechanism for continuous communication with local stakeholders., including regularly stakeholder meetings, questionnaires distribution and concern response. In addition, PP published a contact phone number where all stakeholders can raise their grievances or comments at any time to ensure their voices are fully heard. Via interview with local stakeholders, CTI confirmed that PP regularly communicated with local stakeholders prior to Verification. The key timetable for the Project implementation was communicated to the local government, residents' committees and residents, and the Project promoters gathered their comments and suggestions, if any.
Date(s) of stakeholder consultation	The verification team checked the minutes /38/ of stakeholder meetings during operation and stakeholder consultation questionnaires /39/, it is confirmed that the stakeholder consultation during this monitoring period was held on 20/03/2023.
Communication of monitored results	Through checking questionnaires /39/ and interview with plant

	manager, it is confirmed that, that the project have a positive impact on the environment, reduce safety hazards, save energy and reduce carbon emissions. 30 questionnaires were distributed to local residents and government officials during the stakeholder consultation meeting on 20/03/2023 and 28 copies were collected with valid answers. The questionnaire was designed to assess the project impacts on the local environment and social economic development and all stakeholder surveyed are supportive to the implementation of the project, believing that the Project help improve the life of local people and promote local economic development without adverse environmental impact. By interviewing Mr. Sun Guohui, the officer of Jiangxi Environmental Protection Bureau, it was confirmed that the local authority also conducts spot checks on the implementation of the project at periodic intervals as per relevant regulations and the local authority also didn't have negative perceptions about the project.
Consultation records	30 questionnaires were distributed to residents and government officials on 20/03/2023 and 28 copies were collected with valid answers. Through interviewing with residents, staffs and also government officers, there are no negative comments on this project.
Stakeholder input	Through on-site visits and interviews with stakeholders and checking the Minutes of Operational Stakeholder Meetings as well as the stakeholder consultation questionnaires /39/, CTI confirmed that the project has not received any complaints, comments or suggestions from stakeholders during the consultation, and there is no updates to the project design.

4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	By checking the validation report of registered PD that completed by LGAI Technological Center, S.A. (Applus+ Certification) on 27/12/2020 /9/, it is confirmed that prior to the construction on the start date, a stakeholder consultation meeting was held in 20-December-2018, including local residents, local government, project proponent, and consultant. Prior the stakeholder meeting, in 20-December-2018, 40 questionnaires were distributed, and 40 pieces of reply were received. The opinions expressed by the stakeholders were recorded and are available on request. The survey showed that the proposed project receives strong support from the

	local community. Such conclusion is also confirmed via on-site interview with local residents. According to the report /10/, PP disclosed to stakeholders the nature, scale, speed, reversibility and scope of the proposed Project or activity; The reason or purpose of the Project and/or activity; Duration of Project activities; Affected locations; And a preliminary assessment of economic, social, cultural and environmental impacts, including potential risks and fair and equitable benefit sharing, respecting the precautionary principle. In addition, PP stated that it will actively listen to concerns and feedback from stakeholders and address any questions or concerns raised. Through this process, PP were able to reach a transparent agreement with the community on the implementation of project activities. In addition, as assessed above, by checking the Minutes of Operational Stakeholder Meetings /38/ and stakeholder consultation questionnaires/39/, it is confirmed that no negative comments were received. Via interviewing with staff from local environmental protection bureau during the site visit, it is confirmed by the assessment team that during the implementation stage of this monitoring period, local authority has conducted spot checks on the implementation of the project periodically as per the request from the local governments' regulations, there were no negative comments or issues from the local stakeholders during this monitoring period, the project passed all the periodic spot checks by local government. In addition, PP have been monitoring the situation in the community to identify any ongoing or unresolved conflicts that may be affected by this project. PP take active steps to ensure that Project do not exacerbate or influence the outcome of these conflicts. It is verified that the Free Prior and Informed Consent is true and reasonable, such conclusion is supported by the on-site interview with local stakeholders.
Outcome of FPIC discussion	The project didn't occupy land, relocate people without consent, and forced physical or economic displacement by reviewing EIA approval /51/. Most surveyed stakeholders think the project will improve local economic development without adverse environmental impact from interviewing with local stakeholders.

4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	There is no grievance raised during the monitoring period. Through checking stakeholder consultation records /39/ and interview with villagers, it is conformed that, the project information and the continuous input/grievance mechanism have been introduced to the local stakeholders. As confirmed during the on-site investigation and checking the stakeholder consultation records/39/, it is confirmed that the project information with contact information has also been posted on the bulletins at and nearby the project site, and stakeholders can also reach out to the local environmental management department if they have any grievance. Additionally, By checking the Grievance Book provided by Nanchang Zhonglan Huanneng Technical Service Co. Ltd./61/, it can be confirmed that the PP receives and records complaints received from stakeholders through the Grievance Book at the project site Through checking the training record/5/ and on-site investigation, it is confirmed that the staff of the project proponent is trained to handle the grievance In addition, as justified above, the feedback mechanism has been established, briefly, the relevant-responsible personnel will be promptly notified for-inspection and corrective action upon receiving-the feedback. And an immediate report-will be submitted to the company management. CTI confirmed the existence of such mechanism through on-site interview. In sum, CTI concluded that the grievance mechanism reaches all stakeholders effectively.
Grievance redress procedure	If Grievance received, the PP and stakeholders will discuss the solution first and then invite local government to give judgement.

4.2.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
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No public comment was received during this monitoring period.	N/A	N/A
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4.2.6 Risks to Local Stakeholders and the Environment

4.2.6.1 Management Experience

Through checking the website /39/, CTI confirmed that Nanchang Zhonglan Huanneng Technical Service Co. Ltd. has sufficient capacity and experience in project management, and the project has been running since January 2019 without any problems. Through checking the business license and interview with project manager, it is confirmed that the technicians of project proponent have professional licenses and extensive hands-on experience, and regular training is conducted to further improve the skills of its staff. The project owner's expertise and experience in engaging communities was also confirmed from interviewing with local officer.

4.2.6.2 Risk Assessment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Natural and human induced risks to stakeholders' well being	No risk identified. The project does not involve the requisition of other natural or cultural resources and no impact on stakeholders' well-being. No risks posed to stakeholders' well-being, due to implementation of the project. This was confirmed from EIA /13/ and its approval /14/
Risks to stakeholder participation	No risk identified. The mechanism for on-going communication with local stakeholders has been set up, confirmed with the interaction with the stakeholders with the project owner. No risks posed to stakeholder participation, due to implementation of the project.
Working conditions	No risk identified. Requirements for working conditions have been described in the project design and management manual. No risks posed to Working conditions, due to implementation of the project. Working conditions are in good status, confirmed from onsite visit and also by interviewing with staffs on duty.
Safety of women and girls	No risk identified. Workers including women will be employed during construction and operation period and the project has no impact to safety women and girls. No risks posed to Safety of women and girls, due to implementation of the

	project. Women are employed as same with men employees, this was confirmed from interviewing women staffs.
Safety of minority and marginalized groups, including children	No risk identified. The project use LFG to supply clean electricity and has no impact to safety of minority and marginalized groups, including children. No risks posed to Safety of minority and marginalized groups, including children, due to implementation of the project. This was witnessed from interviewing with villagers and also collaboration from local officer.
Pollutants (air, noise, discharges to water, generation and release of hazardous materials and chemical pesticides and fertilizers	No risk identified. Measures has been identified in EIA of the project to mitigate environment pollution caused by construction and operation of the project, which will be implemented as per environment pollution related laws and regulations and supervised by local government. No risks posed to Pollutants release, due to implementation of the project. The project use LFG to supply clean electricity and turned the disadvantageous condition to good environment surrounding by utilization of land filled waste.

4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination	No risk identified. No discrimination found during construction and operation period, from interviewing the staffs. This was confirmed from interviewing with different stakeholders.
Sexual harassment	No risk identified. Strict punishment measures will be taken if any sexual harassment occur, and cameras will be installed on the project site to prevent sexual harassment of female employees. This was confirmed from interviewing with different stakeholders.
Gender equity in labor and work	No risk identified. Through checking Labor Law of the PRC /58/, it is confirmed that it is the requirement by local government to ensure gender equality in labour and work, and this was confirmed from checking Staff roster and

	pay-check /32/. This was confirmed from interviewing with different stakeholders.
Forced labor	No risk identified. No forced labour in the project activities, and this was confirmed from checking Staff roster and pay-check /32/.
Child labor	No risk identified. No child labour recruitment was found, confirmed from checking Staff roster and pay-check /32/ and the employer complies with the Labor Law of the People's Republic of China
Human trafficking	No risk identified. There is no human trafficking found. This was confirmed from interviewing with different stakeholders.

4.2.7.2 Human Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	During preparation period of the project, project proponent has communicated with local stakeholders, and it is not involved in IPs, LCs, and customary rights holders. Those were confirmed from interviews with all relevant personnel that human rights were respected.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	Through site visits and interviews with local government staff as well as reviewing the EIA /13/ and its approval /15/, CTI confirmed that there are no cultural heritage nor indigenous people to be protected in or around the project site.

4.2.7.4 Property Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	The project has no legal or customary tenure/access rights to

territories, property, and resources, including collective and/or conflicting rights, held by stakeholders, those were confirmed from FSR /51/ and its approval /51/, and also from interviewing stakeholders.

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	Not applicable
Benefit sharing during the monitoring period	Not applicable, as there is no property rights encroachment.

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	It is not involved impact on biodiversity and ecosystems which is confirmed by checking EIA and its approval /51/ of the project.
Soil degradation and soil erosion	It is not involved impact on soil degradation and soil erosion which is confirmed by checking EIA and its approval /51/ of the project.
Water consumption and stress	The domestic sewage, mainly domestic sewage and condensate, was pretreated in a septic tank and discharged together with the condensate into the leachate adjustment tank of the Nanchang Maiyuan landfill site, and after being processed, it reaches the standard of "Pollutant Control Standard for Domestic Waste Landfill" (GB16889-2008), then went to wastewater treatment plant for further treatment which is confirmed by checking EIA and its approval /51/ of the project and through onsite inspection.

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	The project has no impact on habitats and areas needed for habitat connectivity for rare, threatened, or endangered species which is confirmed by checking EIA and its approval /51/ of the project.
Areas needed for	The project has no impact on habitats and areas needed for habitat

habitat connectivity	connectivity for rare, threatened, or endangered species which is confirmed by checking EIA and its approval /51/ of the project.
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	Evidence gathering activities, evidence checked, and assessment conclusion
Habitats for rare, threatened, and endangered species	The project has no impact on habitats and areas needed for habitat connectivity for rare, threatened, or endangered species which is confirmed by checking <i>EIA and its approval /51/</i> of the project.
Areas for habitat connectivity	The project has no impact on habitats and areas needed for habitat connectivity for rare, threatened, or endangered species which is confirmed by checking <i>EIA and its approval /51/</i> of the project.

4.2.8.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
Not applicable	For this project, it was confirmed with no planting or species introduction, as the project activities focus on capturing and utilizing LFG from landfill site for power generation /9//10/.

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
Not applicable	Not applicable

	Evidence gathering activities, evidence checked, and assessment conclusion
Invasive species	Not applicable as the project activities focus on capturing and utilizing LFG from landfill site for power generation /9//10/.

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	Not applicable as the project is not an ARR, ALM, WRC or ACoGS project

4.3 Accuracy of Reduction and Removal Calculations

The monitoring has been carried out in accordance with the registered VCS PD /9/. CTI confirms that all parameters stated in the monitoring plan are monitored and reported appropriately. All parameters required to be monitored by the monitoring plan as per the monitoring methodology ACM0001 “Flaring or use of landfill gas” (Version 19.0) and the management system were assessed during the site visit. The monitoring report lists each parameter required by the monitoring plan and the information flow (i.e. from data generation, aggregation, recording, calculation and reporting) for these parameters is provided. The information flow for each parameter is further verified in the following sections.

The monitoring has been carried out in accordance with the monitoring plan contained in the registered VCS PD /9/.

Parameters determined ex-ante

The parameter of $BE_{CH_4,SWDS,y}$ - methane generation, from the landfill in the absence of the project is only used for ex-ante estimation parameter $F_{CH_4,PJ,y}$. In this monitoring period, the parameter $F_{CH_4,PJ,y}$, adopts ex post determination method, which is consistent with the approved methodology ACM0001. Thus, the parameters, including ϕ_y , OX , F , $DOC_{f,y}$, MCF_y , k_j , $W_{j,x}$, DOC_j , η_{PJ} , which determined $F_{CH_4,PJ,y}$ ex-ante in this report for calculation of $BE_{CH_4,SWDS,y}$ are not included.

The data in table below has been verified against the data sources and the registered PD.

Parameter	Description	Data	Unit	Source
OX_{top_layer}	Fraction of methane that would be oxidized in the top layer of the SWDS in the baseline	0.1	/	Consistent with how oxidation is accounted for in the methodological tool “Emissions from solid waste disposal sites”
GWP_{CH_4}	Global warming potential of CH_4	28	/	IPCC Fifth Assessment Report (AR5)
NCV_{CH_4}	Net calorific value of methane at reference conditions	0.0504	TJ/t CH_4	IPCC Fifth Assessment Report (AR5)
$EF_{grid,OM,y}$	Operating margin CO_2 emission factor in year y	0.9014	t CO_2 /M Wh	“2017 Baseline Emission Factors for Regional Power Grids in China” published by DNA of China dated 29/12/2020 published by China DNA /20/
$EF_{grid,BM,y}$	Build margin CO_2 emission factor in year y	0.3112	t CO_2 /M Wh	“2017 Baseline Emission Factors for Regional Power Grids in China” published by DNA of China dated 29/12/2020 published by China DNA /20/
$EF_{grid,CM,y}$ ($EF_{grid,y}$)	Combined margin emission factor for the grid in year y	0.6063	t CO_2 /M Wh	“2017 Baseline Emission Factors for Regional Power Grids

				in China" published by DNA of China dated 29/12/2020 published by China DNA /20/
R_u	Universal ideal gases constant	8,314	Pa.m ³ /k mol.K	"Tool to determine the mass flow of a greenhouse gas in a gaseous stream"
MM_i	Molecular mass of greenhouse gas CH ₄	16.04	kg/kmol	"Tool to determine the mass flow of a greenhouse gas in a gaseous stream"
P_n	Absolute pressure at normal conditions	101,325	Pa	"Tool to determine the mass flow of a greenhouse gas in a gaseous stream"
T_n	Temperature at normal conditions	273.15	K	"Tool to determine the mass flow of a greenhouse gas in a gaseous stream"
$\rho_{i,n}$	Density of greenhouse gas i in the gaseous stream at normal conditions	0.71566	kg gas i/m ³ wet gas i	Calculated via equation (9) and (10) in "Tool to determine the mass flow of a greenhouse gas in a gaseous stream", $\rho_{i,n}=101,325\text{Pa} \times 16.04\text{kg/kmol}/(8314\text{Pa} \cdot \text{m}^3/\text{kmol} \cdot \text{K} \times 273.15\text{K}) = 0.71566\text{kg gas i/m}^3\text{ gas i}$
$TDL_{j,y}$ and $TDL_{k,y}$	Average technical transmission and distribution losses for providing electricity to source j, k in year y	$TDL_{j,y}$: 20% $TDL_{k,y}$: 3%	%	Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation (version 03.0)

Parameters monitored ex-post

The parameters monitored ex post were monitored and determined as per the monitoring plan which is listed as follows:

Data / Parameter	Management of SWDS
Data unit	/
Description	Management of SWDS
Purpose of the	Calculation of baseline emissions

data:	
Parameter value:	Since the implementation of the project activity, no changes have taken place in the management of the landfill. By the end of the implementation of the project, the provisions on methane recovery and utilization have not changed in the current effective laws and standards in China, and it is a common phenomenon in China that methane is discharged into the atmosphere without utilization.
Source of data used:	Original design of the landfill
Monitoring method, frequency and equipments:	This parameter was monitored annually by the project owner through following up with any changes in the management of Nanchang Maiyuan landfill site.
Calibration:	-
QA/QC procedure:	Data record will be archived for a period of 2 years after the crediting period to which the records pertain.
Means of verification:	Through interview with staff from Nanchang Maiyuan landfill site and by checking the monitoring manual /4/, the assessment team confirmed that there was no changes in the management of the SWDS after the implementation of the project activity, which is consistent with that in the registered PD and MR. Staff from Nanchang Maiyuan landfill site was interviewed, the Statement of Management Technical /4/ was checked, and on-site inspection was conducted by the verification team, all monitoring method and frequency meets the description in the PD. Furthermore, by checking "Overview of the Development of China's Municipal Solid Waste Treatment Industry in 2012" /63/, it is confirmed that 648 landfill sites in China have been constructed by the end of 2012. However, only 50 of the 648 landfill sites were equipped to utilize and collect or combust landfill gases. by checking "2019 Statistical Yearbook of Urban and Rural Construction" /61/ and "2020 China Biomass Power Generation Industry Development Report"/62/, it is confirmed that up to 2019, there were 1,885 sanitary landfills in cities and counties across China. Only 216 biogas power generation projects were installed and connected to the grid. The coverage is less than 12%. Through interviewing with Staff from Nanchang Maiyuan landfill Site, checking the Statement about technical management of Nanchang Maiyuan landfill Site, and via on-site inspection, it is confirmed that all monitoring method and frequency meets the description in the VCS PD (version 2.0 dated 26/12/2020) /9/
Data / Parameter	f _y
Data unit	tCH ₄

Description	Fraction of methane captured at the SWDS and flared, combusted or used in another manner that prevents the missions of methane to the atmosphere in year y
Purpose of the data:	Calculation of baseline emissions
Parameter value:	0
Source of data used:	Historic data on the amount captured from Nanchang Maiyuan landfill statement on waste composition and waste amount, and it is once for the crediting period.
Monitoring method, frequency and equipments:	This parameter is Historic data from SWDS which was followed up by the project owner and was determined once for the crediting period.
Calibration:	-
QA/QC procedure:	Data record will be archived for a period of 2 years after the crediting period to which the records pertain.
Means of verification:	This parameter is Historic data from SWDS which was followed up by the project owner and was determined once for the crediting period. In the absence of the project, LFG from Nanchang Maiyuan landfill site is emitted directly into atmosphere. Through interview with staff from Nanchang Maiyuan landfill site and by checking the Operation Management Manual of Nanchang Maiyuan landfill site /6/, the verification team confirmed that the methane was not captured at SWDS or not flare, combusted. And no other measures that prevents the emissions of methane to the atmosphere are taken. Therefore, the verification team confirmed the baseline scenario or monitoring plan will not change accordingly.

Data / Parameter	$F_{CH_4, BL, R, y}$	
Data unit	t CH ₄ /yr	
Description	Amount of methane in the LFG which is flared due to a requirement in year y	
Purpose of the data:	Calculation of baseline emissions	
Parameter value:	Monitoring period	Value

Start Date	End Date	
01/05/2022	31/05/2022	114.510
01/06/2022	30/06/2022	115.119
01/07/2022	31/07/2022	102.910
01/08/2022	31/08/2022	78.736
01/09/2022	30/09/2022	85.661
01/10/2022	31/10/2022	64.507
01/11/2022	30/11/2022	58.316
01/12/2022	31/12/2022	59.983
01/01/2023	31/01/2023	46.651
01/02/2023	28/02/2023	40.839
01/03/2023	31/03/2023	44.164
01/04/2023	30/04/2023	48.680
01/05/2023	31/05/2023	48.177
01/06/2023	30/06/2023	45.462
01/07/2023	31/07/2023	51.837
01/08/2023	31/08/2023	55.109
01/09/2023	30/09/2023	48.792
01/10/2023	31/10/2023	48.557
01/11/2023	30/11/2023	40.815
01/12/2023	31/12/2023	37.271
01/01/2024	31/01/2024	40.608
01/02/2024	29/02/2024	33.970
01/03/2024	31/03/2024	40.809
01/04/2024	30/04/2024	36.473
01/05/2024	31/05/2024	51.596
01/06/2024	30/06/2024	38.321
01/07/2024	31/07/2024	37.779
01/08/2024	31/08/2024	34.546

	Total	1,550.198
Source of data used:	Information of the host country's regulatory requirements relating to LFG, contractual requirements, or requirements to address safety and odour concerns	
Monitoring method, frequency and equipments:	As per registered VCS PD/9/, this parameter is calculated via equation: $F_{CH4,BL,y} = \max \{F_{CH4,BL,R,y}; F_{CH4,BL,sys,y}\} = \rho_{reg,y} \times F_{CH4,PJ,y} = 0.2 \times F_{CH4,PJ,y}$	
Calibration:	Not applicable as this parameter is a calculated value.	
QA/QC procedure:	Refer to the QA/QC to the monitored parameter $\rho_{reg,y}$ and $F_{CH4,PJ,y}$.	
Means of verification:	As per registered VCS PD/9/, this parameter is calculated via equation: $F_{CH4,BL,y} = \max \{F_{CH4,BL,R,y}; F_{CH4,BL,sys,y}\} = \rho_{reg,y} \times F_{CH4,PJ,y} = 0.2 \times F_{CH4,PJ,y}$ Parameter $\rho_{reg,y}$ is justified in section below. Parameter $F_{CH4,PJ,y}$ is calculated via equation: $F_{CH4,PJ,y} = V_{t,wb,n} \times V_{i,t,wb} \times Op_{j,h,y} \times \rho_{i,n}$. Parameter $\rho_{i,n}$ was determined ex ante and has been justified in "Parameter monitored ex ante" section. Parameter $V_{t,wb,n}$, $V_{i,t,wb}$ and $Op_{j,h,y}$ will be justified in section below.	

Data / Parameter	$\rho_{reg,y}$
Data unit	Dimensionless
Description	Fraction of LFG that is required to be flared due to a requirement in year y
Purpose of the data:	Calculation of baseline emissions
Parameter value:	20%
Source of data used:	Information of the host country's regulatory requirements relating to LFG, contractual requirements, or requirements to address safety and odour concerns
Monitoring method, frequency and equipments:	As per registered VCS PD and according to the methodology ACM0001 (version 19.0), If the requirement does not specify any amount or percentage of LFG that should be destroyed, but requires the installation of a system to capture and flare the LFG, then a typical destruction rate of 20% is assumed. And it is checked annually.

Calibration:	-
QA/QC procedure:	-
Means verification:	of Currently China has regulations in place to deal with the management of landfills and to encourage utilization of LFG. Those regulations are: “Standard for Pollution Control on the Landfill Site of Municipal Solid Waste” (GB 16889-2008), which became effective in 2008, issued by the Environment Protection Administration and ” Technical Code for Municipal Solid Waste Sanitary Landfill” (GB 50869- 2013), issued by the Ministry of Construction in 2013. GB16889-2008 and GB50869-2013 stated that landfill gas should be utilized (for gas that can be utilized) or flared (for gas that cannot be utilized). Although China government encouraged the collection and utilization of LFG from landfill site in the past few years, due to financial and technological difficulties, most of the landfills just release LFG directly into the atmosphere without any recovery and flaring system. By checking Statement about technical management of Nanchang Maiyuan landfill Site/64/, the verification team confirmed that there was no changes in the management of the SWDS after the implementation of the project activity. Therefore, $p_{reg,y} = 20\%$

Data / Parameter	$V_{t,wb,n}$		
Data unit	m³ wet gas/h		
Description	Volumetric flow of the gaseous stream in time interval t on a wet basis at normal conditions		
Purpose of the data:	Calculation of baseline emissions		
Parameter value:	Monitoring period		Value
	Start Date	End Date	
	01/05/2022	31/05/2022	3,181.40
	01/06/2022	30/06/2022	3,002.86
	01/07/2022	31/07/2022	2,769.01
	01/08/2022	31/08/2022	2,576.20
	01/09/2022	30/09/2022	2,534.19
	01/10/2022	31/10/2022	2,110.63

	01/11/2022	30/11/2022	2,065.24
	01/12/2022	31/12/2022	1,671.44
	01/01/2023	31/01/2023	1,266.13
	01/02/2023	28/02/2023	1,192.66
	01/03/2023	31/03/2023	1,168.24
	01/04/2023	30/04/2023	1,444.55
	01/05/2023	31/05/2023	1,409.36
	01/06/2023	30/06/2023	1,404.90
	01/07/2023	31/07/2023	1,457.42
	01/08/2023	31/08/2023	1,410.09
	01/09/2023	30/09/2023	1,061.56
	01/10/2023	31/10/2023	1,277.25
	01/11/2023	30/11/2023	1,158.05
	01/12/2023	31/12/2023	1,067.06
	01/01/2024	31/01/2024	1,053.39
	01/02/2024	29/02/2024	919.12
	01/03/2024	31/03/2024	1,047.05
	01/04/2024	30/04/2024	1,095.72
	01/05/2024	31/05/2024	1,251.98
	01/06/2024	30/06/2024	920.42
	01/07/2024	31/07/2024	982.72
	01/08/2024	31/08/2024	916.39
	Average		1,552.41
Source of data used:	Measured by a flow meter continuously and converted automatically by the recovery monitoring system		
Monitoring method, frequency and equipments:	The type, serial number and accuracy have been confirmed by checking the nameplate of the flow meter during site visit, which were:		
	Equipment	Model	Serial Number
			Accuracy

	Flow meter	RVM VS14IIJF 63N2	18081001	0.5								
Calibration:	The calibration information are shown as below: The <table><tr><td>Date ofcalibration</td><td>Validity</td></tr><tr><td>18-Dec-2021</td><td>17-Dec-2022</td></tr><tr><td>17-Dec-2022</td><td>16-Dec-2023</td></tr><tr><td>16-Dec-2023</td><td>15-Dec-2024</td></tr></table> calibration was conducted by accredited third party which is Jiangxi Institute of Metrology & Testing/30/, accredited by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China /31/. Calibration was verified by checking calibration certificate /30/, all calibration of monitoring equipment meets the requirement indicated in the PD.				Date ofcalibration	Validity	18-Dec-2021	17-Dec-2022	17-Dec-2022	16-Dec-2023	16-Dec-2023	15-Dec-2024
Date ofcalibration	Validity											
18-Dec-2021	17-Dec-2022											
17-Dec-2022	16-Dec-2023											
16-Dec-2023	15-Dec-2024											
QA/QC procedure:	Periodic calibration against a primary device provided by an independent accredited laboratory is mandatory for all projects applying large scale methodology(ies). The metering instruments will be calibrated every year in accordance with the national standard. Data record will be archived for a period of 2 years after the crediting period to which the records pertain.											
Means verification:	of	During site visit, it is confirmed that this parameter was continuously measured by a flow meter (with accuracy of 0.5) and daily recorded by PP. The monthly value was aggregated manually in Monthly Report /17/, which is in compliance with the registered PD. Furthermore, It is confirm during on-site inspection of the Recovery Monitoring System and checking Recovery Monitoring System Instruction Manual/66/ that the temperature and pressure was monitored automatically and the parameter $V_{t,wb,n}$ have been converted automatically into normal condition (0℃ and 101,325Pa) during the monitoring process. Value of $V_{t,wb,n}$ was sourced from Monthly Report /17/. The values have been verified by CTI to be reasonable through comparing with the calculated recovered methane based on the amount of monitored electricity generation via equation (6) of methodology AMS-III.G., Landfill methane recovery. By checking Daily Report /16/, the verification team confirmed that value of $V_{t,wb,n}$ applied in MR and ERR calculation spreadsheet of this monitoring period is correct.										
Data / Parameter	$V_{i,t,wb}$											

Data unit	m³ gas i/m³ wet gas		
Description	Volumetric fraction of greenhouse gas i in the gaseous stream in a time interval t on a wet basis		
Purpose of the data:	Calculation of baseline emissions		
Parameter value:	Monitoring period		Value
	Start Date	End Date	
	01/05/2022	31/05/2022	33.80%
	01/06/2022	30/06/2022	37.20%
	01/07/2022	31/07/2022	34.90%
	01/08/2022	31/08/2022	28.70%
	01/09/2022	30/09/2022	32.80%
	01/10/2022	31/10/2022	28.70%
	01/11/2022	30/11/2022	27.40%
	01/12/2022	31/12/2022	33.70%
	01/01/2023	31/01/2023	34.60%
	01/02/2023	28/02/2023	35.60%
	01/03/2023	31/03/2023	35.50%
	01/04/2023	30/04/2023	32.70%
	01/05/2023	31/05/2023	32.10%
	01/06/2023	30/06/2023	31.40%
	01/07/2023	31/07/2023	33.40%
	01/08/2023	31/08/2023	36.70%
	01/09/2023	30/09/2023	44.60%
	01/10/2023	31/10/2023	35.70%
	01/11/2023	30/11/2023	34.20%
	01/12/2023	31/12/2023	32.80%

	01/01/2024	31/01/2024	36.20%	
	01/02/2024	29/02/2024	37.10%	
	01/03/2024	31/03/2024	36.60%	
	01/04/2024	30/04/2024	32.30%	
	01/05/2024	31/05/2024	38.70%	
	01/06/2024	30/06/2024	40.40%	
	01/07/2024	31/07/2024	36.10%	
	01/08/2024	31/08/2024	35.40%	
	Average		34.04%	
Source of data used:	Gas analyzer in time interval t on a wet basis are all sourced from Monthly Report /17/.			
Monitoring method, frequency and equipments:	The parameter was monitored continuously and recorded everyday. The type, serial number and accuracy have been confirmed by site visit, which were:			
	Monitoring equipment	Gas analyzer		
	Model	GFA800 MOH		
	Accuracy	2%		
	Serial No	1803020		
Calibration:	Calibration date	18-Dec-2021	17-Dec-2022	16-Dec-2023
	Valid till	17-Dec-2022	16-Dec-2023	15-Dec-2024
	The calibration was conducted by accredited third party which is Jiangxi Institute of Metrology & Testing/30/, accredited by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China /31/. Calibration was verified by checking calibration certificate /30/, all calibration of monitoring equipment meets the requirement indicated in the PD.			
QA/QC procedure:	The Gas analyzer was calibrated by a qualified third party, Jiangxi Institute of Metrology & Testing. Calibration records and accreditation certificates/30/ /31/ have been verified by the verification team. As per the calibration certificate, the zero verification with an inert gas (N2) and one reading verification with a standard gas (single calibration gas, CH4) was included. All calibration gases have been certified and were under their validity period. In the monitoring plan of the VCS PD, it stated that the gas analyzer will be calibrated and checked regularly for accuracy. By checking the calibration reports, CTI found the calibration frequency of the gas analyzer is annual, which is in line with the monitoring plan of			

		the VCS PD and the calibrations of meters are verified to be valid for the whole reporting period. Data record will be archived for a period of 2 years after the crediting period to which the records pertain.
Means verification:	of	During site visit, it is confirmed that this parameter was continuously measured by a gas analyzer (with accuracy of 2%) and and daily recorded by PP. The monthly value was aggregated manually in Monthly Report/17/, which is in compliance with the registered PD. Data recorded in Monthly Report /17/ has been crosschecked with that in daily monitoring data of LFG Volumetric fraction recorded in Daily Operation Report/16/, which is verified to be consistent. Also, the values have been verified by CTI to be reasonable through comparing with the calculated recovered methane based on the amount of monitored electricity generation via equation (6) of methodology AMS-III.G., Landfill methane recovery. By checking the same, the verification team confirmed that value of $v_{i,t,wb}$ of this monitoring period in the MR and ERR calculation spreadsheet is correct.

Data / Parameter	Op _{j,h}								
Data unit	hours								
Description	Operation of the equipment that consumes the LFG								
Purpose of the data:	Calculation of baseline emissions								
Parameter value:	Monitoring period		#1	#2	#3	#4	#5	#6	Value
	Start Date	End Date							
	01/05/2022	31/05/2022	742	740	743	589	738	0	744
	01/06/2022	30/06/2022	718	719	717	0	720	0	720
	01/07/2022	31/07/2022	741	740	723	0	739	0	744
	01/08/2022	31/08/2022	735	731	630	0	742	0	744
	01/09/2022	30/09/2022	718	719	713	0	566	0	720
	01/10/2022	31/10/2022	737	740	742	0	0	0	744
	01/11/2022	30/11/2022	719	718	718	0	0	0	720
	01/12/2022	31/12/2022	315	178	737	0	0	560	744
	01/01/2023	31/01/2023	0	0	740	0	0	740	744
	01/02/2023	28/02/2023	0	0	671	0	0	671	672
	01/03/2023	31/03/2023	0	0	80	0	629	705	744

	01/04/2023	30/04/2023	0	0	0	0	714	715	720
	01/05/2023	31/05/2023	0	0	0	0	717	720	744
	01/06/2023	30/06/2023	0	0	0	0	743	738	720
	01/07/2023	31/07/2023	0	0	0	0	737	742	744
	01/08/2023	31/08/2023	0	0	0	0	743	743	744
	01/09/2023	30/09/2023	0	0	0	0	734	733	720
	01/10/2023	31/10/2023	0	0	0	0	723	724	744
	01/11/2023	30/11/2023	0	0	0	0	713	583	720
	01/12/2023	31/12/2023	0	0	0	0	664	739	744
	01/01/2024	31/01/2024	0	0	0	0	738	740	744
	01/02/2024	29/02/2024	0	0	0	0	691	691	696
	01/03/2024	31/03/2024	0	0	0	0	741	740	744
	01/04/2024	30/04/2024	0	0	0	0	699	694	720
	01/05/2024	31/05/2024	0	0	0	0	739	740	744
	01/06/2024	30/06/2024	0	0	0	0	716	637	720
	01/07/2024	31/07/2024	0	0	0	0	640	734	744
	01/08/2024	31/08/2024	0	0	0	0	728	726	744
	Total		5,425	5,285	7,214	589	16,314	14,815	20,496
Source of data used:	Operation of the equipment that consumes the LFG are all sourced from Monthly Report /17/								
Monitoring method, frequency and equipments:	For each equipment unit j using the LFG monitor that the plant is operating in hour h by the monitoring any one or more of the following three parameters: (a) Temperature. Determine the location for temperature measurements and minimum operational temperature based on manufacturer's specifications of the burning equipment. Document and justify the location and minimum threshold in the PD; (b) Flame. Flame detection system is used to ensure that the equipment is in operation; (c) Products generated. Monitor the generation of steam for the case of boilers and air-heaters and glass for the case of glass melting furnaces.								

	This option is not applicable to brick kilns. $Op_{j,h}=0$ when: (a) One of more temperature measurements are missing or below the minimum threshold in hour h (instantaneous measurements are made at least every minute); (b) Flame is not detected continuously in hour h (instantaneous measurements are made at least every minute); (c) No products are generated in the hour h. Otherwise, $Op_{j,h}=1$
Calibration:	-
QA/QC procedure:	By checking Daily Operation Report/16/, Monthly Report/17/ and on-site visit, it is confirmed that The power plant staff records the value of the online operating system every day and exports the records of the online operating system every month. All operation data and paper documents will be archived for two years following the end of the crediting period./
Means verification:	of The methane was destructed through using for electricity generation. The project activity was in normal operational condition, while the operation hours of generators were monitored by the project owner. By checking on-line operation system during site visit, the verification team confirmed that the operating hours of each gas engine are automatically monitored and recorded every hour by on-line operation system, which is in compliance with methodology and registered PD. The value of $Op_{j,h}$ is sourced from Monthly Report /17/ which was aggregated manually by the project owner daily. And by checking the Operation and Maintenance Record/6/, and on-site inspection of the online operating system, it is confirmed that PP uses the online operation system to monitor the operation of each generator and the entire power station simultaneously, and that there are no records of all generators shutting down at the same time during this monitoring period. Data recorded in Monthly Report /17/ has been crosschecked with that in Daily Operation Report/16/, which is verified to be consistent. By checking the same,, the verification team confirmed the operational hours of generators in this monitoring period applied in the MR and ERR calculation spreadsheet is correct. According to the applied methodology/44/: “Data / Parameter table 12”, for each individual generator, if there is shutdown in any hour h, the corresponding operating hour is recorded as 0, otherwise, it is recorded as 1. For the overall operating hours of the whole project, it is not a simple aggregation of the operating hours of each generator, it should reflect

whether the whole power plant is in operation or not in any hour h. If at least one generator is in normal operation in any hour of the day, then the project is considered in normal operation and the operating hour is recorded as 1. Only if ALL 6 generators are shutting down at the same time in any hour, the whole power plant is considered to be not in operation and the corresponding operating hour is recorded as 0. By checking on-line operation system during site visit, it is confirmed that the operating hours of each gas engine are automatically monitored and recorded every hour by on-line operation system and as per the Operation and Maintenance Record/6/ and via onsite interview with PP, it is confirmed that there are no records showing that ALL 6 generators being shut down at the same time in any hour during this monitoring period which means that the power plant is in continuous operation (i.e., 24hours/day) during this monitoring period. Thus, the overall operating hours of the project in each month is calculated as the number of days in that month multiple 24h (Detailed calculation process please refer to the ERR calculation sheet /2/.

Data / Parameter	EG _{PJ,y}			
Data unit	MWh			
Description	Amount of electricity generated using LFG by the project activity in year y			
Purpose of the data:	Calculation of baseline emissions			
Parameter value:	Monitoring period		Monitored value	Conservative value for calculation
	Start Date	End Date		
	01/05/2022	31/05/2022	2,646.800	2,646.800
	01/06/2022	30/06/2022	2,462.200	2,462.200
	01/07/2022	31/07/2022	2,438.600	2,438.600
	01/08/2022	31/08/2022	2,140.500	2,140.500
	01/09/2022	30/09/2022	1,935.600	1,935.600
	01/10/2022	31/10/2022	1,579.500	1,579.500
	01/11/2022	30/11/2022	1,443.400	1,443.400
	01/12/2022	31/12/2022	1,307.700	1,307.700
	01/01/2023	31/01/2023	1,288.800	1,288.800

	01/02/2023	28/02/2023	1,090.000	1,090.000
	01/03/2023	31/03/2023	994.700	994.700
	01/04/2023	30/04/2023	1,131.400	1,131.400
	01/05/2023	31/05/2023	1,048.000	1,048.000
	01/06/2023	30/06/2023	960.500	960.500
	01/07/2023	31/07/2023	1,066.000	1,066.000
	01/08/2023	31/08/2023	1,118.200	1,118.200
	01/09/2023	30/09/2023	1,096.800	1,096.800
	01/10/2023	31/10/2023	1,056.900	1,056.900
	01/11/2023	30/11/2023	789.700	789.700
	01/12/2023	31/12/2023	904.000	904.000
	01/01/2024	31/01/2024	880.700	876.297
	01/02/2024	29/02/2024	807.700	803.662
	01/03/2024	31/03/2024	916.500	911.918
	01/04/2024	30/04/2024	741.600	737.892
	01/05/2024	31/05/2024	879.300	874.904
	01/06/2024	30/06/2024	927.300	922.664
	01/07/2024	31/07/2024	983.600	978.682
	01/08/2024	31/08/2024	992.400	987.438
	Total		35,628.400	35,592.755
Source of data used:	Monthly Report of the electricity meter /17/			

Monitoring method, frequency and equipment:

The parameter was measured continuously and recorded monthly by bidirectional electricity meter installed at 10kV Xiangzhang line. By checking Operation and Maintenance Record/6/, PP replaced the old meter with a new one on 29-Mar-2024. The type and the accuracy class of the new meter is the same as the old one(0.5S), which does not affect the accuracy of monitoring. See below for the information of bidirectional electricity meter verified by checking the meters during site visit:

Old meter

Type	Serial number	Accuracy class
DTZ1296	3630001201800010 936364	0.5S

New meter

Type	Serial number	Accuracy class
DTZ1296	3630001492249049 842312	0.5S

Calibration:

The calibration information of the meters is shown as below:

Old meter

Type	Serial number	Accuracy class	Date of calibration	Validity
DTZ1296	36300012 01800010 936364	0.5S	01-Feb-2022	31-Jan-2023
			30-Jan-2023	29-Jan-2024

New meter

Type	Serial number	Accuracy class	Date of calibration	Validity
DTZ1296	36300014 92249049 842312	0.5S	/	/

The calibration was conducted by accredited third party which is Jiangxi Institute of Metrology & Testing /30/, accredited by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China /31/. Calibration was verified by checking calibration certificate /30/, all calibration of monitoring equipment meets the requirement indicated in the PD.

From 30/01/2024 to 31/08/2024, due to the meter was not calibrated

		on time, amount of electricity generated using LFG by the project activity is conservatively adjusted by applying the lower limits of maximum permissible error (-0.5%). For conservative, the data for the whole month (Jan, 2024) was adjusted.
QA/QC procedure:		The data was cross checked with Electricity Transaction Note. The metering instruments is calibrated annually in accordance with the latest version "Calibration specification for digital energy meters". Data record will be archived for a period of 2 years after the crediting period to which the records pertain.
Means verification:	of	Through checking Monthly Report /17/ and interview with monitoring staff, it is confirmed that $EG_{PJ,y}$ is continuously monitored by bi-directional electricity meter installed by local grid company at 10kV Xiangzhang line with the accuracy of 0.5s. At 0:00 hr of first day of each month, the staff from project owner will record the electricity meter readings and generate Monthly Report /17/. At the same cut-off time, meter readings will be recorded remotely and digitally by local power grid company and the data will be downloaded and transcribed into Electricity Transaction Notes (ETNs). Value of $EG_{PJ,y}$ was sourced from Monthly Report /17/ issued by the project owner and cross-checked with Electricity Transaction (ETNs) /8/ issued by power grid company covering monitoring period. The conservative value between Monthly Report /17/ and ETNs/8/ is be used to calculate emission reductions. Additionally, from 30/01/2024 to 31/08/2024, due to the meter was not calibrated on time, amount of electricity generated using LFG by the project activity is conservatively adjusted by applying the lower limits of maximum permissible error (-0.5%). For conservative, the data for the whole month (Jan, 2024) was adjusted. .By checking the same, the verification team confirmed that the amount of electricity generated using LFG by the project activity in this monitoring period were verified to be conservative.

Data / Parameter	$EG_{EC,y}$								
Data unit	MWh								
Description	Amount of electricity consumed by the project activity in year y								
Purpose of the data:	Calculation of project emissions								
Parameter value:	<table border="1"> <tr> <td colspan="2">Monitoring period</td><td rowspan="2">Monitored value</td><td rowspan="2">Conservative value for calculation</td></tr> <tr> <td>Start Date</td><td>End Date</td></tr> </table>			Monitoring period		Monitored value	Conservative value for calculation	Start Date	End Date
Monitoring period		Monitored value	Conservative value for calculation						
Start Date	End Date								

	01/05/2022	31/05/2022	0.000	0.000
	01/06/2022	30/06/2022	0.000	0.000
	01/07/2022	31/07/2022	0.000	0.000
	01/08/2022	31/08/2022	0.100	0.100
	01/09/2022	30/09/2022	0.000	0.000
	01/10/2022	31/10/2022	0.000	0.000
	01/11/2022	30/11/2022	0.000	0.000
	01/12/2022	31/12/2022	0.100	0.100
	01/01/2023	31/01/2023	0.400	0.400
	01/02/2023	28/02/2023	0.000	0.000
	01/03/2023	31/03/2023	1.200	1.200
	01/04/2023	30/04/2023	0.000	0.000
	01/05/2023	31/05/2023	0.000	0.000
	01/06/2023	30/06/2023	0.100	0.100
	01/07/2023	31/07/2023	0.000	0.000
	01/08/2023	31/08/2023	0.000	0.000
	01/09/2023	30/09/2023	0.000	0.000
	01/10/2023	31/10/2023	0.300	0.300
	01/11/2023	30/11/2023	0.500	0.500
	01/12/2023	31/12/2023	0.200	0.200
	01/01/2024	31/01/2024	0.000	0.000
	01/02/2024	29/02/2024	0.100	0.101
	01/03/2024	31/03/2024	0.000	0.000
	01/04/2024	30/04/2024	0.400	0.402
	01/05/2024	31/05/2024	0.100	0.101
	01/06/2024	30/06/2024	0.100	0.101
	01/07/2024	31/07/2024	0.600	0.603
	01/08/2024	31/08/2024	0.600	0.603
	Total		4.800	4.810

Source of data used:	Monthly Report /17/of the electricity meter				
Monitoring method, frequency and equipments:	The parameter was measured continuously and recorded monthly by bidirectional electricity meter installed at 10kV Xiangzhang line. By checking Operation and Maintenance Record/6/, PP replaced the old meter with a new one on 29-Mar-2024. The type and the accuracy class of the new meter is the same as the old one(0.5S), which does not affect the accuracy of monitoring. See below for the information of bidirectional electricity meter verified by checking the meters during site visit:				
	Old meter				
	Type	Serial number	Accuracy class		
	DTZ1296	36300012018000109 36364	0.5S		
	New meter				
	Type	Serial number	Accuracy class		
	DTZ1296	36300014922490498 42312	0.5S		
Calibration:	The calibration information of the meters is shown as below:				
	Old meter				
	Type	Serial number	Accuracy class	Date of calibration	Validity
	DTZ1296	36300012 01800010 936364	0.5S	01-Feb-2022	31-Jan-2023
				30-Jan-2023	29-Jan-2024
New meter					
Type	Serial number	Accuracy class	Date of calibration	Validity	
DTZ1296	36300014 92249049 842312	0.5S	/	/	
The calibration was conducted by accredited third party which is Jiangxi Institute of Metrology & Testing /30/, accredited by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China /31/. Calibration was verified by checking calibration certificate /30/, all					

		calibration of monitoring equipment meets the requirement indicated in the PD. From 30/01/2024 to 31/08/2024, due to the meter was not calibrated on time, Amount of electricity consumed by the project activity is conservatively adjusted by applying the upper limits of maximum permissible error (1+0.5%). For conservative, the data for the whole month (Jan, 2024) was adjusted.
QA/QC procedure:		The data was cross checked with Electricity Transaction Note. The metering instruments is calibrated annually in accordance with the latest version "Calibration specification for digital energy meters". Data record will be archived for a period of 2 years after the crediting period to which the records pertain.
Means verification:	of	Through checking Monthly Report /17/ and interview with monitoring staff, it is confirmed that $EG_{PJ,y}$ is continuously monitored by bi-directional electricity meter installed by local grid company at 10kV Xiangzhang line with the accuracy of 0.5s. At 0:00 hr of first day of each month, the staff from project owner will record the electricity meter readings and generate Monthly Report /17/. At the same cut-off time, meter readings will be recorded remotely and digitally by local power grid company and the data will be downloaded and transcribed into Electricity Transaction Notes (ETNs). Value of $EG_{PJ,y}$ was sourced from Monthly Report /17/ issued by the project owner and Electricity Transaction (ETNs) /8/ issued by power grid company covering monitoring period. The conservative value between Monthly Report /17/ and ETNs/8/ will be used to calculate emission reductions. Additionally, from 30/01/2024 to 31/08/2024, due to the meter was not calibrated on time, Amount of electricity consumed by the project activity is conservatively adjusted by applying the upper limits of maximum permissible error (1+0.5%). For conservative, the data for the whole month (Jan, 2024) was adjusted. By checking the same, the verification team confirmed that the Amount of electricity consumed by the project activity in this monitoring period were verified to be conservative.

Data / Parameter	CAPEX and OPEX
Data unit	RMB
Description	Total investment to implement the project and total cost to operate the project
Purpose of the data:	-
Parameter value:	Total investment of the project is 62,969,370.54 RMB; and total cost is 10,360,000 RMB, of which, O & M cost is 4,560,000 RMB.

Source of data used:	Engineering, procurement and construction contracts; and maintenance contracts
Monitoring method, frequency and equipments:	At the first issuance request after each phase of the project is fully implemented
Calibration:	-
QA/QC procedure:	Audited by professional, independent financial auditors. The VVB should only verify that the data provided corresponds to the data from independent financial auditors
Means of verification:	As the project activity applied the simplified procedures to identify the baseline scenario and demonstrate additionality in the registration stage, the monitoring of this parameter is required as per ACM0001. By checking registered PD and ACM 0001, this parameter was monitored at the first issuance request after each phase of the project is fully implemented. By checking Validation Report/9/ and Verification Report of previous VCS monitoring period/12/, Operation and Maintenance Record/6/ and Completion Acceptance Form and Project Settlement Confirmation Form /65/, as well as checking through site visit, it is confirmed all 6 sets of gas-fired Engine/generators of the project activity put into operation on 01/01/2019 and the project activity does not involve any other phases, i.e. the project activity was fully implemented since 01/01/2019. Furthermore, by checking Validation Report/9/ and Verification Report of previous monitoring period (the first issuance request)/12/, it is confirmed that this parameter has been justified at the first issuance request after full implementation and and thereby consistent with the registered VCS PD and ACM 0001.

Data / Parameter	Tariff of electricity exported
Data unit	RMB/kWh
Description	Tariff of the electricity exported
Purpose of the data:	-
Parameter value:	0.58 (including VAT)
Source of data used:	Power purchase agreement
Monitoring method, frequency and equipments:	At the first issuance request after each phase of the project is fully implemented-

Calibration:	-
QA/QC procedure:	Audited by professional, independent financial auditors. The VVB should only verify that the data provided corresponds to the data from independent financial auditors
Means verification:	of As the project activity applied the simplified procedures to identify the baseline scenario and demonstrate additionality in the registration stage, the monitoring of this parameter is required as per ACM0001. By checking registered PD and ACM 0001, this parameter was monitored at the first issuance request after each phase of the project is fully implemented. By checking Validation Report/9/ and Verification Report of previous VCS monitoring period/12/, Operation and Maintenance Record/6/ and Completion Acceptance Form and Project Settlement Confirmation Form /65/, as well as checking through site visit, it is confirmed all 6 sets of gas-fired Engine/generators of the project activity put into operation on 01/01/2019 and the project activity does not involve any other phases, i.e. the project activity was fully implemented since 01/01/2019. Furthermore, by checking Validation Report/9/ and Verification Report of previous monitoring period (the first issuance request)/12/, it is confirmed that this parameter has been justified at the first issuance request after full implementation and and thereby consistent with the registered VCS PD and ACM 0001.

Data management and control

The project proponent is responsible for operation and routine maintenance of power plant under the project activity. The quality assurance and quality control procedures have been addressed in the VER monitoring manual and management procedure /4/, including the organization structure with the responsibilities, personnel competencies, monitoring procedures and monitoring management. By interview with the staff and check records /6/-/8/ during on-site visit, it can be confirmed that the monitoring management system is implemented following the project management and monitoring manual.

All monitoring devices have been calibrated and maintained periodically to ensure the accuracy of measurement. Calibration records /30/ of instruments used in measurements were made available during the verification visit, which provides assurance that they are valid during the verification period. Since from 30-Jan-2024 to 31-Aug-2024, the meter was not calibrated on time by the project owner, thus the corrected value added the maximum permissible error of the equipment is applied to calculate the emission reduction. Competence and training records /5/ of in-plant personnel engaged in measurement of plant parameters were presented during

verification and found to be in order.

Emission reduction calculation

CTI Certification confirms that appropriate methods and formulae for calculating baseline emissions, project emissions and leakage have been followed, and the assumptions, emission factors and default values that are applied in the calculation have been justified.

According to the applied methodology ACM0001, Version 19.0, the emission reductions are determined as the difference between the baseline emissions, project emissions and leakage:

$$ER_y = BE_y - PE_y - LE_y$$

Baseline emissions

As per registered VCS PD /9/, baseline reductions are determined as:

$$BE_y = BE_{CH_4,y} + BE_{EC,y}$$

Baseline emissions of methane from the SWDS ($BE_{CH_4,y}$)

As per ACM0001 and registered VCS PD/9/, for the project activity

$$BE_{CH_4} = \left((1 - OX_{top_layer}) \times F_{CH_4,PJ,y} - F_{CH_4,BL,y} \right) \times GWP_{CH_4}.$$

$$F_{CH_4,PJ,y} = F_{CH_4,EL,y}$$

$F_{CH_4,EL,y}$ is determined using the "Tool to determine the mass flow of a greenhouse gas in a gaseous stream" and monitoring the working hours of the power plant(s), so that no emission reduction is claimed for methane destruction during non-working hours. This is taken into account by monitoring the hours that the equipment utilizing the LFG is operating in year y ($Op_{j,h,y}$). For the project, the flow of gaseous stream is volume flow-wet basis, and the volumetric fraction is wet basis, thus, as per the "Tool to determine the mass flow of a greenhouse gas in a gaseous stream" (version 03.0), Option C is applied to determine the parameter of $F_{CH_4,EL,y} = F_{i,t} \times Op_{j,h,y}$ and the mass flow of greenhouse gas i ($F_{i,t}$) is determined as follows:

$$F_{i,t} = V_{t,wb,n} \times v_{i,t,wb} \times \rho_{i,n}$$

With:

$$\rho_{i,n} = \frac{P_n \times MM_i}{R_u \times T_n}$$

Where:

$F_{i,t}$ = Mass flow of greenhouse gas i in the gaseous stream in time interval t (kg gas/h)

$V_{t,wb,n}$ = Volumetric flow of the gaseous stream in time interval t on a wet basis at normal conditions (m³ wet gas/h)

$v_{i,t,wb}$ = Volumetric fraction of greenhouse gas i in the gaseous stream in time interval t on

a wet basis (m^3 gas i/ m^3 wet gas)

$\rho_{i,n}$ = Density of greenhouse gas i in the gaseous stream at normal conditions (kg gas i/ m^3 wet gas i)

P_n = Absolute pressure at normal conditions (Pa)

T_n = Temperature at normal conditions (K)

MM_i = Molecular mass of greenhouse gas i (kg/kmol)

R_u = Universal ideal gases constant ($\text{Pa} \cdot \text{m}^3/\text{kmol} \cdot \text{K}$)

As per registered PD, for the project activity, there was no regulation or standard that enforces methane destruction in LFG since Nanchang Maiyuan landfill site started operation and Nanchang Maiyuan landfill site did not have existing LFG capture and destruction system prior to the implementation of the project activity. Therefore, the project is in line with case 1: No requirement to destroy methane exists and no existing LFG capture system. In this situation: $F_{CH4,BL,y} = 0$.

Therefore,

$$BE_{CH4} = \left((1 - OX_{top_layer}) \times F_{CH4,PJ,y} - F_{CH4,BL,y} \right) \times GWP_{CH4}$$

$$= \left((1 - OX_{top_layer}) \times V_{t,wb,n} \times v_{i,t,wb} \times \rho_{i,n} \times O_{pj,h} - 0 \right) \times GWP_{CH4}$$

The detailed calculation process of $F_{CH4,PJ,y}$ has been included in the ER calculation spreadsheet and confirmed by the verification team to be correct. The value of $F_{CH4, PJ, y}$ in this monitoring period is as the table below.

Period		$V_{t,wb,n}$ (Nm^3/h)	$O_{pj,h}$ (hour)	$V_{i,t,wb}$ (m^3 gas CH_4/m^3 wet gas)	$F_{CH4, PJ,y}$ (t CH_4)
01/05/2022	31/05/2022	3,181.40	744	33.80%	572.552
01/06/2022	30/06/2022	3,002.86	720	37.20%	575.595
01/07/2022	31/07/2022	2,769.01	744	34.90%	514.552
01/08/2022	31/08/2022	2,576.20	744	28.70%	393.678
01/09/2022	30/09/2022	2,534.19	720	32.80%	428.304
01/10/2022	31/10/2022	2,110.63	744	28.70%	322.533
01/11/2022	30/11/2022	2,065.24	720	27.40%	291.582
01/12/2022	31/12/2022	1,671.44	744	33.70%	299.917
01/01/2023	31/01/2023	1,266.13	744	34.60%	233.257

01/02/2023	28/02/2023	1,192.66	672	35.60%	204.194
01/03/2023	31/03/2023	1,168.24	744	35.50%	220.821
01/04/2023	30/04/2023	1,444.55	720	32.70%	243.399
01/05/2023	31/05/2023	1,409.36	744	32.10%	240.883
01/06/2023	30/06/2023	1,404.90	720	31.40%	227.308
01/07/2023	31/07/2023	1,457.42	744	33.40%	259.186
01/08/2023	31/08/2023	1,410.09	744	36.70%	275.545
01/09/2023	30/09/2023	1,061.56	720	44.60%	243.960
01/10/2023	31/10/2023	1,277.25	744	35.70%	242.786
01/11/2023	30/11/2023	1,158.05	720	34.20%	204.076
01/12/2023	31/12/2023	1,067.06	744	32.80%	186.356
01/01/2024	31/01/2024	1,053.39	744	36.20%	203.038
01/02/2024	29/02/2024	919.12	696	37.10%	169.849
01/03/2024	31/03/2024	1,047.05	744	36.60%	204.046
01/04/2024	30/04/2024	1,095.72	720	32.30%	182.365
01/05/2024	31/05/2024	1,251.98	744	38.70%	257.981
01/06/2024	30/06/2024	920.42	720	40.40%	191.605
01/07/2024	31/07/2024	982.72	744	36.10%	188.893
01/08/2024	31/08/2024	916.39	744	35.40%	172.728
Total/Average		1,552.41	20,496	34.04%	7,750.989

The calculation process has been included in the ER calculation spreadsheet and confirmed by the verification team to be correct. The value of parameters in the equation are listed as follows:

Parameter	Description	01/05/2022~ 31/12/2022	01/01/2023~ 31/12/2023	01/01/2024~ 31/08/2024	Total
OX _{top_layer}	Fraction of methane in the LFG that would be oxidized in the top layer of the SWDS in the baseline (dimensionless)	0.1	0.1	0.1	0.1

$F_{CH_4,PJ,y}$ (tCH ₄)	Amount of methane in the LFG which is flared and/or used in the project activity	3,398.713	2,781.771	1,570.505	7,750.989
$F_{CH_4,BL,y}$ (tCH ₄)	Amount of methane in the LFG that would be flared in the baseline in year y	679.743	556.354	314.101	1,550.198
GWP_{CH_4} (tCO ₂ e/tCH ₄)	Global warming potential of CH ₄	28	28	28	28
$BE_{CH_4,y}$ (tCO ₂ e)	Baseline emissions of methane from the SWDS	66,614	54,522	30,781	151,917

Baseline emissions associated with electricity generation ($BE_{EC,y}$)

As per registered VCS PD /9/, this parameter is calculated as:

$$BE_{EC,y} = \sum_k EC_{BL,k,y} \times EF_{EL,k,y} \times (1 + TDL_{k,y})$$

Where,

$BE_{EC,y}$	=	Baseline emissions from electricity consumption in year y (t CO ₂ /yr)
$EC_{BL,k,y}$	=	Quantity of electricity that would be consumed by the baseline electricity consumer k in year y (MWh/yr)
$EF_{EL,k,y}$	=	Emission factor for electricity generation for source k in year y (t CO ₂ /MWh)
$TDL_{k,y}$	=	Average technical transmission and distribution losses for providing electricity to source k in year y
k	=	Sources of electricity consumption in the baseline

The detailed calculation process of $BE_{EC,y}$ has been included in the ER calculation spreadsheet and confirmed by the verification team to be correct. The parameters determining $BE_{EC,y}$ during this monitoring period are as follows:

Parameter	Description	01/05/2022~ 31/12/2022	01/01/2023~ 31/12/2023	01/01/2024~ 31/08/2024	Total
$EC_{BL,k,y}$ (MWh)	Quantity of electricity that would be consumed by the baseline electricity consumer k in year y, $EC_{BL,k,y} = EG_{PJ,y}$	15,954.300	12,545.000	7,093.455	35,592.755
$EF_{EL,k,y}$ (tCO ₂ /MWh)	Emission factor for electricity generation for source k in year y. $EF_{EL,k,y} = EF_{grid,CM,y}$	0.6063	0.6063	0.6063	-

$TDL_{k,y}$	Average technical transmission and distribution losses for providing electricity to source k	3%	3%	3%	-
$BE_{EC,y}$ (tCO ₂)	Baseline emissions associated with electricity generation	9,963	7,834	4,429	22,226

Hence, the corresponding baseline emissions reductions are calculated as:

Parameter	Description	01/05/2022~ 31/12/2022	01/01/2023~ 31/12/2023	01/01/2024~ 31/08/2024	Total
$BE_{CH_4,y}$ (tCO ₂ e)	Baseline emissions of methane from the SWDS	66,614	54,522	30,781	151,917
$BE_{EC,y}$ (tCO ₂ e)	Baseline emissions associated with electricity generation	9,963	7,834	4,429	22,226
BE_y (tCO ₂ e)	Baseline emissions	76,577	62,356	35,210	174,143

Project emissions

As per the registered VCS PD /9/, Project emissions are calculated as follows: $PE_y = PE_{EC,y}$

In which

$$PE_{EC,y} = \sum_j EC_{PJ,j,y} \times EF_{EL,j,y} \times (1 + TDL_{j,y})$$

The detailed calculation process of $PE_{EC,y}$ has been included in the ER calculation spreadsheet and confirmed by the verification team to be correct. The parameters determining $PE_{EC,y}$ during this monitoring period are as follows:

Parameter	Description	01/05/2022~ 31/12/2022	01/01/2023~ 31/12/2023	01/01/2024~ 31/08/2024	Total
$EC_{PJ,j,y}$ (MWh)	Quantity of electricity consumed by the project electricity consumption source j	0.200	2.700	1.910	4.810
$EF_{EL,j,y}$ (tCO ₂ /MWh)	Emission factor for electricity generation for source j	0.6063	0.6063	0.6063	-

TDL _{j,y} (%)	Average technical transmission and distribution losses for providing electricity to source j	20%	20%	20%	-
PE _{EC,y} (tCO ₂)	Emissions from consumption of electricity due to the project activity	1	2	2	5

Hence, the corresponding project emissions are calculated as:

Parameter	Description	01/05/2022~31/12/2022	01/01/2023~31/12/2023	01/01/2024~31/08/2024	Total
PE _y (tCO ₂)	Project emissions	1	2	2	5
PE _{EC,y} (tCO ₂)	Emissions from consumption of electricity due to the project activity	1	2	2	5

Leakages

Leakage does not need to be accounted for this project as per the PD.

Emission reductions

The emission reductions for this monitoring period was calculated as:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
01/05/2022-31/12/2022	76,577	1	0	76,576
01/01/2023-31/12/2023	62,356	2	0	62,354
01/01/2024-31/08/2024	35,210	2	0	35,208
Total	174,143	5	0	174,138

4.4 Quality of Evidence to Determine Reductions and Removals

The assessment of each parameter related to calculate the GHG emission reductions is justified in Sections 4.1 and 4.3 above. Via the on-site inspection and desk review, the verification team verified the supporting evidence provided by the project proponent as listed in Appendix 3 used to determine the GHG emission reductions

For each reported data, the evidence is provided and verified as sufficient and quality is appropriate. Also, the cross-checks have been performed on the reported data with different source of evidence. The information flow from data generation and aggregation, to recording, calculation and final transposition into the monitoring report has been assessed by VVB in Section 4.3. Moreover, the calibration is verified as stated in Section 4.3 via on-site inspection with evidences to confirm the meters' location, accuracy and calibration frequency are in line with requirement of the monitoring plan.

Therefore, it is concluded that the evidence provided are verified as sufficient and quality is appropriate and thus the evidence can be used to determine the GHG emission reductions and removals for this monitoring period.

4.5 Non-Permanence Risk Analysis

Not applicable as this is not an AFOLU project.

5 VERIFICATION OPINION

5.1 Verification Summary

CTI Certification Co., Ltd (CTI Certification) has performed the verification of the emission reductions that have been reported for the project activity “Nanchang Zhonglan Huanneng Technical Service Co. Ltd. Maiyuan LFG Power Generation Project” in China (VCS Project ID: 2358) for the period 01-May-2022 to 31-Aug-2024.

During the verification, 3 Clarification Requests (CLs) were raised and closed successfully. No Corrective Action request (CAR) or Forwarded Action Request (FAR) was identified.

The verification is based on the baseline and monitoring methodology ACM0001 (Version 19.0), VCS PD/9/. The verification consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification and certification report.

The project proponents are responsible for the collection, calculation and determination of the GHG data in accordance with the monitoring plan and the reporting of GHG emission reductions on the basis set out within the project monitoring report.

Our verification approach was based on the requirements as defined under the applicable VCS Standard Version 4.7 and relevant UNFCCC requirements. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The verification can confirm that:

- the project is implemented and operated as per the registered PD;
- the monitoring plan in registered PD is as per the applied methodology;
- the monitoring complies with the monitoring plan in the registered PD;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS Standard Version 4.7 and CDM requirements;
- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.

It is CTI Certification's responsibility to provide an independent verification statement on the reported GHG emission reductions for the project. Based on an understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these, CTI Certification planned and performed our work to obtain the information and explanations that we considered necessary to provide reasonable assurance that reported GHG emission reductions CTI Certification are fairly stated.

Request for issuance of VCU's shall be made by the project proponent to an approved VCS Program Registry based on the requirements set out under the most recent version of the VCS Program Guidelines clause on VCS Registration.

The verification of reported emission reductions is based on the information made available to CTI Certification and the engagement conditions detailed in this report. CTI Certification cannot be held liable by any party for decisions made or not made based on this report.

5.2 Verification Conclusion

In CTI Certification's opinion the GHG emissions reductions of the "Nanchang Zhonglan Huanneng Technical Service Co. Ltd. Maiyuan LFG Power Generation Project" for the period 01-May-2022 to 31-Aug-2024 are fairly stated in the monitoring report (Version 4.0, dated 17/03/2025). The GHG emission reductions were calculated correctly based on the approved methodology ACM0001 (Version 19.0) and the monitoring plan contained in the registered VCS PD (version 2.0 dated 26/12/2020).

CTI Certification can confirm that the GHG emission reductions are calculated without material misstatements. The verification report expresses a conclusion with a reasonable level of assurance about whether the reported GHG emissions reduction data is free from material misstatement.

Based on the evidence and information that are considered necessary to guarantee that GHG emission reductions are appropriately calculated, CTI Certification confirms the following statement:

Verification period: From 01-May-2022 to 31-Aug-2024

Verified GHG emission reductions and carbon dioxide removals in the above verification period:

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCU (tCO ₂ e)	Removal VCU (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-May-2022 to 31-Dec-2022	76,577	1	0	76,576	0	76,576
01-Jan-2023 to 31-Dec-2023	62,356	2	0	62,354	0	62,354
01-Jan-2024 to 31-Aug-2024	35,210	2	0	35,208	0	35,208
Total	174,143	5	0	174,138	0	174,138

5.3 Ex-ante vs Ex-post ERR Comparison

Vintage period	Ex-ante estimated reductions / removals (tCO ₂ e)	Achieved reductions / removals (tCO ₂ e)	Percent difference	Explanation for the difference
01-May-2022 to 31-Dec-2022	129,092	76,576	-58.25%	The emission reductions claimed are 174,138 tCO ₂ e in this monitoring period. Based on the registered VCS PD/9/, the amount of estimated emission reductions for this monitoring period would be $192,321/365 \times 245 + 177,712 + 165,432/366 \times 244 = 417,092$ tCO ₂ e. Compared with
01-Jan-2023 to 31-Dec-2023	177,712	62,354		

01-Jan-2024 to 31-Aug-2024	110,288	35,208	expected emission reductions 417,092 tCO₂e in the PD, the reported emission reductions in this monitoring period is 58.25% less than that estimated in the registered VCS PD/9/ due to insufficient gas supply from landfills. The verification team considered 58.25% less than the estimation reflects to the operation practice of the project, and did not impact the project's baseline determination and additionality assessment. Therefore, CTI Certification can confirm that the emission reductions reported in this monitoring period are reasonable and appropriate. CTI Certification verified the input data for calculating emission reductions and the calculating process, and confirmed the result were complete and transparent.
Total	417,092	174,138	

Feng Tian

Feng Tian
Team Leader
18-March-2025

Shunrong Lin

Lin Shunrong
Technical Reviewer
18-March-2025

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

<i>Section</i>	<i>Information</i>	<i>Justification</i>	<i>Assessment method and conclusion</i>
N/A	N/A	N/A	N/A

APPENDIX 2: ABBREVIATIONS

Abbreviations	Full text
CAR	Corrective Action Request
CCPG	Central China Power Grid
CL	Clarification request
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
CTI Certification	CTI Certification Co., Ltd
EF	Emission Factor
ER	Emission Reduction
ETN	Electricity Transaction Note
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
MR	Monitoring Report
MRRs	Meter Reading Records
PD	Project Description
PP	Project Proponent
VCS	Verified Carbon Standard
VCU	Verified Carbon Unit

APPENDIX 3: REFERENCES

No.	References
/1/	Climate Bridge (Shanghai) Ltd.: VER/VCU Monitoring Report for Nanchang Zhonglan Huanneng Technical Service Co. Ltd. Maiyuan LFG Power Generation Project, version 2.0 dated 08/10/2024; Version 3.0, dated 13/02/2025; Version 4.0, dated 17/03/2025
/2/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: Emission reduction calculation spreadsheet for Nanchang Zhonglan Huanneng Technical Service Co. Ltd. Maiyuan LFG Power Generation Project.
/3/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd. and State Grid Jiangxi Electric Power Company: Power Purchase Agreement for Nanchang Zhonglan Huanneng Technical Service Co. Ltd. Maiyuan LFG Power Generation Project.
/4/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: VER monitoring manual and management procedure.
/5/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: Records of training for on-site staff.
/6/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: Operation and Maintenance Record, from 01-May-2022 to 31-Aug-2024.
/7/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: Project cycle report - downtime details, from 01-May-2022 to 31-Aug-2024.
/8/	Electricity Transaction (ETNs) of amount of electricity generated using LFG by the project activity in year y measured by electricity meter, from 01-May-2022 to 31-Aug-2024.
/9/	Registered PD, version 2.0 dated 26/12/2020.
/10/	LGAI Technological Center, S.A. (Applus+ Certification) : VCS Validation on 27/12/2020 and 1 st monitoring period (01/01/2019 to 28/02/2021) verification Report, version 1.0 dated 28/04/2021
/11/	Monitoring report for 2 nd monitoring period (from 01/03/2021 to 30/04/2022) dated 04/11/2022 and Verification report by CTI for 2 nd monitoring period dated 07/11/2022
/12/	Power Purchase Agreement, signed between the PP and local Power Grid Company

	dated 10/12/2018
/13/	Jiangxi Nanda Ronghui Environmental Technology Co., Ltd., Environmental Impact Assessment Report dated 07/2018
/14/	Agreement for gas collection
/15/	Nanchang City Ecological Environment Bureau, EIA approval dated 13/12/2018
/16/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: Daily Report of Zhonglan Huanneng, from 01-May-2022 to 31-Aug-2024.
/17/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: Monthly Report of Zhonglan Huanneng, 01-May-2022 to 31-Aug-2024.
/18/	State Economic and Trade Commission: Technical administrative code of electric energy metering (DL/T 448-2016).
/19/	ETN issued by the grid company during this monitoring period
/20/	Chinese DNA, "2017 Baseline Emission Factors for Regional Power Grids in China" published by DNA of China dated 20/12/2018
/21/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: Nameplate and Photos of electricity meter, gas analyzer, flow meter and generators.
/22/	"2019-2020 Implementation Plan for the Total Set and Distribution of National Carbon Emissions Trading Allowances (Thermal Power Industry)" issued by Ministry of Ecology and Environment of P. R. China. http://mee.gov.cn/xxgk2018/xxgk/xxgk03/202012/t20201230_815546.html
/23/	"List of key emissions in the national carbon emissions transaction quota management in 2019-2020" issued by Ministry of Ecology and Environment of P. R. China. http://mee.gov.cn/xxgk2018/xxgk/xxgk03/202012/t20201230_815546.html
/24/	UNFCCC website
/25/	REC Mechanism database of China
/26/	Chinese Emission Trading System (Chinese ETS)
/27/	Gold Standard Registry
/28/	Chinese Certified Emission Reduction Mechanism (CCER)

/29/	China's National Plan on Implementation of the 2030 Agenda for Sustainable Development
/30/	Jiangxi Institute of Metrology & Testing: Calibration certificates for flow meter, Gas analyser and electricity meter covering this monitoring period.
/31/	General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China: Metrological Authorization Certification of Jiangxi Province Academy of Metrology & Quality Inspection issued on 13/05/2022 valid till 12/05/2028.
/32/	Staff roster and paycheck provided by the project owner
/33/	Training plan and training record
/34/	EHS certificates
/35/	statement on double counting
/36/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: Statement for the operation cost.
/37/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: Carbon reduction related training.
/38/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: Minutes of Operational Stakeholder Meetings. 20/03/2023
/39/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: stakeholder consultation questionnaires, 20/03/2023
/40/	Jiangxi Provincial Development and Reform Commission: On-grid tariff approval.
/41/	Verified Carbon Standard: VCS Standard, version 4.7.
/42/	Verified Carbon Standard: VCS Program Guide, version 4.4.
/43/	Verified Carbon Standard: Registration and Issuance Process, version 4.3.
/44/	UNFCCC EB: Approved methodology, ACM0001, Version 19.0.
/45/	Nanchang Zhonglan Huanneng Technical Service Co. Ltd.: Environmental monitoring reports from 2022 to 2024
/46/	Boiler Air Pollutant Emission Standard" (GB13271 -2014) Gas-fired boiler standards
/47/	"Environmental Noise Emission Standard of Industrial Enterprise

	Boundary"(GB12348-2008)
/48/	General Industrial Solid Waste Storage and Disposal Site Pollution Control Standards (GB 18599-2001) and Hazardous Waste Storage Pollution Control Standards (GB 18597-2001)
/49/	Equipment contract
/50/	Equipment list
/51/	China Ruilin Engineering & Technology Co., Ltd., Feasibility study report (FSR) dated 06/2018 Development and Reform Bureau of Nanchang City, Project approval dated 08/06/2018 Jiangxi Nanda Ronghui Environmental Technology Co., Ltd., Environmental Impact Assessment Report dated 07/2018 Nanchang City Ecological Environment Bureau, EIA approval dated 13/12/2018
/52/	Nanchang Maiyuan landfill Site, Nanchang Maiyuan landfill statement on waste composition and waste amount
/53/	Hazardous waste disposal contracts from 2022 to 2024.
/54/	Hazardous waste disposal contracts ledgers from 2022 to 2024.
/55/	Renewable Energy Law of the People's Republic of China http://www.nea.gov.cn/2017-11/02/c_136722869.htm
/56/	National Action plan for the collection and Utilization of municipal landfill gas https://www.chinanews.com.cn/2002-10-24/9/235713.html
/57/	Catalogue for the Guidance of Industrial Structure Adjustment (2019 version) http://www.gov.cn/xinwen/2019-11/06/content_5449193.htm
/58/	Labor Law of the PRC
/59/	Website of project pronpoent https://www.11467.com/qiye/63175470.htm
/60/	Grievance Book provided by Nanchang Zhonglan Huanneng Technical Service Co. Ltd.
/61/	"2019 Statistical Yearbook of Urban and Rural Construction": https://www.mohurd.gov.cn/gongkai/fdzdgknr/sjfb/tjxx/jstjnj/index.html
/62/	"2020 China Biomass Power Generation Industry Development Report": https://www.beipa.org.cn/productinfo/515739.html
/63/	"Overview of the Development of China's Municipal Solid Waste Treatment Industry in 2012": https://doc.mbalib.com/view/604143e8e7ecadf5b5410f95fee266fc.html

/64/	Nanchang City Administration Bureau: Statement about technical management of Nanchang Maiyuan landfill Site, issued on 24/03/2021.
/65/	Completion Acceptance Form and Project Settlement Confirmation Form issued by Nanchang Zhonglan Huanneng Technical Service Co., Ltd and Beijing Zhonglan Environmental Engineering Co., Ltd.
/66/	Recovery Monitoring System Instruction Manual

APPENDIX 4: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

Mr. Tian FENG

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification					
GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
√	√	√	√	√	-

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
SS 8: Mining/mineral production	TA 8.1: Mining/mineral production
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater
	TA 13.2: Manure

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by: *Shunrong Lin*
Shunrong LIN
Technical Competent Manager
Shenzhen, 31/10/2023

Ms. Qixin ZHANG

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification					
GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
√	√	-	-	-	-

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
SS 13: Waste handling and disposal	TA 13.2: Manure

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by: *Shunrong Lin*
Shunrong LIN

Technical Competent Manager

Shenzhen, 01/05/2024

Ms. Shunrong LIN

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification					
GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
√	√	√	√	√	√

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
SS 3: Energy demand	TA 3.1: Energy demand
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater
	TA 13.2: Manure
SS 14: Afforestation and reforestation	TA 14.1: Afforestation and reforestation
SS 15: Agriculture	TA 15.1: Agriculture

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

Wu LIN

Wu Lin

Technical Competent Manager

Shenzhen, 25/10/2022

APPENDIX 5: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS

Table 1: Corrective Action Requests

CAR ID	N/A	Section no.	N/A	Date: N/A
Description of CAR				
N/A				
Project proponent response				Date: N/A
N/A				
Documentation provided by project proponent				
N/A				
VVB assessment				Date: N/A
N/A				

Table 2: Clarification Requests

CL ID	CL 1	Section no.	5.1	Date: 26/09/2024
Description of CL				
By checking VCS ER sheet, there are several months the $EG_{EC,y}$ has value of 0, while all other have values.				
Project proponent response				Date: 08/10/2024
The internal electricity consumption of the project is generally provided by the electricity generation of the project. Under normal operation of the project, the electricity generation of the project first meets the demand for electricity consumption of the plant, and then supplies it to the grid, with occasional import of electricity from the grid. During this monitoring period, the project were operating normally, it is normal and reasonable for some months to import electricity from the grid while some months did not.				
Documentation provided by project proponent				
Electricity invoices				
VVB assessment				Date: 05/11/2024
By checking Electricity invoices, ER sheet and on-sit visit, it is verified that the value of $EG_{EC,y}$ is correct. Thus, CL 01 was closed.				
CL ID	CL 2	Section no.	1.12	Date: 26/09/2024

Description of CL	
Please clarify the respective SDG indicator numbers for SDGs 7, 8 and 13.	
Project proponent response	Date: 08/10/2024
The respective SDG indicator numbers for SDGs 7, 8 and 13 has been clarified in MR.	
Documentation provided by project proponent	
MR UN METADATA: https://unstats.un.org/sdgs/metadata	
VVB assessment	Date: 05/11/2024
By checking the MR, it is confirmed that the SDG indicator numbers for SDGs 7, 8 and 13 in the MR is in line with UN METADATA. Thus, CL 02 was closed.	

CL ID	CL 3	Section no.	2.1.4	Date:26/09/2024
Description of CL				
It is not clear whether PP has provided any grievance book to record the complaints received from the stakeholders.				
Project proponent response				Date: 08/10/2024
The grievance book has been provided to VVB, and no complaints received during this monitoring period.				
Documentation provided by project proponent				
The grievance book				
VVB assessment				Date: 05/11/2024
By checking the Grievance Book provided by Nanchang Zhonglan Huanneng Technical Service Co. Ltd., it can be confirmed that the PP receives and records complaints received from stakeholders through the Grievance Book at the project site. Thus, CL 03 was closed.				

Table 3: Forward Action Requests

FAR ID	N/A	Section no.	N/A	Date: N/A
Description of FAR				
N/A				
Project proponent response				Date: N/A
N/A				
Documentation provided by project proponent				
N/A				
VVB assessment				Date: N/A
N/A				