المجلس العالمي للبصمة الكربونية
GLOBAL CARBON COUNCIL

Project Submission Form

V3.2 - 2020

Contents

COVER PAGE- Project Submission Form (PSF)	
Complete this form in accordance with the instructions attached at the end of this form.	
BASIC INFORMATION	
Title of the Project Activity	**Rongchang County MSW Landfill Site LFG Recovery to power Project**
PSF version number	01
Date of completion of this form	13/06/2022
Project Owner(s) (Shall be consistent with De-registered CDM Type B Projects)	Henan BCCY Environmental Energy Co., Ltd.
Country where the Project Activity is located	China
GPS coordinates of the project site(s)	N29°24′ 5.36″, E105°35′ 1.49″ N29.4014, E105.5837
Eligible GCC Project Type as per the Project Standard (Tick applicable project type)	☐ **Type A:** ☐ Type A1 ☒ Type A2 ☒ Sub-Type 1 ☐ **Type B – De-registered CDM Projects:**[1] ☐ Type B1 ☐ Type B2
Minimum compliance requirements	☒ Real and Measurable GHG Reductions ☒ National Sustainable Development Criteria (if any) ☒ Apply credible baseline and monitoring methodologies ☒ Additionality

[1] Owners of Type B projects shall fill in the form provided in Appendix 7.

<table>
<tr><td></td><td>☒ Local Stakeholder Consultation Process
☒ Global Stakeholder Consultation Process
☒ No GHG Double Counting
☒ Contributes to United Nations Sustainable Development Goal 13 (Climate Action)</td></tr>
<tr><td>Choose optional and additional requirements
(Tick applicable label categories)</td><td>☒ Do-no-net-harm Safeguards to address Environmental Impacts
☒ Do-no-net-harm Safeguards to address Social Impacts
☒ Contributes to United Nations Sustainable Development Goals (in addition to Goal 13)</td></tr>
<tr><td>Applied methodologies
(Shall be approved by the GCC or the CDM)</td><td>CDM Methodologies. AMS-III.G: Landfill Methane Recovery - Version 10.0;
AMS-I.D: Grid connected renewable electricity generation - Version 18.0
CDM TOOL 04: Emissions from solid waste disposal sites - Version 8
TOOL 07: Tool to calculate the emission factor for an electricity system- Version 7
TOOL 32: Positive lists of technologies - Version 4</td></tr>
<tr><td>GHG Sectoral scope(s) linked to the applied methodology(ies)</td><td>GHG-SS #1: Energy (renewable/non-renewable sources)
GHG-SS #13: Waste handling and disposal</td></tr>
<tr><td>Applicable Rules and Requirements for Project Owners
(Tick applicable Rules and Requirements)</td><td>
<table>
<tr><th colspan="2">Rules and Requirements</th><th>Reference</th><th>Version</th></tr>
<tr><td colspan="2">☒ ISO 14064-2</td><td></td><td></td></tr>
<tr><td colspan="2">☒ Applicable host country legal requirements /rules</td><td></td><td></td></tr>
<tr><td rowspan="6"></td><td>☒ Project Standard</td><td></td><td>V3.1</td></tr>
<tr><td>☐ Approved GCC Methodology (XXXXX)</td><td></td><td></td></tr>
<tr><td>☒ Program Definitions</td><td></td><td>V3.1</td></tr>
<tr><td>☒ Environment and Social Safeguards Standard</td><td></td><td>V2</td></tr>
<tr><td>☒ Project Sustainability Standard</td><td></td><td>V2.1</td></tr>
<tr><td>☒ Instructions in Project Submission Form (PSF)-template</td><td></td><td>V3.2</td></tr>
</table>
</td></tr>
</table>

	☒ GCC Rules and Requirements[2]	☐ Add rows if required		
	☒ CDM Rules[3]	☒ Approved CDM Methodology (XXXXX)	AMS-III.G AMS-I.D	V10.0 V18.0
		☐ Tool for the demonstration and assessment of additionality	TOOL 01	
		☐ Combined tool to identify the baseline scenario and demonstrate additionality	TOOL 02	
		☒ Tool to calculate the emission factor for an electricity system	TOOL 07	V7
		☐ Demonstration of additionality of microscale project activities	TOOL 19	
		☐ Demonstration of additionality of small-scale project activities	TOOL 21	
		☐ Additionality of first-of-its-kind project activities	TOOL 23	
		☐ Common practice	TOOL 24	
		☐ Investment analysis	TOOL 27	
		☒ Positive lists of technologies	TOOL 32	V4
		☐ Guidelines for objective demonstration and assessment of barriers		
		☒ Emissions from solid waste disposal sites	TOOL 04	V8
		☐ Add rows if required		
Choose Third Party External Project Verification by	☒ GHG emission reductions (i.e., Approved Carbon Credits **(ACCs)**) ☒ Environmental No-net-harm Label (**E+**) ☒ Social No-net-harm Label (**S+**)			

[2] GCC Program rules and requirements: https://www.globalcarboncouncil.com/resource-centre.html
[3] CDM Program rules: https://cdm.unfccc.int/Reference/index.html

approved GCC Verifiers[4] (Tick applicable verification categories)	☒ United Nations Sustainable Development Goals (**SDG**$^{+}$) ☐ Bronze SDG Label ☐ Silver SDG Label ☒ Gold SDG Label ☐ Platinum SDG Label ☐ Diamond SDG Label ☒ CORSIA requirements (**C**$^{+}$) ☐ Host Country Attestation on Double counting
Declaration to be made by the Project Owner(s)[5] (Tick all applicable statements)	The Project Owner(s) declares that: ☒ The Project Activity complies with the eligibility of the applicable project type (A1, A2, B1 or B2) as stipulated by the Project Standard. ☒ The Project Activity shall start operations, and start generating emission reductions, on or after 1 January 2016. ☒ The Project Activity is eligible to be registered under the GCC program. ☒ No carbon credits generated by the proposed Project Activity will be claimed as carbon credits in any other GHG program anywhere in the world, either for compliance or voluntary purposes, for the entire 10-year GCC crediting period. ☒ The proposed Project Activity, if Type A, is NOT registered as a GHG Project Activity in any other GHG program or any other voluntary program anywhere in the world. ☒ The proposed Project Activity is NOT included as a component Project Activity (CPA) in a registered GHG Programme of Activities (PoA) under any GHG program (such as the CDM or any other voluntary program) anywhere in the world. ☒ The proposed Project Activity is NOT a CPA that has been excluded from a registered PoA under any GHG program (such as the CDM or any other voluntary program) anywhere in the world. Provide details (if any) below for the boxes ticked above.
	☒ If a GCC project chooses to apply to use ACCs under CORSIA, the Project Owner(s) is required to declare that they are aware that they must obtain and provide to the GCC and its Registry (operated by IHS Markit) a written

[4] **Note:** GCC Verifiers under the Individual Track are not eligible to conduct verifications for GCC Project Activities whose owners intend to supply carbon credits (ACCs) for use within CORSIA.

[5] The "Project Owner" means the legal entity or organization that has overall control and responsibility for the Project Activity.

	☒ Confirms the avoidance of double counting as required by CORSIA; ☒ Shall be made publicly available prior to the use of units from the host country under CORSIA; and ☒ Places all responsibility on the Project Owner(s) to replace any and all doubly claimed or counted ACCs by the host country, in the GCC registry operated by IHS Markit. Provide details below for the boxes ticked above
	The Project Owner(s) declares that: ☒ All of the information provided in this document, including any supporting documents submitted to the GCC or its registry operator IHS Markit at any time, is true and correct; ☒ They understand that a failure by them to provide accurate information or data, or concealing facts and information, can be considered as negligence, fraud or willful misconduct. Therefore, they are aware that they are fully responsible for any liability that arises as a result of such actions. Provide details below for the boxes ticked above
Appendixes 1-7	Details about the Project Activity are provided in Appendixes 1 through 7 to this document.
Name, designation, date and signature of the Project Owner(s)	Henan BCCY Environmental Energy Co., Ltd.  13/06/2022

1. PROJECT SUBMISSION FORM

Section A. Description of the Project Activity

Section A. Description of the Project Activity

A.1. Purpose and general description of the Project Activity

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Rongchang county MSW landfill site LFG recovery to power project (hereafter referred to as the project) is located at Rongchang County MSW landfill site (hereafter referred to as Rongchang landfill site), in Rongchang County, Chongqing City, China. The project is constructed and operated by Rongchang BCCY Environment Energy Co., Ltd. Rongchang landfill site started collecting and handling waste at the 2009.
The project started to construct on 15/03/2015. The project has a total designed capacity 2MW (4*0.5MW) and combusts the LFG, which contains nearly 50% of methane, to generate electricity and export it to the Central China Power Grid (CCPG). Total electricity supplied to the grid in the crediting period will be 76,646MWh. The estimated average GHG emission reductions of the project is 44,811tCO_2e and the total GHG emission reductions and removals are 448,112tCO_2e during the fixed 10 years crediting period.
Scenario existing prior to the implementation of the project (the same as baseline scenario):
LFG from Rongchang landfill site is emitted to the atmosphere directly. Equivalent electricity generated by the project is supplied by the CCPG, which is dominated by fossil fuel based power plants.

A.2. Location of the Project Activity

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Address and geodetic coordinates of the physical site of the Project Activity		
Physical address	**Latitude**	**Longitude**
Rongchang Landfill Site, Qibaoyan Village, Rongchang County, Chongqing City, China	N29°24′5.36″ N29.4014	E105°35′1.49″ E105.5837

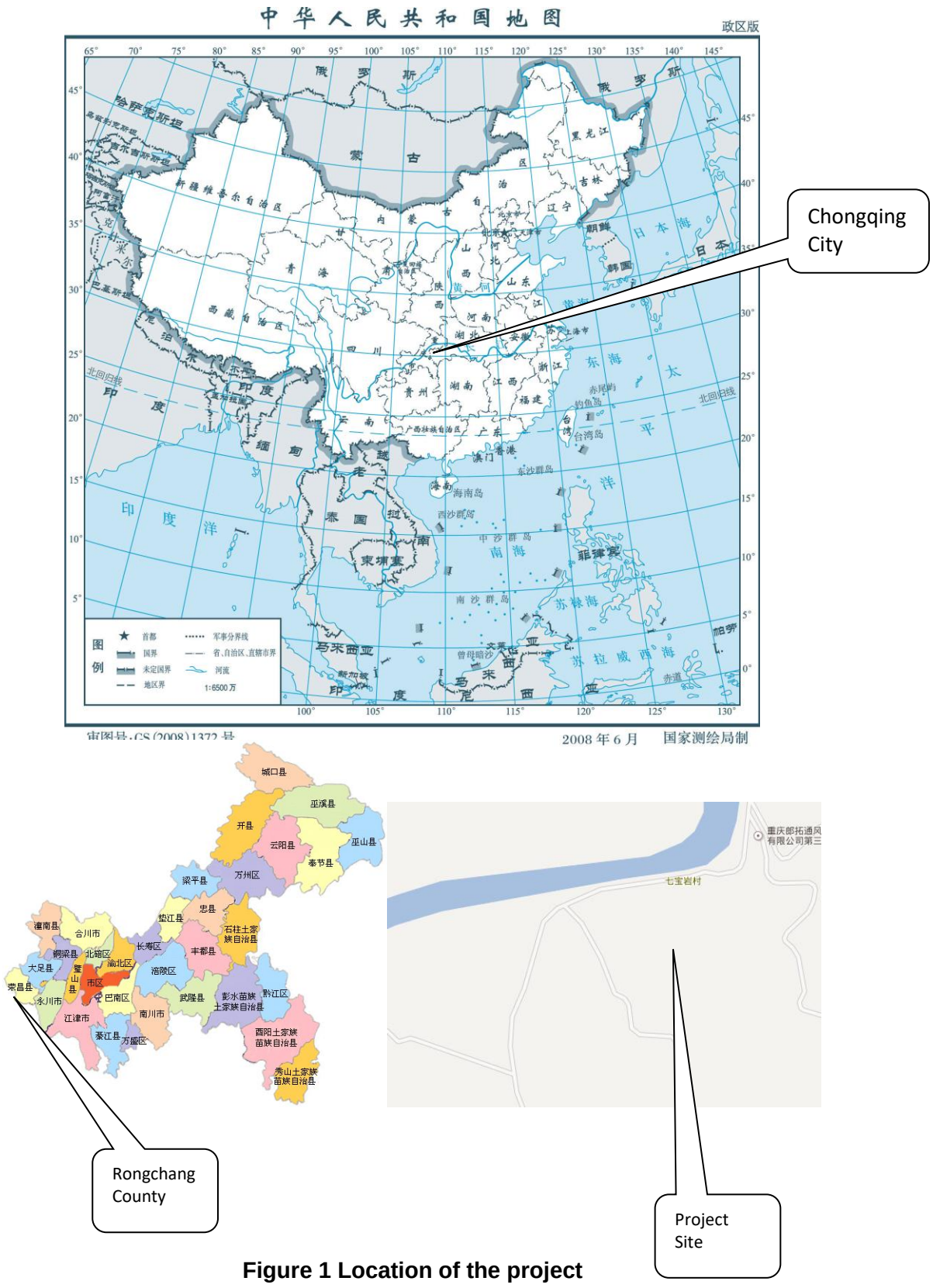

Figure 1 Location of the project

A.3. Technologies/measures

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GHG emission reductions will be achieved through combustion of the recovered methane gas by gas engines, which would be otherwise emitted to the atmosphere, and the generation of electricity from the landfill gas, which is supplied by the CCPG prior to the implementation of the project.

Description of the technology in the project

The project consists in LFG collection, transmission and treatment system, with subsequent electricity generation and grid connection system.

LFG collection system

LFG is extracted from MSW under negative pressure by blower pumps and moved through wells, then collected by gas collection stations and transferred by sub-pipes and a main pipe to LFG treatment equipment. Flow rate of the LFG is regulated at the collection points in order to always fit with the consumption capacity of the generation engines.

LFG treatment system

Prior to electricity generation, LFG is treated to remove impurities and moisture, to avoid corrosion in the engines. The treatment consists of filtration, de-moisturing, cooling and pressurization.

Electricity generation and grid connection system

4 gas engines of 0.5MW rated power each are fed with the LFG and generate electricity, which is then exported to the grid.

Table 1 Equipment technical parameters

Main Equipment	Parameter	Value
Generator set	Type	500GJ1-1PWZ
	Manufacturer	SHENGLI OIL FIELD SHENGLI POWER MACHINERY GROUP CO., LTD
	Rated capacity	500 kW
	Rated rotation speed	1000 r/min
	Capacity factor	0.8 (lagging)
Generator set	Type	500GF1-1RZ
	Manufacturer	SHENGLI OIL FIELD SHENGLI POWER MACHINERY GROUP CO., LTD
	Rated capacity	500 kW
	Rated rotation speed	1000 r/min
	Capacity factor	0.8 (lagging)
Generator set	Type	500GF-Z
	Manufacturer	SHENGLI OIL FIELD SHENGLI POWER MACHINERY GROUP CO., LTD
	Rated capacity	500 kW
	Rated rotation speed	1000 r/min
	Capacity factor	0.8 (lagging)

A.4. Project Owner(s)

Location/ Country	Project Owner(s)	Where applicable[6], indicate if the host country has provided approval (Yes/No)
China	Henan BCCY Environmental Energy Co., Ltd.	NO

A.5. Declaration of intended use of Approved Carbon Credits (ACCs) generated by the Project Activity

>> The Project Activity is expected to generate ACCs for a full 10-year crediting period and supply the credits to offset the following GHG emissions:

Period		Name of the Entities	Purpose and Quantity of ACCs to be supplied
From	To		
		To be determined	

ACCs from the project activity will be used to create additional revenue stream for the investment and for reducing the project financial risks and thus enabling the sustainability of the project. No double counting will occur in the scope of this project since GCC is the only program applied.

A.6. Additional requirements for CORSIA

>>
Please see Section E and F.

Section B. Application of selected methodology(ies)

B.1. Reference to methodology(ies)

[6] For example, *Project Coordination Form* is to be filled-in by Project Owners for projects located in Qatar. A written attestation from the host country's national focal point or the focal point's designee, as required by CORSIA (Refer section A.5 of the PSF guidelines).

>>
Applied approved CDM methodology:
AMS-III.G. Landfill methane recovery --- Version 10.0
AMS-I.D. Grid connected renewable electricity generation---Version 18.0
Applied CDM tools:
“Emissions from solid waste disposal sites” (Version 8.0);
“Tool to calculate the emission factor for an electricity system” (Version 07.0);
“Positive lists of technologies” (Version 4.0)
Reference: https://cdm.unfccc.int/methodologies/index.html
https://cdm.unfccc.int/Reference/tools/index.html

B.2. Applicability of methodology(ies)

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The selected methodology AMS-III.G. (version 10.0) and AMS-I.D. (version 18.0) are appropriate to LFG project activities, where the baseline scenario is the atmospheric release of the LFG, and that all or part of the electricity exported to the grid is the electricity generation in existing and/or new grid-connected power plants. In this case, the LFG is released to atmosphere prior to the implementation of the project, and electricity generated by the project is exported to Central China Power Grid (CCPG).

The project fulfils the following applicability conditions of the methodology:

Applicability conditions for AMS-III.G.	Justifications
2.This methodology comprises measures to capture and combust methane from landfills (i.e. solid waste disposal sites) used for the disposal of residues from human activities including municipal, industrial, and other solid wastes containing biodegradable organic matter.	Applicable. The project consists in capturing landfill gas (which contains methane) from the Rongchang landfill site, which is used for disposal of residues from human activities.
3.Different options to utilise the recovered landfill gas as detailed in paragraph 4 for “AMS-III.H.：Methane recovery in wastewater treatment” (version 19.0) are eligible for use under this methodology. The relevant procedures in AMS-III.H. shall be followed in	Applicable. The project utilizes the recovered LFG to generate electrical energy directly, i.e. 4(a) of AMS-III.H. (version 19.0).

this regard. Paragraph 4 of AMS-III.H.: The recovery biogas from the above measures may also be utilised for the following applications instead of combustion/flaring: (a) Thermal or mechanical, electrical energy generation directly; (b) Thermal or mechanical, electrical energy generation after bottling of upgraded biogas, in this case additional guidance provided in the appendix shall be followed; or (c) Thermal or mechanical, electrical energy generation after upgrading and distribution, in this case additional guidance provided in the appendix shall be followed: (i) Upgrading and injection of biogas into a natural gas distribution grid with no significant transmission constraints; (ii) Upgrading and transportation of biogas via a dedicated piped network to a group of end users; or(iii) Upgrading and transportation of biogas (e.g. by trucks) to distribution points for end users (d) Hydrogen production; (e) Use as fuel in transportation applications after upgrading.	
4. Measures are limited to those that result in aggregate emission reductions of less than or equal to 60 kt CO_2 equivalent annually from all Type III components of the project activity.	Applicable. The project results in aggregate emission reduction of less than 60kt CO_2 equivalent annually from all Type III components.

5.The proposed project activity does not reduce the amount of organic waste that would have been recycled in the absence of the project activity	The implementation of the project does not reduce the amount of organic waste that would be recycled in the absence of the project. All the solid waste is disposed in the Rongchang landfill site.
6. This methodology is not applicable if the management of the solid waste disposal site SWDS) in the project activity is deliberately changed in order to increase methane generation compared to the situation prior to the implementation of the project activity (e.g. other than to meet a technical or regulatory requirement). Such changes may include, for example, the addition of liquids to a SWDS, pre-treating waste to seed it with bacteria for the purpose of increasing the rate of anaerobic degradation of the SWDS or changing the shape of the SWDS to increase methane production	Not applicable.

Applicability conditions for AMS-I.D.	Justifications
4.This methodology is applicable to project activities that: (a) Install a Greenfield plant; (b) Involve a capacity addition in (an) existing plant (s); (c) Involve a retrofit of (an) existing plant (s); (d) Involve a rehabilitation of (an) existing plant (s)/unit (s) or; (e) Involve a replacement of (an) existing plant(s).	Applicable. The project installs a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project, which corresponds to point (a).
5.Hydro power plants with reservoirs that satisfy	Not applicable. The project is not a hydro

at least one of the following conditions are eligible to apply this methodology: (a) The project activity is implemented in an existing reservoir with no change in the volume of reservoir; (b) The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4W/m^2; (c) The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4W/m^2.	power plant.
6. If the new unit has both renewable and non-renewable components (e.g. a wind/ diesel unit), the eligibility limit of 15 MW for a small-scale GCC project activity applies only to the renewable component. If the new unit co-fires fossil fuel. The capacity of the entire unit shall not exceed the limit of 15 MW.	Not applicable. The project does not use non-renewable components nor co-fires fossil fuels. Anyway, the total installed capacity is below 15MW.
7. Combined heat and power (co-generation) systems are not eligible under this category.	Not applicable. The project only involves electricity generation.
8. In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	Not applicable. The project does not involve addition of renewable energy generation units at an existing renewable power generation facility.
9.In the case of retrofit, rehabilitation or replacement, to qualify as a small-scale project the total output of the retrofitted, rehabilitated or	Not applicable.

replacement power plant / unit shall not exceed the limit of 15 MW.	
10. In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. If the recovered methane is used for electricity generation for supply to a grid then the baseline for the electricity component shall be in accordance with procedure prescribed under this methodology. If the recovered methane is used for heat generation or cogeneration other applicable Type-I methodologies such as AMS-L.C. Thermal energy production with or without electricity shall be explored.	Applicable. The project installed two engines to combusted LFG of Rongchang MSW, which mainly contains 50% methane.
11.In case biomass Is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass "shall apply.	Not applicable.

Regarding to tool— "Tool to calculate the emission factor for an electricity system" (Version 07.0)：

Applicable conditions	Justifications
This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects).	Applicable. This tool is applied to estimate the OM, BM and/or CM.
Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-	Applicable. The emission factor for the project electricity system is calculated for grid power plants only.

options under the step 2 of the tool are available to the project participants, i.e. option lla and option IIb. If option lla is chosen, the conditions specified in “Appendix 1: Procedures related to off-grid power generation” should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	
In case of GCC projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.	Not applicable. The project electricity system is located in China.
Under this tool, the value applied to the CO2 emission factor of biofuels is zero.	Not applicable.

Regarding to tool— “Positive lists of technologies” (Version 04.0)：

Applicable conditions	Justifications
The use of this methodological tool is not mandatory for the project participants of a GCC project activity or GCC POA for demonstrating their additionality.	Applicable.
This methodological tool shall be applied in conjunction with a small-scale or large-scale methodology which refers to this tool.	Applicable. This tool is applied in conjunction with small-scale methodology AMS-III.G.（version 10.0）.

Regarding to tool— “Emissions from solid waste disposal sites” (Version 8.0)：

(a)Application A: The GCC project activity mitigates methane emissions from a specific	Applicable. The project collects the methane from the Rongchang landfill site and use it to

existing SWDS. Methane emissions are mitigated by capturing and flaring or combusting the methane (e.g. "ACM0001: Flaring or use of landfill gas). The methane is generated from waste disposed in the past, including prior to the start of the GCC project activity. In these cases, the tool is only applied for an ex-ante estimation of emissions in the project design document (GCC-PD). The emissions will then be monitored during the crediting period using the applicable approaches in the relevant methodologies (e. g. measuring the amount of methane captured from the SWDS)	generate the electricity.
(b)Application B: The GCC project activity avoids or involves the disposal of waste at a SWDS. An example of this application of the tool is ACM0022, in which municipal solid waste (MSW)is treated with an alternative option, such as composting or anaerobic digestion, and is then prevented from being disposed of in a SWDS. The methane is generated from waste disposed or avoided from disposal during the crediting period. In these cases, the tool can be applied for both ex-ante and ex post estimation of emissions. These project activities may apply the simplified approach detailed in 0 when calculating baseline emissions	Not applicable.

B.3. Project boundary, sources and greenhouse gases (GHGs)

>>

The project boundary is the site of the project activity, Rongchang landfill site, where the LFG is captured and used, and also includes all the power sources connected to the CCPG, which expands throughout Henan Province, Hubei Province, Hunan Province, Jiangxi Province, Sichuan Province

and Chongqing City.

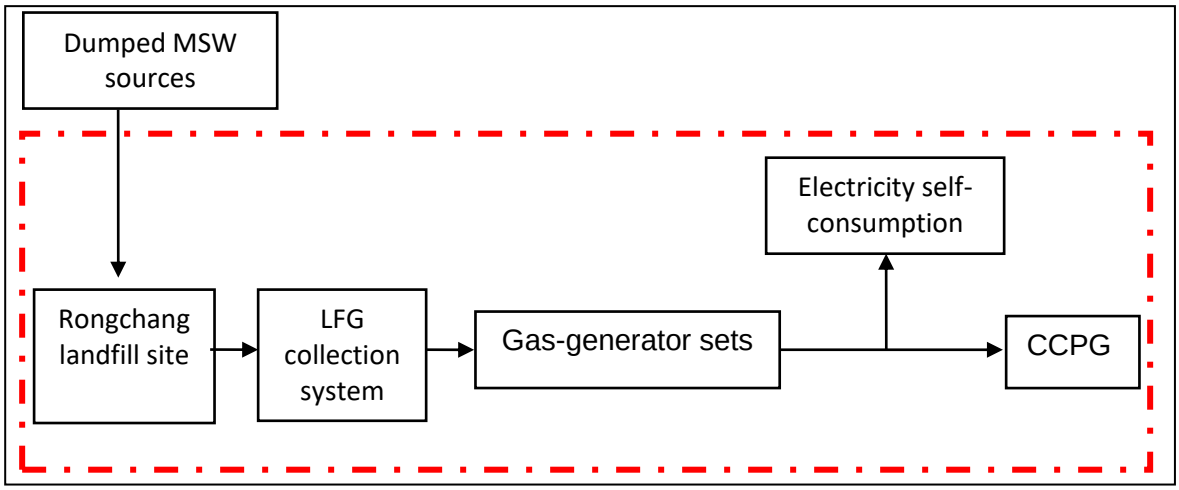

Figure 2 the Diagram of Project Boundary

The table below provides an overview of the emissions sources included or excluded from the project boundary for determination of baseline and project emissions.

Source		GHG	Included?	Justification/Explanation
Baseline	Emissions from decomposition of waste at the SWDS site	CH_4	Yes	The major source of emissions in the baseline.
		N_2O	No	N_2O emissions are small compared to CH_4 emissions from landfills. Exclusion of this gas is conservative.
		CO_2	No	CO_2 emissions from the decomposition of organic waste are not accounted since the CO_2 is also released under the project activity.
	Emission from electricity generation	CO_2	Yes	The major source of emissions in the baseline.
		CH_4	No	Excluded for simplification, this is conservative.
		N_2O	No	Excluded for simplification, this is conservative.
	Emissions from heat generation	CO_2	No	No heat generation is included in the project.
		CH_4	No	No thermal energy generation is included in the project.
		N_2O	No	No thermal energy generation is included in the project.
	Emissions from the use of natural gas	CO_2	No	Excluded for simplification. This is conservative
		CH_4	No	No supply of LFG is included in the project.
		N_2O	No	Excluded for simplification. This is conservative
Project Activity	Emissions from fossil fuel consumption for purposes other than electricity generation or transportation due to the project activity	CO_2	No	Excluded because there is no fossil fuel consumption.
		CH_4	No	Excluded because there is no fossil fuel consumption.
		N_2O	No	Excluded because there is no fossil fuel consumption.

	Emission from electricity consumption due to project activity	CO_2	Yes	Main emission source.
		CH_4	No	Excluded for simplification. This emission source is very small compared to CO_2 emissions.
		N_2O	No	Excluded for simplification. This emission source is very small compared to CO_2 emissions.
	Emissions from flaring	CO_2	No	Excluded because there is no flaring in the project.
		CH_4	No	Excluded because there is no flaring in the project
		N_2O	No	Excluded because there is no flaring in the project
	Emissions from distribution of LFG using trucks and dedicated pipelines	CO_2	No	No supply of LFG is included in the project.
		CH_4	No	No supply of LFG is included in the project.
		N_2O	No	No supply of LFG is included in the project.

B.4. Establishment and description of the baseline scenario

>>

Landfill gas: In the absence of the project, MSW of Rongchang landfill site is left to decay within the project boundary, and methane is emitted to the atmosphere directly without any recovery and utilization.

Electricity: The project is a new grid-connected renewable power unit.

According to the section 5.3 of the methodology AMS-III.G. and 5.2 of methodology AMS-I.D., the baseline scenario is:

LFG from Rongchang landfill site is emitted to the atmosphere directly.

Equivalent electricity generated by the project is supplied by the CCPG, which is dominated by fossil fuel based power plants.

B.5. Demonstration of additionality

>>

According to the section B.6 of the methodology AMS-III.G., the project chooses simplified procedures to demonstrate additionality. Tool32 (Positive lists of technologies) is used to demonstrate additionality.

Requirements of tool 32 (Positive lists of technologies)	The project
5.1Waste handling and disposal 5.1.1Landfill gas recovery and its gainful use The project activities and PoAs at new or existing landfills (greenfield or brownfield)are deemed automatically additional if it is demonstrated that prior to the implementation of the project activities and PoAs the landfill gas(LFG)was only vented and or flared (in the case of brownfield projects)or would have been only vented and/or flared(in the case of greenfield projects)but not utilized for energy generation, and that under the project activities and PoAs any of the following conditions are met: (a) The LFG is used to generate electricity in one or several power plants with a total nameplate capacity that equals or is below 10 MW; (b) The LFG is used to generate heat for internal or external consumption (c)The LFG is flared	The LFG from Rongchang landfill site is vented to the atmosphere prior the implementation of the project for safety concerns. Total nameplate capacity of the project is 2 MW, which is below 10MW.

Conclusion: the project is automatically additional.

B.6. Estimation of emission reductions

>>

B.6.1. Explanation of methodological choices

>>

The project utilizes the LFG for generation to substitute the equivalent electricity supplied by the grid, resulting in CH_4 and CO_2 emissions, which will be calculated as follows according to the methodology AMS-III.G. and AMS-I.D.

Baseline emissions associated with the SWDS:

$$BE_{y,1} = \eta_{PJ} \times BE_{CH4,SWDS,y} - (1 - OX) \times F_{CH4,BL,y} \times GWP_{CH4} \quad \text{Equation (1)}$$

Where:

$BE_{y,1}$	=	Baseline emissions associated with the SWDS in year y (tCO_2e/yr)
η_{PJ}	=	Efficiency of the LFG capture system that will be installed in the project activity. It is used for ex ante estimation only. A default value of 50 per cent may be used
$BE_{CH4,SWDS,y}$	=	Methane emission potential of a solid waste disposal site (in tCO_2e)
OX	=	Oxidation factor (reflecting the amount of methane from SWDS that is oxidised in the soil or other material covering waste) (dimensionless). A default value of 0.1 may be used
$F_{CH4,BL,y}$	=	Methane emissions that would be captured and destroyed to comply with national or local safety requirement or legal regulations in the year y (t CH_4). The relevant procedures in "ACM0001: Flaring or use of landfill gas" may be followed, as well as taking into account the compliance with the relevant local laws and regulation if such laws and regulations exist
GWP_{CH4}	=	Global Warming Potential for methane

Ex ante determination of $BE_{CH4,SWDS,y}$

According to the AMS-III.G., $BE_{CH4,SWDS,y}$ is calculated using the methodological tool" Emission from solid waste disposal sites", which is calculated as follows:

$$BE_{CH4,SWDS,y} = \varphi_y \times (1 - f_{y)} \times GWP_{CH4} \times (1 - OX) \times \frac{16}{12} \times F \times DOC_{f,y} \times MCF_y \times \sum_{x=1}^{y} \sum_j (W_{j,x} \times DOC_j \times e^{-k_j \times (y-x)} \times (1 - e^{k_j}) \quad \text{Equation (2)}$$

Where:

$BE_{CH4,SWDS,y}$	=	Baseline methane emissions occurring in the year y
φ_y	=	Model correction factor to account for model uncertainties for year y
f_y	=	Fraction of methane captured at the SWDS and flared,

		combusted or used in another manner that prevents the emission of methane to the atmosphere in year y
GWP_{CH4}	=	Global Warming Potential of methane
OX	=	Oxidation factor (reflecting the amount of methane from SWDS that is oxidized in the soil or other material covering the waste)
F	=	Fraction of the methane in the SWDS gas (volume fraction)
$DOC_{f,y}$	=	Fraction of degradable organic carbon (DOC) that decomposes under the specific conditions occurring in the SWDS for year y(weight fraction)
MCF_y	=	Methane correction factor for year y
$W_{j,x}$	=	Amount of organic waste type j disposed/prevented from disposal in the SWDS in the year y (t)
DOC_j	=	Fraction of degradable organic carbon in the waste type j (weight fraction for year y
k	=	Decay rate for the waste type(1/yr)
j	=	Type of residual waste or types of waste in the MSW
x	=	Years of the crediting period for which waste is disposed at the SWDS, extending from the first year in the time period(x=1) to year y(x=y)
y	=	Years of the crediting period for which methane emissions are calculated

Determination of $F_{CH4,BL,y}$

This section provides a procedure to determine the amount of methane that would have been captured and destroyed (by flaring) in the baseline due to regulatory or contractual requirements, to address safety and odour concerns, or for other reasons (collectively referred to as requirement in this section). The four cases in **Table 2** are distinguished. The appropriate case should be identified, and the corresponding instructions followed.

Table 2. Cases for determining methane captured and destroyed in the baseline

Situation at the start of the project activity	Requirement to destroy methane	Existing LFG capture and destruction system
Case 1	No	No
Case 2	Yes	No
Case 3	No	Yes

Situation at the start of the project activity	Requirement to destroy methane	Existing LFG capture and destruction system
Case 4	Yes	Yes

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.

"Technical Code for Municipal Solid Waste Sanitary Landfill"（GB 50869-2013), issued by the Ministry of Construction in 2013.

According to item 5.15 of GB16889-2008, if the designed landfill capacity is more than 2.5 million tons and the landfill thickness is more than 20m, methane utilization facilities or flare burning facilities shall be built to treat the landfill gas containing methane. For municipal solid waste landfills smaller than the above scale, technologies that can effectively reduce methane generation and emission shall be adopted or flare combustion facilities shall be used to treat methane containing landfill gas.

Item 11.1.1 of GB 50869-2013 stipulates that the landfill site must be equipped with effective landfill gas drainage facilities to prevent the natural accumulation and migration of landfill gas, causing fire and explosion. Item 11.1.3 stipulates that if the landfill does not have the conditions for landfill gas utilization, the flare method shall be adopted for combustion treatment, and the process that can effectively reduce the generation and emission of methane shall be adopted. The old landfills that are not safe and stable should be equipped with effective landfill gas drainage facilities. Among them, item 11.1.1 is mandatory and must be strictly implemented.

In fact, the LFG of Rongchang landfill is emitted to atmosphere without LFG capture system prior the implementation of the project. Therefore, Case 2 listed in the table 3 is applicable for the project.

The requirements above don't specify any amount or percentage of LFG that should be destroyed. In this situation:

$$F_{CH4,BL,y} = F_{CH4,BL,R,y} \quad \text{Equation (3)}$$

$$F_{CH4,BL,R,y} = 0.2 \times F_{CH4,PJ,capt,y} \quad \text{Equation (4)}$$

Where:

$F_{CH4,BL,R,y}$ = Amount of methane in the LFG which is flared in the baseline due to a requirement in year y (tCH_4/yr)

$F_{CH4,PJ,capt,y}$ = Amount of methane in the LFG which is captured in the project activity in year y (tCH_4/yr)

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

$$BE_{y,2} = EG_{PJ,y} \times EF_{grid,y}$$ Equation (5)

$BE_{y,2}$ = Baseline emissions associated with electricity generation in year y (t CO_2)

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the GCC project activity in year y(MWh)

$EF_{grid,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (t CO_2/MWh)

Calculation of $EG_{PJ,y}$

The project is the installation of a greenfield power plant, therefore:

$$EG_{PJ,y} = EG_{PJ,facility,y}$$ Equation (6)

Where:

$EG_{PJ,facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y(MWh)

Calculation of $EF_{grid,y}$

According to the AMS-III.G., $EF_{grid,y}$ is calculated using the "Tool to calculate the emission factor for an electricity system"($EF_{grid,y}$=$EF_{grid,CM,y}$).

Project participants shall apply the following six steps:

Step 1: Identify the relevant electricity systems;

Step 2: Choose whether to include off-grid power plants in the project

Step 3: Select a method to determine the operating margin (OM);

Step 4: Calculate the operating margin emission factor according to the

Step 5: Calculate the build margin (BM) emission factor;

Step 6: Calculate the combined margin (CM) emission factor.

Step 1: Identity the relevant electricity systems

Ministry of Ecology and Environment of the People's Republic of China has published a delineation of the project electricity system and connected electricity systems, so the project adopts the delineation of project electricity system and connected electricity system published by Ministry of Ecology and Environment of the People's Republic of China. The power generated by the project

displaces the equivalent electricity generated by the Central China Power Grid. The Central China Power Grid is a larger regional grid, which consists of six sub-grids: Henan Province, Hubei Province, Hunan Province, Jiangxi Province, Sichuan Province and Chongqing City.

In addition, there is net imported power to the Central China Power Grid from the Northwest China Power Grid, North China Power Grid and China Southern Power Grid. According to the "Tool to calculate the emission factor for an electricity system", use one of the following options to determine the CO_2 emission factor for net electricity imports from a connected electricity system:
(a) 0tCO_2/MWh; or

(b) The simple operating margin emission rate of the exporting grid, determined as described in Step 4 section 6.4.1, if the conditions for this method, as described in Step 3 below, apply to the exporting grid; or

(c) The simple adjusted operating margin emission rate of the exporting grid, determined as described in Step 4 section 6.4.2 below; or

(d) The weighted average operating margin (OM) emission rate of the exporting grid, determined as described in Step 4 section 6.4.4 below.

The PD will choose option (b) to calculate the CO_2 emission factor for net electricity imports from the Central China Power Grid.

According to the available data of 2016-2018, the corresponding marginal emission factors of electricity are calculated, and weighted average is carried out to obtain the marginal emission factors of electricity.

Step 2. Choose whether to include off-grid power plants in the project electricity system (optional).

Option I: Only grid power plants are included in the calculation.

Option II: Both grid power plants and off-grid power plants are included in the calculation.

Following the calculation of the Ministry of Ecology and Environment of the People's Republic of China, and statistical data is available, Option I is chosen.

Step 3. Select a method to determine the operating margin (OM)

"Tool to calculate the emission factor for an electricity system (Version 7.0)" offers four methods for the calculation of the operating margin emission factor(s) ($EF_{grid,OM,y}$):

(a) Simple OM; or

(b) Simple adjusted OM; or

(c) Dispatch data analysis OM; or

(d) Average OM.

Method (a) -Simple OM is chosen for calculation and low-cost/must-run resources constitute less than 50% of the total grid generation in average of the five most recent years[7].

For simple OM, the emission factor can be calculated using either of the two following data vintages:

(a) Ex ante option: If the ex-ante option is chosen, the emission factor is determined once at the validation stage, thus no monitoring and recalculation of the mission factor during the crediting period is required. For grid power plants, use a 3-year generation-weighted average, based on the most recent data available at the time of submission of the GCC-PD to the DOE for validation. For off-grid power plants, use a single calendar year within the 5 most recent calendar years prior to the time of submission of the GCC-PD for validation;

(b) Ex post option: If the ex-post option is chosen, the emission factor is determined for the year in which the project activity displaces grid electricity, requiring the emissions factor to be updated annually during monitoring. If the data required to calculate the emission factor for year y is usually only available later than six months after the end of year y, alternatively the emission factor of the previous year y-1 may be used. If the data is usually only available 18 months after the end of year y, the emission factor of the year proceeding the previous year y-2 may be used. The same data vintage (y, y-1 or y-2) should be used throughout all crediting periods Project participant employs ex ante option for its operation margin calculation.

Step 4. Calculate the operating margin emission factor according to the selected method

The simple OM emission factor is calculated as the generation-weighted average CO_2 emissions per unit net electricity generation (tCO_2/MWh) of all generating power plants serving the system, not including low-cost / must-run power plants / units.

The simple OM may be calculated by one of the following two options:

(a) Option A: Based on the net electricity generation and a CO_2 emission factor of each power unit; or

(b) Option B: Based on the total net electricity generation of all power plants serving the system and the fuel types and total fuel consumption of the project electricity system. Option B can only be used if:

(i) The necessary data for Option A is not available: and

(ii) Only nuclear and renewable power generation are considered as low-cost/must-run power sources and the quantity of electricity supplied to the grid by these sources is known; and

(iii) Off-grid power plants are not included in the calculation (i.e., if Option I has been chosen in Step 2).

[7] 2019 Bulletin on the Baseline Emission Factors of the China Grids

Since the data of each power plant/unit is unavailable, Option A is not applicable to the project. The project adopts Option B to calculate the operating margin emission factor ($EF_{grid,OM,y}$) of CCPG.

$$EF_{grid,OMsimple,y} = \frac{\sum_i FC_{i,y} \times NCV_{i,y} \times EF_{CO2,i,y}}{EG_y} \quad \text{Equation (7)}$$

Where:

$EF_{grid,OMsimple,y}$	=	Simple operating margin CO_2 emission factor in year y (tCO_2/MWh)
$FC_{i,y}$	=	Amount of fuel type i consumed in the project electricity system in year y (mass or volume unit)
$NCV_{i,y}$	=	Net calorific value (energy content) of fuel type i in year y (GJ/mass or volume unit)
$EF_{CO2,i,y}$	=	CO_2 emission factor of fossil fuel type i in year y (tCO_2e/GJ), 2006 IPCC Guidelines for default values
EG_y	=	Net electricity generated and delivered to the grid by all power sources serving the system, not including low-cost/must run power plants/units in year y (MWh)
i	=	All fuel types combusted in power sources in the project electricity system in year y
y	=	The relevant year as per the dta vintage chosen in Step 3

Regarding parameter selection, local values of $NCV_{i,y}$ and $EF_{CO2,i,y}$ should be used where available. If no such values are available, IPCC default values are preferable. The Net Calorific Value ($NCV_{i,y}$) of each type of fossil fuel used in the calculation comes from China Energy Statistic Yearbook 2018. Emission factor ($EF_{CO2,i,y}$) of each type of fossil fuel come from IPCC 2006 default values.

The operating margin emission factor for 2016, 2017 and 2018 are calculated based on the data above. The three-year average is calculated as a weighted average of the emission factors. The Operational Margin Emission Factor is $0.8587tCO_2/MWh$.

Step 5. Calculate the build margin emission factor

In terms of vintage of data, project participants can choose between one of the following two options:

(a) Option 1: For the first crediting period, calculate the build margin emission factor ex ante based on the most recent information available on units already built for sample group m at the time of GCC PD submission to the DOE for validation. For the second crediting period, the build margin emission factor should be updated based on the most recent information available on units already built at the time of submission of the request for renewal of the crediting period to the DOE. For the third crediting period, the build margin emission factor calculated for the second crediting

period should be used. This option does not require monitoring the emission factor during the crediting period.

(b) Option 2: For the first crediting period, the build margin emission factor shall be updated annually, ex-post, including those units built up to the year of registration of the project activity or, if information up to the year of registration is not yet available, including those units built up to the latest year for which information is available. For the second crediting period, the build margin emissions factor shall be calculated ex ante, as described in Option 1 above. For the third crediting period, the build margin emission factor calculated for the second crediting period should be used.

The project applies option 1 to calculate the build margin emission factor ex-ante.

According to the "Tool to calculate the emission factor for an electricity system", the sample group of power units m used to calculate the build margin should be determined as per the following procedure, consistent with the data vintage selected above:

(a) Identify the set of five power units, excluding power units registered as GCC project activities, that started to supply electricity to the grid most recently ($SET_{5\ units}$) and determine their annual electricity generation ($AEG_{SET\text{-}5\text{-}units}$, in MWh);

(b) Determine the annual electricity generation of the project electricity system, excluding power units registered as GCC project activities (AEG_{total}, in MWh). Identify the set of power units, excluding power units registered as GCC project activities, that started to supply electricity to the grid most recently and that comprise 20% of AEG_{total} (if 20% falls on part of the generation of a unit, the generation of that unit is fully included in the calculation) ($SET_{\geq 20\%}$) and determine their annual electricity generation ($AEG_{SET\text{-}\geq 20\%}$, in MWh);

(c) From $SET_{5\text{-}units}$ and $SE_{T\geq 20\ percent}$ select the set of power units that comprises the larger annual electricity generation (SET_{sample});

Identify the date when the power units in SET_{sample} started to supply electricity to the grid. If none of the power units in SET_{sample} started to supply electricity to the grid more than 10 years ago, then use $SE_{Tsample}$ to calculate the build margin. Ignore steps (d), (e) and (f).

Otherwise:

(d) Exclude from SET_{sample} the power units which started to supply electricity to the grid more than 10 years ago. Include in that set the power units registered as GCC project activity, starting with power units that started to supply electricity to the grid most recently, until the electricity generation of the new set comprises 20% of the annual electricity generation of the project electricity system (if 20% falls on part of the generation of a unit, the generation of that unit is fully included in the calculation) to the extent is possible. Determine for the resulting set (SET_{sample}) the annual electricity generation ($AEG_{SET\text{-}sample}$, in MWh);

(e) If the annual electricity generation of that set is comprises at least 20% of the annual electricity generation of the project electricity system (i.e. $AEG_{SET\text{-}sample} \geq 0.2 \times AEG_{total}$), then use the sample group SET_{sample} to calculate the build margin. Ignore steps (e) and (f).

Include in the sample group SET_{sample} the power units that started to supply electricity to the grid more than 10 years ago until the electricity generation of the new set comprises 20% of the annual electricity generation of the project electricity system (if 20% falls on part of the generation of a unit, the generation of that unit is fully included in the calculation);

(f) The sample group of power units m used to calculate the build margin is the resulting set (SET_{sample}>10yrs)

The build margin emissions factor is the generation-weighted average emission factor (tCO_2/MWh) of all power units m during the most recent year y for which power generation data is available, calculated as follows:

$$EF_{grid,BM,y} = \frac{\sum_m EG_{m,y} \times EF_{EL,m,y}}{\sum_m EG_{m,y}} \quad \text{Equation (8)}$$

Where:

$EF_{grid,BM,y}$	=	Build margin CO_2 emission factor in year y (t CO_2/MWh)
$EG_{m,y}$	=	Net quantity of electricity generated and delivered to the grid by power unit m in year y (MWh)
$EF_{EL,m,y}$	=	CO_2 emission factor of power unit m in year y (t CO_2/MWh)
m	=	Power units included in the build margin
y	=	Most recent historical year for which electricity generation data is available

According to the tools, the generation capacity of and the proportions of different generating technologies used in the mostly recent capacity additions would be calculated at first. The weight of each generating technology used in capacity additions can then be worked out and finally the Build Margin emission factor would be calculated with the commercial optimal efficiencies of the generating technologies.

The following method is adopted for the BM calculation. The first step is to use the most recently available data on the energy balance to calculate the proportion of CO_2 emissions from solid, liquid, and gas fuels used for power generation in total CO_2 emissions for the CCPG in 2017. Then this proportion is applied as a weight and combined with the emission factors of the best commercially available technologies to calculate the thermal emission factor of the CCPG. Finally, the BM factor of the CCPG can be determined by multiplying its thermal emission factor by the capacity-weighted share of thermal power in the newly added 20% of the installed capacity

(1) Calculate the proportion of CO_2 emissions from solid, liquid, and gas fuels used for power generation in total CO_2 emissions for the CCPG in the base year (2015)

$$\lambda_{Coal,y} = \frac{\sum_{i \in COAL,j} F_{i,j,y} \times NCV_{i,y} \times EF_{CO2,i,j,y}}{\sum_{i,j} F_{i,j,y} \times NCV_{i,y} \times EF_{CO2,i,j,y}} \quad \text{Equation (9)}$$

$$\lambda_{Oil,y} = \frac{\sum_{i \in Oil,j} F_{i,j,y} \times NCV_{i,y} \times EF_{CO2,i,j,y}}{\sum_{i,j} F_{i,j,y} \times NCV_{i,y} \times EF_{CO2,i,j,y}}$$ Equation (10)

$$\lambda_{Gas,y} = \frac{\sum_{i \in Gas,j} F_{i,j,y} \times NCV_{i,y} \times EF_{CO2,i,j,y}}{\sum_{i,j} F_{i,j,y} \times NCV_{i,y} \times EF_{CO2,i,j,y}}$$ Equation (11)

Where:

$F_{i,j,y}$	=	The amount of fuel i (in a mass or volume unit) consumed by province
$NCV_{i,y}$	=	Net calorific value (energy content) of fossil fuel type i(GJ/mass or volume unit)
COAL,OIL&GAS	=	The aggregation of various kinds of coal, oil, and gas as fossil fuels.

(2) Calculate the corresponding emission factor for fossil fuel fired power generation.

$$EF_{Thermal} = \lambda_{Coal} \times EF_{Coal,Adv} + \lambda_{Oil} \times EF_{Oil,Adv} + \lambda_{GAS} \times EF_{Gas,Adv}$$ Equation (12)

Where:

$EF_{Coal,adv}$, $EF_{olL,adv}$, $EF_{Gas,adv}$ are the emission factors of coal, oil and gas-fired power generation with efficiency levels of the best commercially available technology in China in the previous three years.

(3) Calculate the Building Margin emission factor

$$EF_{BM,y} = \frac{CAP_{Thermal}}{CAP_{Total}} \times EF_{Thermal}$$ Equation (13)

Where:

$CAP_{Thermal}$	=	Total capacity additions while
CAP_{Total}	=	Capacity additions of thermal power

Following the four steps above, the build margin emission factor, $EF_{grid,BM,y}$ of the CCPG is calculated to be 0.2854 tCO_2/MWh. The detailed calculations and data are listed in the Annex 1.

Step 6. Calculate the combined margin emission factor

Combined Margin emission factor ($EF_{grid,CM,y}$) is calculated as the weighted average of the operating margin emission factor($EF_{grid,OM,y}$) and the build margin emission factor ($EF_{grid,BM,y}$),where the weights ω_{OM} and ω_{BM} ,by default, are 0.5 and 0.5 in the first crediting period, and $EF_{grid,OM,y}$ and $EF_{grid,BM,y}$ are calculated as described above and are expressed in tCO_2/MWh.

$$EF_{grid,CM,y} = \omega_{OM} \times EF_{grid,OM,y} + \omega_{BM} \times EF_{grid,BM,y}$$ Equation (14)

$EF_{grid,CM,y}$=0.5×0.8587+0.5×0.2854=0.57205 (tCO_2/MWh)

The $EF_{OM,y}$, $EF_{BM,y}$ and $EF_{grid,CM,y}$ are ex-ante calculation and are fixed during the credit period.

By combining all the above equations, the ex-ante estimate of the emission reduction is :

$$BE_y = \eta_{PJ} \times BE_{CH4,SWDS,y} - (1 - OX) \times F_{CH4,BL,y} \times GWP_{CH4} + EG_{PJ,y} \times EF_{grid,y}$$

Equation (15)

Project Emissions

$$PE_y = PE_{power,y} + PE_{flare,y} + PE_{process,y}$$

Equation (16)

Where:

PE_y	=	Project emission in year y (t CO_2e)
$PE_{power,y}$	=	Emission from the use of fossil fuel or electricity for the operation of the installed facilities in the year y (t CO_2e)
$PE_{flare,y}$	=	Emissions from flaring or combustion of the landfill gas stream in the year y (t CO_2e)
$PE_{process,y}$	=	Emission from the landfill gas upgrading process in the year y (t CO_2e), determined by following the relevant procedures described in annex 1 of AMS-III.H.

According to AMS-III.G., project emissions from electricity consumption are determined as per the procedures described in AMS-I.D. "Grid connected renewable electricity generation ". According to AMS-I. D., the project is neither involved geothermal power plants nor hydro power plants, project emissions from electricity consumption are identified as 0. Besides, as fossil fuel is not be used by the project, project emissions from fossil fuel consumption are also 0. Therefore, $PE_{power,y}$ is equal to 0.

There is no flare used to destroy the LFG, therefore, $PE_{flare,y}$ Is equal to 0.

The project captures LFG for power generation and not involved upgrading process, therefore, $PE_{process,y}$ is equal to 0.

Leakage emissions

There is no equipment transferred in the project, no leakage effects need to be accounted under AMS-III.G. and AMS-I.D.

Net GHG Emission Reductions and Removals

According to AMS-III.G., the emission reduction achieved by the project activity can be estimated ex-ante in the PD by:

$$ER_{y,estimated} = BE_y - PE_y - LE_y$$

Equation (17)

By combining all the above equations, the ex-ante estimate of the emission reduction is:

$$ER_{y,estimated} = \eta_{PJ} \times BE_{CH4,SWDS,y} - (1 - OX) \times F_{CH4,BL,y} \times GWP_{CH4} + EG_{PJ,y} \times EF_{grid,y} - PE_y - LE_y$$ Equation (18)

Emission reductions (ex-post)

According to AMS-III.G., The actual emission reduction achieved by the project activity during the crediting period will be calculated using the amount of methane recovered and destroyed/gainfully used by the project activity, calculated as:

$$ER_{y,calcaulated} = (1 - OX) \times \left(F_{CH4,PJ,y} - F_{CH4,BL,y}\right) \times GWP_{CH4} - PE_y - LE_y$$ Equation (19)

Where:

$F_{CH4,PJ,y}$ = Methane captured and destroyed/gainfully used by the project activity in the year y (t CH_4)

The project utilizes the recovered methane for power generation. Therefore $F_{CH4,PJ,y}$ is calculated as follows, based on the amount of monitored electricity generation without monitoring methane flow and concentration:

$$F_{CH4,PJ,y} = \frac{EG_y \times 3600}{NCV_{CH4} \times EE_y} \times D_{CH4}$$ Equation (20)

Where:

EG_y = Electricity generation in year y(MWh)

3600 = Conversion factor (1 MWh=3600 MJ)

NCV_{CH4} = NCV of methane (MJ/NM^3) use default value:35.9 MJ/NM^3

EE_y = Energy Conversion Efficiency of the project equipment determined from one of the following options:

- Specification provided by the equipment manufacturer specifically for biogas fuel only if the equipment is designed to utilize biogas as fuel if the specification provides a range of efficiency values, the highest value of the range shall be used for the calculation
- Default efficiency of 40 per cent

Therefore:

$$ER_{y,calcaulated} = (1 - OX) \times \left(\frac{EG_y \times 3600}{NCV_{CH4} \times EE_y} \times D_{CH4} - F_{CH4,BL,y}\right) \times GWP_{CH4} - PE_y - LE_y$$

Equation (21)

B.6.2. Data and parameters fixed ex ante

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Data / Parameter Table 1.

Data / Parameter:	**OX**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	-
Description	Reflecting the amount of methane from SWDS that is oxidized in the soil or other material covering the waste
Measured/calculated /default	default
Data source	Extensive review of published literature on this subject, including the IPCC 2006 Guidelines for National Greenhouse Gas Inventories
Value(s) of monitored parameter	0.1
Measurement/ Monitoring equipment (if applicable)	-
Measuring/reading/ recording frequency (if applicable)	Ex-ante determined and fixed for the crediting period.
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 2.

Data / Parameter:	**GWP_{CH4}**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	$tCO_2e/t\ CH_4$
Description	Global warming potential of CH_4
Measured/calculated /default	default
Data source	IPCC

Value(s) of monitored parameter	28
Measurement/ Monitoring equipment (if applicable)	Default value of 28. Shall be updated according to any future COP/CMP decisions
Measuring/reading/ recording frequency (if applicable)	Ex-ante determined and fixed for the crediting period.
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 3.

Data / Parameter:	**$\rho_{CH4}(D_{CH4,y})$**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	t/m^3
Description	Density of methane gas at Normal Conditions
Measured/calculated /default	default
Data source	-
Value(s) of monitored parameter	0.0007168 (Normal contidions:0℃ and101.325kPa)
Measurement/ Monitoring equipment (if applicable)	-
Measuring/reading/ recording frequency (if applicable)	Ex-ante determined and fixed for the crediting period.
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 4.

Data / Parameter:	η_{PJ}
Methodology reference	AMS-III.G. (version 10.0)
Data unit	
Description	Efficiency of the LFG capture system that will be installed in the project activity
Measured/calculated /default	default
Data source	FSR of the project
Value(s) of monitored parameter	75%
Measurement/ Monitoring equipment (if applicable)	-
Measuring/reading/ recording frequency (if applicable)	-
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 5.

Data / Parameter:	φ_y
Methodology reference	AMS-III.G. (version 10.0)
Data unit	-
Description	The model correction factor to account for model uncertainties
Measured/calculated /default	default
Data source	Default value of the tool “Emissions from solid waste disposal sites” (version 08.0)
Value(s) of monitored parameter	0.75

Measurement/ Monitoring equipment (if applicable)	-
Measuring/reading/ recording frequency (if applicable)	Ex-ante determined and fixed for the crediting period.
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	Application A is used to decide the value. And the value of conditions for used for the project since the MAP/PET>1. The meteorological data for the project site (Rongchang County) are: Mean annual temperature (MAT): 17.8°C[8] Mean annual precipitation (MAP): 1,099 mm[9] Potential evapotranspiration (PET): 630 mm[10]

Data / Parameter Table 6.

Data / Parameter:	**f_y**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	-
Description	Fraction of methane captured at the SWDS and flared, combusted or used in another manner that prevents the emissions of methane to the atmosphere in year y
Measured/calculated /default	default
Data source	The tool “Emissions from solid waste disposal sites” (version 08.0)
Value(s) of monitored parameter	0

[8] http://diqu87718.cn.zhsho.com/
[9] http://www.114huoche.com/zhengfu_ChongQing/RongChangXian/

[10] http://wenku.baidu.com/link?url=q-01dP6g-01VNqFzxOIu8UEbTdTcvWhdZZKT9VgUl5EIawgmNGgMrnEH5cbUKzZj90WuIMwFxNjMeAQ6QLDr8nWVs2rI6mSyXCfNTjuy7Li

Measurement/ Monitoring equipment (if applicable)	-
Measuring/reading/ recording frequency (if applicable)	-
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	It has been considered in the section B6.1, equation (1). Therefore, f_y=0

Data / Parameter Table 7.

Data / Parameter:	**F**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	-
Description	Fraction of methane in the SWDS gas (volume fraction)
Measured/calculated /default	default
Data source	IPCC 2006 Guidelines for National Greenhouse Gas Inventories
Value(s) of monitored parameter	0.5
Measurement/ Monitoring equipment (if applicable)	-
Measuring/reading/ recording frequency (if applicable)	-
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 8.

Data / Parameter:	**$DOC_{f,y}$**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	Weight fraction
Description	Default value for the fraction of degradable organic carbon (DOC) in MSW that decomposed in the SWDS
Measured/calculated /default	default
Data source	IPCC 2006 Guidelines for National Greenhouse Gas Inventories
Value(s) of monitored parameter	0.5
Measurement/ Monitoring equipment (if applicable)	-
Measuring/reading/ recording frequency (if applicable)	Ex-ante determined and fixed for the crediting period.
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 9.

Data / Parameter:	**MCF_y**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	-
Description	Methane correction factor
Measured/calculated /default	default
Data source	IPCC 2006 Guidelines for National Greenhouse Gas Inventories
Value(s) of monitored parameter	1.0
Measurement/ Monitoring equipment (if applicable)	-

Measuring/reading/ recording frequency (if applicable)	Ex-ante determined and fixed for the crediting period.
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	The project using application A to decide the value of MCF_y. The Rongchang landfill site has controlled placement of waste, mechanical compacting and levelling of the waste, So MCF_y value of 1.0 for anaerobic managed solid waste disposal sites should be applied in line with" Emissions from solid waste disposal sites" (version 8.0)

Data / Parameter Table 10.

Data / Parameter:	**W_x**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	t
Description	Quantity of MSW land filled during 2009-2027
Measured/calculated /default	-
Data source	Records from landfill operator

Value(s) of monitored parameter

Year	Annual landfilled MSW (tons)
2009	81,494
2010	84,014
2011	86,613
2012	89,291
2013	92,053
2014	97,367
2015	100,288
2016	103,297
2017	106,396
2018	109,588
2019	112,876

	<table><tr><td>2020</td><td>116,262</td></tr><tr><td>2021</td><td>119,750</td></tr><tr><td>2022</td><td>123,342</td></tr><tr><td>2023</td><td>127,042</td></tr><tr><td>2024</td><td>130,854</td></tr><tr><td>2025</td><td>134,779</td></tr><tr><td>2026</td><td>138,823</td></tr><tr><td>2027</td><td>142,987</td></tr></table> <table><tr><td>Waste type j</td><td>Weight Fraction (% wet waste)</td></tr><tr><td>W_1-Wood and wood products</td><td>0.021</td></tr><tr><td>W_2-Pulp, paper and cardboard</td><td>0.253</td></tr><tr><td>W_3-Food, food waste, beverages and tobacco</td><td>0.302</td></tr><tr><td>W_4-Textiles</td><td>0.008</td></tr><tr><td>W_5-Garden, yard and park waste</td><td>0.027</td></tr><tr><td>W_6-Glass, plastic, metal other inert</td><td>0.389</td></tr></table>
Measurement/ Monitoring equipment (if applicable)	-
Measuring/reading/ recording frequency (if applicable)	-
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 11.

<table>
<tr><td>Data / Parameter:</td><td>DOC_j</td></tr>
<tr><td>Methodology reference</td><td>AMS-III.G. (version 10.0)</td></tr>
<tr><td>Data unit</td><td>-</td></tr>
<tr><td>Description</td><td>Fraction of degradable organic carbon in the waste type j (weight fraction)</td></tr>
<tr><td>Measured/calculated /default</td><td>default</td></tr>
<tr><td>Data source</td><td>“Emissions from solid waste disposal sites” (version 08.0)</td></tr>
<tr><td>Value(s) of monitored parameter</td><td>
<table>
<tr><td>Waste type j</td><td>DOC_j (% wet waste)</td></tr>
<tr><td>Wood and wood products</td><td>43</td></tr>
<tr><td>Pulp, paper and cardboard (other than sludge)</td><td>40</td></tr>
<tr><td>Food, food waste, beverages and tobacco (other than sludge)</td><td>15</td></tr>
<tr><td>Textiles</td><td>24</td></tr>
<tr><td>Garden, yard and park waste</td><td>20</td></tr>
<tr><td>Glass, plastic, metal, other inert waste</td><td>0</td></tr>
</table>
</td></tr>
<tr><td>Measurement/ Monitoring equipment (if applicable)</td><td>-</td></tr>
<tr><td>Measuring/reading/ recording frequency (if applicable)</td><td>Ex-ante determined and fixed for the crediting period.</td></tr>
<tr><td>Calculation method (if applicable)</td><td>-</td></tr>
<tr><td>QA/QC procedures</td><td>-</td></tr>
<tr><td>Purpose of data</td><td>Calculation of baseline emissions</td></tr>
<tr><td>Additional comments</td><td>-</td></tr>
</table>

Data / Parameter Table 12.

<table>
<tr><td>Data / Parameter:</td><td colspan="3">k_j</td></tr>
<tr><td>Methodology reference</td><td colspan="3">AMS-III.G. (version 10.0)</td></tr>
<tr><td>Data unit</td><td colspan="3">1/yr</td></tr>
<tr><td>Description</td><td colspan="3">Decay rate for the waste type j</td></tr>
<tr><td>Measured/calculated /default</td><td colspan="3">default</td></tr>
<tr><td>Data source</td><td colspan="3">IPCC 2006 Guidelines for National Greenhouse Gas Inventories (adapted from Volume 5, Table 3.3)</td></tr>
<tr><td>Value(s) of monitored parameter</td><td colspan="3"><table>
<tr><td colspan="2">Waste type j</td><td>k_j (MAT≤20℃, MAP/PET＜1)</td></tr>
<tr><td rowspan="2">Slowly degrading</td><td>Pulp, paper, cardboard (other than sludge)</td><td>0.06</td></tr>
<tr><td>Wood, wood products and straw</td><td>0.03</td></tr>
<tr><td>Moderately degrading</td><td>Other(non-food) organic putrescible garden and park waste</td><td>0.1</td></tr>
<tr><td>Rapidly degrading</td><td>Food, food waste, sewage sludge, beverages and tabacco</td><td>0.185</td></tr>
</table></td></tr>
<tr><td>Measurement/ Monitoring equipment (if applicable)</td><td colspan="3">-</td></tr>
<tr><td>Measuring/reading/ recording frequency (if applicable)</td><td colspan="3">Ex-ante determined and fixed for the crediting period.</td></tr>
<tr><td>Calculation method (if applicable)</td><td colspan="3">-</td></tr>
<tr><td>QA/QC procedures</td><td colspan="3">-</td></tr>
<tr><td>Purpose of data</td><td colspan="3">Calculation of baseline emissions</td></tr>
<tr><td>Additional comments</td><td colspan="3">The meteorological data for the project site (Rongchang County) are:
Mean annual temperature (MAT): 17.8°C
Mean annual precipitation (MAP): 1,099mm</td></tr>
</table>

	Potential evapotranspiration (PET): 630 mm

Data / Parameter Table 13.

Data / Parameter:	$EF_{grid,OM,y}$
Methodology reference	AMS-III.G. (version 10.0)
Data unit	tCO_2/MWh
Description	Operation margin emission factor of CCPG
Measured/calculated /default	calculated
Data source	2019 Bulletin on the Baseline Emission Factors of the China Grids
Value(s) of monitored parameter	0.8587
Measurement/ Monitoring equipment (if applicable)	-
Measuring/reading/ recording frequency (if applicable)	-
Calculation method (if applicable)	The value is published by Ministry of Ecology and Environment of the People's Republic of China, based on China Electric Yearbook (2016-2018), Electricity Industry Statistics (2015-2017), China Energy Statistic Yearbook (2016-2018) and IPCC data.
QA/QC procedures	Official and authoritative statistic data.
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 14.

Data / Parameter:	**$EF_{grid,BM,y}$**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	tCO_2/MWh
Description	Build margin emission factor of CCPG
Measured/calculated /default	calculated
Data source	2019 Bulletin on the Baseline Emission Factors of the China Grids
Value(s) of monitored parameter	0.2854

Measurement/ Monitoring equipment (if applicable)	-
Measuring/reading/ recording frequency (if applicable)	Ex-ante determined and fixed for the crediting period.
Calculation method (if applicable)	The value is published by Ministry of Ecology and Environment of the People's Republic of China, based on China Electric Yearbook (2016-2018), Electricity Industry Statistics (2015-2017), China Energy Statistic Yearbook (2016-2018) and IPCC data.
QA/QC procedures	Official and authoritative statistic data.
Purpose of data	Calculation of baseline emissions
Additional comments	-

B.6.3. Ex-ante calculation of emission reductions

>>

1. Calculation of the baseline emissions

The baseline emissions are calculated as follows:

$$BE_y = BE_{CH4,y} + BE_{EC,y}$$

1.1 Baseline emissions of methane from the SWDS ($BE_{CH4,y}$)

Table 3 The estimation of annual methane destroyed

Year	W1	W2	W3	W4	W5	$BE_{CH4,SWDS,y}$ (Methane emission)	$F_{CH4,PJ,y}$ (CH_4 destroy)	$F_{CH4,BL,y}$ (20% discount)	$BE_{CH4,y}$ (ER from CH_4)
Unit	tCO_2e	tCO_2e	tCO_2e	tCO_2e	tCO_2e	tCO_2e	tCH_4	tCH_4	tCO_2e
01/01/2016-31/12/2016	5,186	20,141	18,665	382	1,564	45,937	1,230	246	28,915
01/01/2017-31/12/2017	5,382	22,495	20,092	427	1,722	50,117	1,342	268	31,547
01/01/2018-31/12/2018	5,581	24,818	21,415	494	1,875	54,182	1,451	290	34,105
01/01/2019-31/12/2019	5,783	27,114	22,656	544	2,023	58,121	1,557	311	36,584
01/01/2020-31/12/2020	5,989	29,390	23,833	595	2,167	61,972	1,660	332	39,009
01/01/2021-31/12/2021	6,391	35,187	26,981	668	2,546	71,773	1,922	384	44,140
01/01/2022-31/12/2022	6,608	37,199	26,531	706	2,631	73,675	1,973	395	45,310
01/01/2023-31/12/2023	6,823	38,973	25,565	739	2,685	74,786	2,003	401	45,993
01/01/2024-31/12/2024	7,036	40,525	24,257	769	2,714	75,300	2,017	403	46,309

01/01/2025-31/12/2025	7,248	41,872	22,736	794	2,720	75,370	2,019	404	46,352
01/01/2026-31/12/2026	7,458	43,030	21,101	816	2,708	75,113	2,012	402	46,194

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

Table 4 The estimation of $BE_{EC,y}$

Year	MDproject, y	Total captured LFG	Total collected LFG	LFG collected flow	LFG combusted by Genset	Power	Power Generation	Power suppied to Grid	ER for power replace
Unit	tCH_4	Nm^3/a	Nm^3/a	Nm^3/h	Nm^3	kW	kWh	MWh	tCO_2e
01/01/2016 - 31/12/2016	1,837	5,126,918	3,845,188	513	3,845,188	820	6,152,301	5,783	3,308
01/01/2017 - 31/12/2017	2,005	5,593,470	4,195,102	559	4,195,102	895	6,712,164	6,309	3,609
01/01/2018 - 31/12/2018	2,167	6,047,113	4,535,335	605	4,535,335	968	7,256,536	6,821	3,902
01/01/2019 - 31/12/2019	2,325	6,486,669	4,865,002	649	4,865,002	1,038	7,784,003	7,317	4,185
01/01/2020 - 31/12/2020	2,479	6,916,516	5,187,387	692	5,187,387	1,107	8,299,820	7,802	4,463
01/01/2021 - 31/12/2021	2,563	7,152,139	5,364,104	715	5,364,104	1,144	8,582,567	8,068	4,615
01/01/2022 - 31/12/2022	2,631	7,341,648	5,506,236	734	5,506,236	1,175	8,809,977	8,281	4,737
01/01/2023 - 31/12/2023	2,671	7,452,344	5,589,258	745	5,589,258	1,192	8,942,813	8,406	4,808
01/01/2024 - 31/12/2024	2,689	7,503,628	5,627,721	750	5,627,721	1,201	9,004,353	8,464	4,841
01/01/2025 - 31/12/2025	2,692	7,510,592	5,632,944	751	5,632,944	1,202	9,012,711	8,472	4,846
01/01/2026 - 31/12/2026	2,683	7,484,956	5,613,717	748	5,613,717	1,198	8,981,947	8,443	4,829

Thus, the baseline emissions are determined as below.

Table 5 The estimation of BE_y

Year	ER from CH_4	ER from power	Baseline Emission
Unit	tCO_2e	tCO_2e	tCO_2e

09/05/2016-31/12/2016	18,724 [11]	2,142 [12]	20,865
01/01/2017-31/12/2017	31,547	3,609	35,156
01/01/2018-31/12/2018	34,105	3,902	38,007
01/01/2019-31/12/2019	36,584	4,185	40,769
01/01/2020-31/12/2020	39,009	4,463	43,472
01/01/2021-31/12/2021	44,140	4,615	48,755
01/01/2022-31/12/2022	45,310	4,737	50,047
01/01/2023-31/12/2023	45,993	4,808	50,801
01/01/2024-31/12/2024	46,309	4,841	51,150
01/01/2025-31/12/2025	46,352	4,846	51,198
01/01/2026-08/05/2026	16,200[13]	1,693 [14]	17,892

2. Calculation of the project emissions

As described in section B.6.1, it is assumed that the amount of electricity consumed from the grid is zero ($EC_{PJ,j,y}$=0) in ex-ante calculation, which will be monitored in the verification period. Thus PE_y=0.

3. Calculation of the leakage

Leakage is not considered.

4. Calculation of emission reductions

Year	Baseline emissions (t CO_2e)	Project emissions (t CO_2e)	Leakage (t CO_2e)	Emission reductions (t CO_2e)
09/05/2016-31/12/2016	20,865	0	0	20,865
01/01/2017-31/12/2017	35,156	0	0	35,156
01/01/2018-31/12/2018	38,007	0	0	38,007
01/01/2019-31/12/2019	40,769	0	0	40,769
01/01/2020-31/12/2020	43,472	0	0	43,472
01/01/2021-31/12/2021	48,755	0	0	48,755
01/01/2022-31/12/2022	50,047	0	0	50,047
01/01/2023-31/12/2023	50,801	0	0	50,801
01/01/2024-31/12/2024	51,150	0	0	51,150
01/01/2025-31/12/2025	51,198	0	0	51,198
01/01/2026-08/05/2026	17,892	0	0	17,892
Total	448,112	0	0	448,112

B.6.4. Summary of ex ante estimates of emission reductions

[11] It covers 237 days from 09/05/2016 to 31/12/2016, thus $BE_{CH4,y}$ is calculated as 28,915 tCO_2e*237 days /366days.

[12] It covers 237 days from 09/05/2016 to 31/12/2016, thus $BE_{EC,y}$ is calculated as 3,308 tCO_2e*237 days /366days.

[13] It covers 128 days from 01/01/2026 to 08/05/2026, thus $BE_{CH4,y}$ is calculated as 46,194 tCO_2e*128 days /365days.

[14] It covers 128 days from 01/01/2026 to 08/05/2026, thus $BE_{EC,y}$ is calculated as 4,829 tCO_2e*128 days /365days

>>

Year	Baseline emissions (t CO_2e)	Project emissions (t CO_2e)	Leakage (t CO_2e)	Emission reductions (t CO_2e)
09/05/2016-31/12/2016	20,865	0	0	20,865
01/01/2017-31/12/2017	35,156	0	0	35,156
01/01/2018-31/12/2018	38,007	0	0	38,007
01/01/2019-31/12/2019	40,769	0	0	40,769
01/01/2020-31/12/2020	43,472	0	0	43,472
01/01/2021-31/12/2021	48,755	0	0	48,755
01/01/2022-31/12/2022	50,047	0	0	50,047
01/01/2023-31/12/2023	50,801	0	0	50,801
01/01/2024-31/12/2024	51,150	0	0	51,150
01/01/2025-31/12/2025	51,198	0	0	51,198
01/01/2026-08/05/2026	17,892	0	0	17,892
Total	448,112	0	0	448,112
Total number of crediting years	10			
Annual average over the crediting period	44,811			44,811

B.7. Monitoring plan

>>

1. The requirement of monitoring plan

The project participants will monitor the emission reductions by methods, indicators, and frequency required by Monitoring Methodology AMS-III.G (Version 10.0） and AMS-I.D (Version 18.0) to ensure project ERs are measurable and real. The monitoring methodology is based on direct measurement of the amount of landfill gas captured and destroyed by the project and electricity generating units.

2． Responsibilities of operational and management structure

The project participant will implement this monitoring plan. The plan could be revised according to suggestions from VVB and the practical circumstances, in order to keep it consistent, transparent and conservative during the monitoring process.

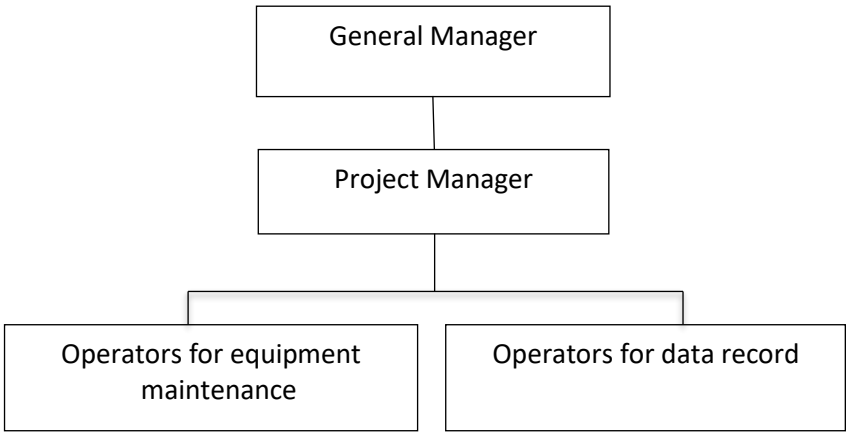

Figure 3 Operational and management structure

(1) Principal of the monitoring procedure

The general manager of the project is the leader of the monitoring tasks: he sets out the responsibility of everyone in the monitoring system, and establishes the related documents. The general manager ensures that staff in the monitoring system has the ability to deal with the assigned tasks.

(2) Executive person of the monitoring procedure

Project Manager: a Project Manager is appointed, specifically responsible for training, checking the daily operation, reporting forms and archiving emergency situation reports. The GCC Manager reports monthly to the General Manager (GM) about the project performance and monitored data. In the event that non-conformance in the performance to the mentioned procedures and/or functioning problems of the monitoring equipment are identified, the GCC manager will inform the GM about the situation and work out relevant measures to be taken. The GCC manager will also be responsible for aggregating the monitored data monthly and yearly, archiving and keeping data during the crediting period and two years after.

(3) Operators of the monitoring procedure

Operators will take turns to work in the control center 24 hours a day. They will be in charge of data supervision, filling operation report forms and, checking and inspecting the system. If necessary, they will have the responsibility for executing the emergency plan and drafting emergency situation reports.

3. Monitoring system

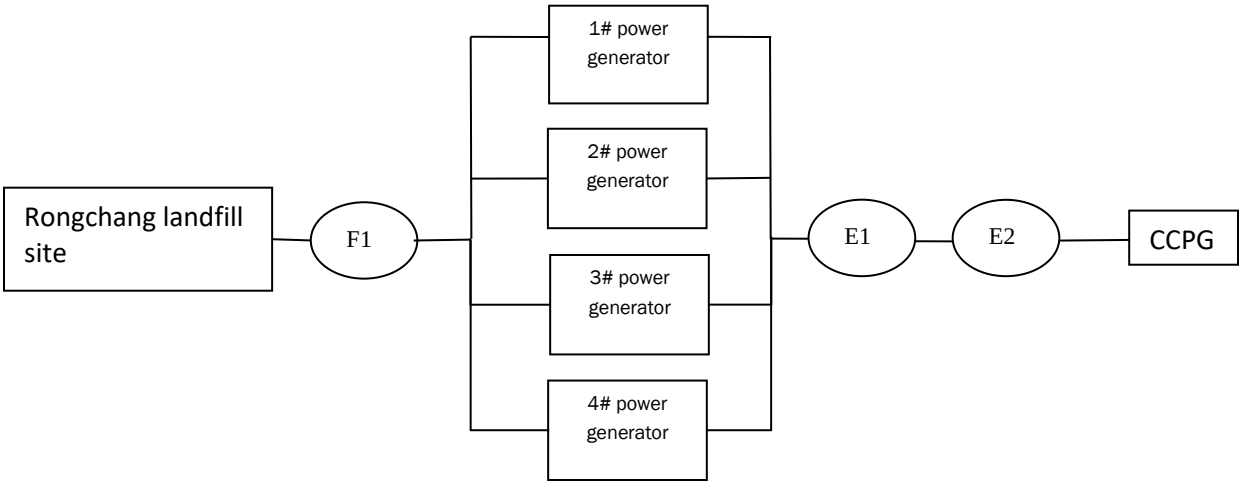

Figure 4 Monitoring system

Main parameters:

E1	Electricity meter to continuously measure the total electricity by all the generators
E2	Electricity meter (main meter, bi-directional) to continuously measure the electricity supplied to the CCPG and the electricity supplied by the grid

F1	Flow meter to continuously measure the methane emission captured for utilization

QA/QC
All the monitoring devices listed above (flow meter, gas analyzer and electricity meter) will be calibrated once a year by a qualified third party. The calibration report will be kept in the archives by the project owner, and checked by Project Manager. When the data is not available from the main monitoring devices, the data measured by the back-up devices will be used.

B.7.1. Data and parameters to be monitored

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Data / Parameter Table 15.

Data / Parameter:	**$F_{CH4,BL,y}$**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	tCH_4/yr
Description	Amount of methane in the LFG which is flared due to a requirement in year y
Measured/calculated /default	Measured
Data source	Information of the host country's regulatory requirements relating to LFG, contractual requirements, or requirements to address safety and odor concerns.
Value(s) of monitored parameter	-
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	Annually
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 16.

Data / Parameter:	**$\rho_{reg,y}$**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	Dimensionless
Description	Fraction of LFG that is required to be flared due to a requirement in year y
Measured/calculated /default	Measured
Data source	Information of the host country's regulatory requirements relating to LFG, contractual requirements, or requirements to address safety and odor concerns.
Value(s) of monitored parameter	-
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	Annually
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 17.

Data / Parameter:	**$EG_{PJ,facility,y}$**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	MWh
Description	Quantity of net electricity generated supplied by the project plant/unit in year y
Measured/calculated /default	Measured
Data source	Electricity meter E2
Value(s) of monitored parameter	-

Measurement/ Monitoring equipment	<table><tr><td colspan="2">Electricity meter E2</td></tr><tr><td>Type of meter</td><td>DL/T645-2007</td></tr><tr><td>Location of meter</td><td>Onsite substation</td></tr><tr><td>Accuracy of meter</td><td>0.5S</td></tr><tr><td>Serial number of meter</td><td>6008698886</td></tr><tr><td>Calibration frequency</td><td>Every year</td></tr><tr><td>Date of Calibration/ validity</td><td>-</td></tr><tr><td>Reference No. of Calibration Certificate</td><td>-</td></tr><tr><td>Calibration Status</td><td>Calibrated</td></tr></table>
Measuring/reading/ recording frequency	The recording frequency will be hourly measured and record and monthly aggregated.
Calculation method (if applicable)	Measured continuously by electricity meter (bi-directional) installed at the project site. All data will be monitored and archived electronically. Double check by receipt of electricity sales.
QA/QC procedures	The calibration should be done once a year by a qualified third party.
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 18.

Data / Parameter:	**EG_y**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	MWh
Description	Electricity generation in year y
Measured/calculated /default	Measured
Data source	Electricity meter E1
Value(s) of monitored parameter	-

Measurement/ Monitoring equipment	<table><tr><td colspan="2">Electricity meter E1</td></tr><tr><td>Type of meter</td><td>DL/T614-2007</td></tr><tr><td>Location of meter</td><td>Onsite substation</td></tr><tr><td>Accuracy of meter</td><td>0.5S</td></tr><tr><td>Serial number of meter</td><td>150409183867</td></tr><tr><td>Calibration frequency</td><td>Every year</td></tr><tr><td>Date of Calibration/ validity</td><td>-</td></tr><tr><td>Reference No. of Calibration Certificate</td><td>-</td></tr><tr><td>Calibration Status</td><td>Calibrated</td></tr></table>
Measuring/reading/ recording frequency	The recording frequency will be hourly measured and record and monthly aggregated.
Calculation method (if applicable)	Measured continuously by electricity meter installed at the project site. All data will be monitored and archived electronically.
QA/QC procedures	The calibration should be done once a year by a qualified third party.
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 19.

Data / Parameter:	**$D_{CH4,y}$**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	t/m^3
Description	Density of methane at the temperature and pressure of the landfill gas in year y ($tonnes/m^3$). If $LFG_{i,y}$ is reported at normal conditions of temperature and pressure, the density of methane is also determined at normal conditions
Measured/calculated /default	Measured
Data source	-
Value(s) of monitored parameter	
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	-
Calculation method (if applicable)	The project employs landfill gas flow meter to measures flow, pressure and temperature and the normalized flow of landfill gas is displayed.

	According to the AMS-III.G., the density of methane is also determined at normal conditions
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	-

Data / Parameter Table 20.

Data / Parameter:	**P**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	Pa
Description	Pressure of the landfill gas
Measured/calculated /default	Measured
Data source	-
Value(s) of monitored parameter	-
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	-
Calculation method (if applicable)	The project employs landfill gas flow meter to measures flow, pressure and temperature and the normalized flow of landfill gas is displayed. According to the AMS-III.G., there is no need for separate monitoring of pressure and temperature of the landfill gas.
QA/QC procedures	-
Purpose of data	-
Additional comments	-

Data / Parameter Table 21.

Data / Parameter:	**T**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	℃
Description	Temperature of the landfill gas
Measured/calculated /default	Measured
Data source	-

Value(s) of monitored parameter	-
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	-
Calculation method (if applicable)	The project employs landfill gas flow meter to measures flow, pressure and temperature and the normalized flow of landfill gas is displayed. According to the AMS-III.G., there is no need for separate monitoring of pressure and temperature of the landfill gas.
QA/QC procedures	-
Purpose of data	-
Additional comments	-

Data / Parameter Table 22.

Data / Parameter:	**EE_y**
Methodology reference	AMS-III.G. (version 10.0)
Data unit	%
Description	Energy Conversion Efficiency of the project equipment
Measured/calculated /default	Measured
Data source	Information of the host country's regulatory requirements relating to LFG, contractual requirements, or requirements to address safety and odor concerns.
Value(s) of monitored parameter	-
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	-
Calculation method (if applicable)	As per paragraph 21 of AMS.III.G. (Version 10.0) Specification provided by the equipment manufacturer. The equipment shall be designed to utilize biogas as fuel, and the efficiency specification is for biogas. If the specification provides a range of efficiency values, the highest value of the range shall be used for the calculation
QA/QC procedures	-

Purpose of data	-
Additional comments	-

Data / Parameter Table 23.

Data / Parameter:	**Methane emissions**
Methodology reference	Environment and Social Safeguards Standard – V3.0
Data unit	m^3 of CH_4/annum
Description	Quantum of methane emission captured for utilization
Measured/calculated /default	Measured
Data source	Flow meter F1
Value(s) of monitored parameter	-
Measurement/ Monitoring equipment	Flow meter F1 Type of meter: RLVZM-100 Location of meter: On pretreatment system Accuracy of meter: Class 0.5 Serial number of meter: F61-1403-0054 Calibration frequency: Every year Date of Calibration/ validity: - Reference No. of Calibration Certificate: - Calibration Status: Calibrated
Measuring/reading/ recording frequency	Continuously measured and monthly recorded
Calculation method (if applicable)	Monitored data on the quantum of land fill gas captured and utilized will be multiplied with methane content of landfill gas to estimate the quantum of methane emission avoided
QA/QC procedures	The flow meters are subject to a regular maintenance and testing regime to ensure accuracy.
Purpose of data	Estimation of environmental safeguard.
Additional comments	Data will be archived in electronic form for two years after the end of crediting period or of the last issuance of credits for this project activity, whichever occurs later.

Data / Parameter Table 24.

Data / Parameter:	**CO_2 Emission**
Methodology reference	Environment and Social Safeguards Standard – V3.0
Data unit	tCO_2/Year
Description	Clean electricity generated from the LFG and anerobic digestor based power generation unit to result in reduction of CO_2 emission by avoiding electricity generated in the grid connected power plant and equivalent CO_2 emission avoidance from capture and utilization of methane (LFG).
Measured/calculated /default	Calculated
Data source	Project Owner
Value(s) of monitored parameter	44,811 tCO_2/year
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	Yearly
Calculation method (if applicable)	Emission avoidance due to the project activity is estimated as product of quantum of electricity generated and grid emission factor and quantum of methane capture and utilized for power generation.
QA/QC procedures	Reduced quantum of Greenhouse gases emitted to the atmosphere is estimated based on the product of monitored quantum of electricity generated.
Purpose of data	Estimation of environmental safeguard
Additional comments	Data will be archived in electronic form for two years after the end of crediting period or of the last issuance of credits for this project activity, whichever occurs later.

Data / Parameter Table 25.

Data / Parameter:	**Replacing fossil fuels with renewable sources of energy**
Methodology reference	Environment and Social Safeguards Standard – V3.0
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Measured/calculated /default	Measured
Data source	Electricity meter E2
Value(s) of monitored parameter	-

Measurement/ Monitoring equipment	<table><tr><td colspan="2">Electricity meter E2</td></tr><tr><td>Type of meter</td><td>DL/T645-2007</td></tr><tr><td>Location of meter</td><td>Onsite substation</td></tr><tr><td>Accuracy of meter</td><td>0.5S</td></tr><tr><td>Serial number of meter</td><td>6008698886</td></tr><tr><td>Calibration frequency</td><td>Every year</td></tr><tr><td>Date of Calibration/ validity</td><td>-</td></tr><tr><td>Reference No. of Calibration Certificate</td><td>-</td></tr><tr><td>Calibration Status</td><td>Calibrated</td></tr></table>
Measuring/reading/ recording frequency	The recording frequency will be hourly measured and record, and monthly aggregated.
Calculation method (if applicable)	Measured continuously by electricity meter (bi-directional) installed at the project site. All data will be monitored and archived electronically.
QA/QC procedures	The calibration should be done once a year by a qualified third party.
Purpose of data	Estimation of environmental safeguard
Additional comments	Data will be archived in electronic form for two years after the end of crediting period or of the last issuance of credits for this project activity, whichever occurs later.

Data / Parameter Table 26.

Data / Parameter:	**Long-term jobs (> 1 year) created**
Methodology reference	Environment and Social Safeguards Standard – V3.0
Data unit	Number
Description	Number of Person employed for more than one year
Measured/calculated /default	Calculated
Data source	Project Owner
Value(s) of monitored parameter	-
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	Yearly
Calculation method (if applicable)	Total number of long-term employments will be calculated from the company record.
QA/QC procedures	The number of long-term employments will be checked from the company record.
Purpose of data	To justify social safeguard

Additional comments	Data will be archived in paper & electronically for a period of 2 years beyond the end of crediting period or of the last issuance of credits for this project activity, whichever occurs later.

Data / Parameter Table 27.

Data / Parameter:	**Job related training**
Methodology reference	Environment and Social Safeguards Standard – V3.0
Data unit	Number
Description	Number of Persons trained on operational and safety protocols
Measured/calculated /default	Calculated
Data source	Project Owner
Value(s) of monitored parameter	-
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	Yearly
Calculation method (if applicable)	Total number of persons trained on operational and safety protocols will be calculated from training record.
QA/QC procedures	The number of persons trained on operational and safety protocols (will be checked from training Records.
Purpose of data	To justify social safeguard
Additional comments	Data will be archived in paper & electronically for a period of 2 years beyond the end of crediting period or of the last issuance of credits for this project activity, whichever occurs later.

B.7.2. Monitoring-program of risk management actions

>>

There is no parameter evaluated as “Harmful” in Section E

B.7.3. Sampling plan

>>

Not applicable.

B.7.4. Other elements of the monitoring plan

>>

Section C. Start date, crediting period type and duration

C.1. Start date of the Project Activity

>>

09/05/2016 (Project operation start date)

C.2. Expected operational lifetime of the Project Activity

>>

20 years

C.3. Crediting period of the Project Activity

>>

C.3.1. Fixed crediting period

>>

Fixed crediting period.

C.3.2. Start date of the crediting period

>>
09/05/2016 (Operation start date)

C.3.3. Duration of the crediting period

>>
10 years, from 09/05/2016 to 08/05/2026.

Section D. Environmental impacts

D.1. Analysis of environmental impacts

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In December 2014, an environmental impact assessment (EIA) was completed in accordance with Chinese regulation by Chongqing Fuling Environmental Protection Research Institute and was approved by Environment Protection Bureau of Rongchang County on 08/01/2015.The objective of

this EIA was to identify the effects of the project activities on both the biophysical components of the environment and socio-economical aspects of local community and to provide measures and procedures to mitigate the possible effects.
The outcome of the EIA was favourable and the project was found to have no significant environmental impacts. The project not only reduces the danger caused by uncontrolled release of LFG, but also reduces the pollution caused by the landfill to the air, soil and water quality in the local area. From environmental protection perspectives, the project is in compliance with national industry policy, promoting sustainable development and utilisation of waste.
During construction phase, the raise dust, noise, waste water and solid wastes caused by project construction will be treated according to the measures in EIA report, and there will be no significant impact on the environment.
During the operation period, all the mitigation measures proposed by EIA report will be implemented and the following key aspects will be addressed:

Waste water

The wastewater produced by the project consists of condensation wastewater and domestic sewag e. Domestic sewage collected by biogas digester for fermentation treatment. Condensation wastew ater will be treated by leachate treatment system of the Rongchang landfill site. Therefore, it has littl e influence on the receiving water body.

Waste Gas

The exhaust gas produced by this project is mainly the exhaust gas of the generators. The concentration of the exhaust gas (mainly SO2, NOx and particulate matter) after combustion in gas-generator sets and processed by the wet dedusting and desulfurization system is discharged through the 15m high cylinder exhaust.

Noise pollution

According to the prediction results, the acoustic environment quality of the project equipment noise transmitted to the east, south, west and Central boundary of Rongchang landfill site can meet the Class 2 Zone standards of "Environmental Noise Emission Standard of Industrial Enterprise Boundary"(GB12348-2008).

Solid waste

The solid waste of the project is mainly sludge, domestic garbage and waste lubricating oil. Sludge produced by desulphurization unit and the domestic garbage which is collected uniformly and then sent to environment sanitation department for landfill treatment. The waste mineral oil generated by the generator set shall be properly collected and stored in the hazardous waste temporary deposit, and shall be submitted to the relevant qualified units for centralized treatment regularly.

As mentioned above, the project was considered not causing significant environmental impacts. On the contrary, the project benefits the environment by reducing emission of local air pollutants and greenhouse gases.

D.2. Environmental impact assessment

>>

The Environment Impact Assessment (EIA) was compiled by Chongqing Fuling Environmental Protection Research Institute In december, 2014 and approved by Environment Protection Bureau of Rongchang County on 08/01/2015. Every aspect of environmental impact has been considered in the EIA report with corresponding measures during project development. The environmental impacts, treatment and effect arising from the Project during operation has been analysed in section 7 of this report below. And no net harm has been detected.

Meanwhile, the implementation of the project will improve local socio-economic development and contribute to the sustainable development as described in section 7.2 of this report above.

In conclusion, the project has no negative impacts on local environment and socio-economy. No net harm on local environment and social community has been detected for the project.

Section E. Environmental and social safeguards

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E.1. Environmental safeguards

>>

Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**									**Project Owner's Conclusion**	
		Description of Impact *(both positive and negative)*	**Legal requirement / Limit**	**Do-No-Harm Risk Assessment**			**Risk Mitigation Action Plans**		**Do-No-Harm Residual Risk Assessment**		**Self-Declaration**	
				Not Applicable *(No actions required)*	**Harmless** *(No actions required)*	**Harmful** *(Actions required)*	**Operational Controls**	**Program of Risk Management Actions**	**Re-evaluate Risks**	**Monitoring**	**Explanation of Conclusion**	**The Project Activity will not cause any harm**
Environmental impacts on the identified categories[15] indicated below.	*Indicators for environmental impacts*	*Describe anticipated environmental impacts, both positive and negative from all sources (stationary and mobile), that may result from the Project Activity, within and outside the project boundary, over which the Project Owner(s) has control, and beyond what would reasonably be expected to occur in the absence of the Project Activity.*	*Describe the applicable national regulatory requirements /legal limits related to the identified risks of environmental impacts.*	*If no environmental impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable*** *(No actions required)*	*If environmental impacts are anticipated, but are expected to be in compliance with applicable national regulatory requirements/ below the legal limits, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Harmless*** *(No actions required)*	*If environmental impacts are anticipated that will not be in compliance with the applicable national regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm (may be un-safe) and shall be indicated as* ***Harmful*** *(Actions required).*	*Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as* ***Harmful****.*	*Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., installation of pollution control equipment) that will be adopted to reduce the risk of impacts that have been identified as* ***Harmful****.*	*Re-evaluate risks after Risk Mitigation Action Plans have been developed (refer to previous two columns) for impacts that have been identified as Harmful. Indicate whether the risks have been eliminated or reduced and, where appropriate, indicate them as* ***Harmless*** *(No actions required)*	*Describe the monitoring approach and the parameters to be monitored for each impact that has been identified as Harmful and described in the PSF (refer to Table 3).*	*Describe how the Project Owner has concluded that the Project Activity is likely to achieve the identified Risk Mitigation Action Plan targets for managing risks to levels that are unlikely to cause any harm.*	*Confirm that the Project Activity risks of negative environmental impacts are expected to be managed to levels that are unlikely to cause any harm (Mark +1 for* ***Yes*** *or and -1 for* ***No****)*
Environmental Safeguards												
Environment *- Air*	*SO_x emissions*	As per EIA report, after proper treatment, SOx content in the exhaust gas of LFG generators is 0.772μg/m^3, significantly	SOx emission limit of 35 mg/m^3 as specified in mandatory regulation GB13223-2011	-	The SO_x emission by the project is expected to be lower than the legal limits, hence the project is deemed Harmless	-	N.A.	The waste gas is desulphurized and dedusted by sodium hydroxide + lime water wet process device and discharged through the 15m high cylinder exhaus	N.A.	Online monitoring system has been installed by local government to monitor the SO_x content in the exhaust gas	LFG Pre-treatment system and exhaust gas purification facility has been installed and properly operated to ensure the	+1

[15] sourced from the CDM SD Tool and the sample reports are available (https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx)

								t.Hence the SO_x content in the exhaust gas is expected to comply with national regulation		to ensure the compliance with regulations.	compliance with regulations.	
	NO_x emissions	As per EIA report, NOx content in the exhaust gas of LFG generators is 12.45μg/m^3, lower than the emission limit.	NOx emission limit of 50 mg/m^3 as specified in mandatory regulation GB13223-2011	-	The NO_x emission by the project is expected to be lower than the legal limits, hence the project is deemed Harmless	-	N.A.	The exhaust gas will be purified by TWC denitrification facility and discharged through the 15m high cylinder exhaust. Hence the NO_x content in the exhaust gas is expected to comply with national regulation	N.A.	Online monitoring system has been installed by local government to monitor the NO_x content in the exhaust gas to ensure the compliance with regulations.	Exhaust gas purification and SCR denitrification facility has been installed and properly operated to ensure the compliance with regulations.	+1
	CO_2 emissions	There exists CO_2 emissions in the exhaust gas of LFG generators. However, there is no restriction on CO_2 emissions by LFG power generation project. Furthermore, the project reduces the CO_2 emission by power generation using previously atmospheric released LFG as fuel, replacing equivalent electricity generated by the connected power grid	There are no laws and regulations which limit the CO_2 emissions by LFG power generation projects in China.	The project reduces CO_2 emissions in the baseline; hence the project will not cause any harm in this regard	-	-	N.A.	N.A.	N.A.	The electricity generated will be monitored and CO_2 emission reductions will be calculated accordingly. Furthermore, availability of regulations on CO_2 emissions applicable for the project will be monitored throughout the crediting period	The project is expected to result in lower CO_2 emission than the baseline throughout the crediting period	+1
	CO emissions	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Suspended particulate matter (SPM) emissions	As per EIA report, SPM content in the exhaust gas of LFG generators is 1.03 μg/m^3,	SPM emission limit of 5 mg/m^3as specified in mandatory regulation	-	The SPM emission by the project is expected to be lower than the legal limits,	-	N.A.	The waste gas is desulphurized and dedusted by sodium hydroxide +	N.A.	Online monitoring system has been installed by local government	Exhaust gas purification facility has been installed and properly operated to	

		lower than the emission limit.	GB13223-2011		hence the project is deemed Harmless			lime water wet process device and discharged through the 15m high cylinder exhaust.Hence the SO_x content in the exhaust gas is expected to comply with national regulation		to monitor the SPM in the exhaust gas to ensure the compliance with regulations.	ensure the compliance with regulations	
	Fly ash emissions	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Non-Methane Volatile Organic Compounds (NMVOCs)	The project reduces NMVOCs emission by combustion of previously atmospheric released LFG	N.A.	The project reduces NMVOCs emissions in the baseline, hence the project will not cause any harm in this regard	-	-	N.A.	N.A.	N.A.	The LFG combusted by the project will be monitored.	The project will result in lower NMVOCs emission than the baseline throughout the crediting period	+1
	Odor emissions	The project reduces odor emissions by LFG recovery, purification, and destruction.	N.A.	The project reduces odor emissions in the baseline; hence the project will not cause any harm in this regard	-	-	N.A.	N.A.	N.A.	The LFG combusted by the project will be monitored.	The project will result in lower odor emissions than the baseline throughout the crediting period	+1
	Noise Pollution	The LFG generators may cause noise pollutions during operation. Measures have been taken to ensure that the noise is reduce to 50dB outside the project facility. The project does not meet the Class II standards. However, as the project boundary is within the range of health protection, there are no	Emission standard for dindustrial enterprises noise at boundary (GB12348-2008) requires noise under 60dB during daytime and 50dB during night hour for Class II	-	The project boundary is within the range of health protection, there are no sensitive noise points such as residential areas and schools within the range, and the noise disturbance phenomenon will not occur. hence the project is deemed Harmless	-	N.A.	N.A.	N.A.	N.A.	The noise outside the project facility is lower than 50dB, which complies with national regulation. Furthermore, the closest resident's settlement is 758m away. The noise from the project has no impact on the residents' settlement.	+1

		sensitive noise points such as residential areas and schools within the range, and the noise disturbance phenomenon will not occur, which is acceptable to the environment										
	Methane emissions	The project reduces methane emission by combustion of previously atmospheric released LFG	N.A.	The project reduces methane emission in the baseline; hence the project will not cause any harm in this regard	-	-	N.A.	N.A.	N.A.	The LFG combusted by the project will be monitored and methane emission reductions will be calculated accordingly. Furthermore, availability of regulations on CH_4 emissions applicable for the baseline will be monitored throughout the crediting period	The project will result in lower methane emissions than the baseline.	+1
Environment *- Land*	*Solid waste Pollution from Plastics*	There may be plastic wastes generated at the end of domestic use by project staffs at the project site. Plastic wastes are properly collected and disposed.	Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste requires proper collection and disposure	-	Solid waste Pollution from Plastics is properly disposed as per regulations; hence the project is deemed Harmless	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Solid waste Pollution from Hazardous wastes	The project reduces waste lubricating oil.The waste mineral oil generated by the generator set shall be properly collected and	Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid	-	Solid waste Pollution from Hazardous wastes is properly disposed as per regulations, hence the	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

		stored in the hazardous waste temporary deposit, and shall be submitted to the relevant qualified units for centralized treatment regularly. Hazardous wastes will be properly collected and treated by qualified entity	Waste requires proper collection and treatment by qualified entity		project is deemed Harmless							
	Solid waste Pollution from Bio-medical wastes	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Solid waste Pollution from E-wastes	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Solid waste Pollution from Batteries	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Solid waste Pollution from end of life products/ equipment	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury)	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Soil erosion	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Environment *- Water*	*Reliability/ accessibility of water supply*	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Water Consumption from ground	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

	and other sources											
	Generation of wastewater	The project generates wastewater caused by the domestic use and condensate, but it is treated according to national regulations	Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Wastewater requires proper treatment of domestic wastewater	-	Domestic wastewater is treated together with leachate in the leachate treatment station of the land fill site to comply with the standard of "Discharge standard of pollutants for municipal wastewater treatment plant" (GB18918-2002), and then further treated in the nearby Municipal sewage treatment plant. Hence the project is deemed Harmless.	-	N.A.	N.A.	N.A.	The leachate treatment station is outside the project boundary. It is owned and operated by the land fill site. The project owner cannot monitor the operation of the leachate treatment station. However the national standard of "Discharge standard of pollutants for municipal wastewater treatment plant" (GB18918-2002) is mandatory, in case of non-compliance, the land fill site will be punished by the government. The non-compliance will be publicly available on the governmental website. Hence the information of the non-compliance of the leachate treatment station will be monitored throughout the crediting period	The Domestic wastewater is properly treated in the leachate treatment station of the land fill site to comply with the standard of "Discharge standard of pollutants for municipal wastewater treatment plant" (GB18918-2002), and then further treated in the nearby Municipal sewage treatment plant	+1

	Wastewater discharge without/with insufficient treatment	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Pollution of Surface, Ground and/or Bodies of water	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Pollution of condensate	The condensate produced by the gas pre-treatment process.	Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Wastewater requires proper treatment of condensate	-	The condensate is treated together with leachate in the leachate treatment station of the land fill site to comply with the standard of "Discharge standard of pollutants for municipal wastewater treatment plant" (GB18918-2002), and then further treated in the nearby Municipal sewage treatment plant. Hence the project is deemed Harmless.	-	N.A.	The condensate is treated in the leachate treatment station of the land fill site to comply with the standard of "Discharge standard of pollutants for municipal wastewater treatment plant" (GB18918-2002), and then further treated in the nearby Municipal sewage treatment plant	N.A.	The leachate treatment station is outside the project boundary. It is owned and operated by the land fill site. The project owner cannot monitor the operation of the leachate treatment station. However the national standard of "Pollutant Control Standard for Domestic Waste Landfill" (GB16889-2008) is mandatory, in case of non-compliance, the land fill site will be punished by the government. The non-compliance will be publicly available on the governmental website. Hence the information of the non-compliance	The leachate is properly treated in the leachate treatment station of the land fill site to comply with the standard of "Pollutant Control Standard for Domestic Waste Landfill" (GB16889-2008), and then further treated in the nearby Municipal sewage treatment plant	+1

										of the leachate treatment station will be monitored throughout the crediting period.		
Environment *– Natural Resources*	*Conserving mineral resources*	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Protecting/ enhancing plant life	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Protecting/ enhancing species diversity	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Protecting/ enhancing forests	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Protecting/ enhancing other depletable natural resources	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Conserving energy	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Replacing fossil fuels with renewable sources of energy	The project utilizes LFG to generate electricity, which will replace the electricity generated by fossil fuel plants of CCPG	N.A.	The project activity causes positive impact on the environment by replacing the fossil fuels with the renewable energy sources of energy	-	-	N.A.	N.A.	N.A.	The electricity generated from LFG will be monitored throughout the crediting period.	The project is expected to supply an average of 7,665MWh renewable electricity to CCPG annually	+1
	Replacing ODS with non-ODS refrigerants	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Note: If the score is: (a) zero or greater, the overall impact is neutral or positive and there is no net harm; and (b) less than zero, the overall impact is negative and there is net harm to Environment. Score is obtained after adding the individual scores in each of the rows in the last column of the above table.

Net Score:	**+10**
Project Owner's Conclusion in PSF:	The Project Owner confirms that the Project Activity will not cause any net harm to the environment.

E.2. Social Safeguards

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Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**									**Project Owner's Conclusion**	
		Description of Impact (*both positive and negative*)	**Legal requirement /Limit**	**Do-No-Harm Risk Assessment**			**Risk Mitigation Action Plans**		**Do-No-Harm Residual Risk Assessment**		**Self-Declaration**	
				Not Applicable *(No actions required)*	**Harmless** *(No actions required)*	**Harmful** *(Actions required)*	**Operational Controls**	**Program of Risk Management Actions**	**Re-evaluate Risks**	**Monitoring**	**Explanation of Conclusion**	**The Project Activity will not cause any harm**
Social impacts on the identified categories[16] indicated below.	*Indicators for social impacts*	*Describe the impacts on society and stakeholders, both positive and negative, that may result from constructing and operating of the Project Activity.*	*Describe the applicable national regulatory requirements / legal limits related to the identified risks of social impacts.*	*If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable*** *(No actions required)*	*If social impacts are anticipated, but are expected to be in compliance with applicable national regulatory requirements/ legal limits, then it the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Harmless*** *(No actions required)*	*If social impacts are anticipated that will not be in compliance with the applicable national regulatory requirements/ legal limits, then the Project Activity is likely to cause harm (may be unsafe) and shall be indicated as* ***Harmful*** *(Actions required).*	*Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as* ***Harmful****.*	*Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., construction of crèche for workers) that will be adopted to reduce the risk of impacts that have been identified as* ***Harmful****.*	*Re-evaluate risks after Risk Mitigation Actions plans have been developed (refer to previous two columns) for impacts that have been identified as Harmful. Indicate whether the risks have been eliminated or reduced and, where appropriate, indicate them as* ***Harmless*** *(No actions required)*	*Describe the monitoring approach and the parameters to be monitored for each impact that has been identified as Harmful and to be described in the PSF (refer to Table 3).*	*Describe how the Project Owner has concluded that the Project Activity is likely to achieve the identified Risk Mitigation Action Plan targets for managing risks to levels that are unlikely to cause any harm.*	*Confirm that the Project Activity risks of negative social impacts are expected to be managed to levels that are unlikely to cause any harm (Mark +1 for* ***Yes*** *or and -1 for* ***No****)*
Social Safeguards												
Social - *Jobs*	*Long-term jobs (> 1 year) created/ lost*	The project is expected to create 16 long-term job opportunities	N.A.	-	The social impact is expected to increase employment; hence the project is harmless	-	N.A.	N.A.	N.A.	Number of people employed by the project will be monitored through checking payroll records or the social insurance payment	The social impact is expected to increase employment, which can be confirmed by payroll records or the social insurance payment records of	+1

[16] sourced from the CDM SD Tool and the sample reports are available (https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx)

										records of the project owner	the project owner	
	New short-term jobs (< 1 year) created/ lost	The construction of the project will create short-term job opportunities	N.A.	-	The social impact is expected to increase employment; hence the project is harmless	-	N.A.	N.A.	N.A.	Construction of the project was implemented by qualified construction company contracted by project owner. Project owner has no access to the employment records of the short-term employment. Hence this parameter will not be scored.	Project owner has no access to the employment records of the short-term employment. Hence this parameter will not be scored.	N.A.
	Sources of income generation increased / reduced	Sources of income generation increased comparing the baseline scenario.	No regulation	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	Local income has been increased due to local employment generation from the project activity. But cannot be monitored. Hence this parameter will not be scored	N.A.
Social - *Health & Safety*	*Disease prevention*	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Reducing / increasing accidents	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Reducing / increasing crime	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Reducing / increasing food wastage	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Reducing / increasing	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

	indoor air pollution											
	Efficiency of health services	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sanitation and waste management	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Other health and safety issues	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Reducing / increasing fire/explosion and risk to human life	Recovery and destruction of LFG by the project can reduce the potential safety hazards of landfill gas fire and explosion, which will reduce the risk to human life of landfill staff.	N.A.	-	The social impact is expected to reduce fire/ explosion and risk to human life; hence the project is harmless	-	N.A.	N.A.	N.A.	Monitoring the fire and explosion incident occurred within the land fill site and the project site	No fire or explosion is expected to happen throughout the crediting period	+1
	Reducing / increasing risk to human health due to water contaminatio n, generation of flies, enhanced scavenging	The landfill is managed by Rongchang Municipal Garden Administration. The construction and operation of the project activity does not impact the management of landfill, which means the implementation of the project will not reduce or increase risk to human health due to water contamination, generation of flies, enhanced scavenging	N.A.	Not Applicable	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Social - *Education*	*Job related training imparted or not*	The project owner provides job related training for all employees	No regulation	-	The project provides job related training for all employees; hence it is	-	N.A.	N.A.	N.A.	Training records will be monitored annually	Job related training can be confirmed by training records	+1

					harmless							
	Educational services improved or not	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Project-related knowledge disseminatio n effective or not	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Other educational issues	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Social - *Welfare*	*Improving/ deteriorating working conditions*	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Community and rural welfare	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Poverty alleviation (more people above poverty level)	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Improving / deteriorating wealth distribution/ generation of income and assets	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Increased or / deteriorating municipal revenues	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Women's empowerme nt	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Reduced / increased	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

	traffic congestion											
	Other social welfare issues	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Note: If the score is: (a) zero or greater, the overall impact is neutral or positive and there is no net harm; and (b) less than zero, the overall impact is negative and there is net harm to society. Score is obtained after adding the individual scores in each of the rows in the last column of the above table.

Net Score:	**+3**
Project Owner's Conclusion in PSF:	The Project Owner confirms that the Project Activity will not cause any net harm to society.

Section F. United Nations Sustainable Development Goals (SDG)

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UN-level SDGs	UN-level Target	Declared Country-level SDG	Defining Project-level SDGs					Project Owner(s)'s Conclusion	
			Project-level SDGs	**Project-level Targets/ Actions**	**Project-level Indicators**	**Contribution of Project-level Actions to SDG Targets**	**Monitoring**	**Explanation of Conclusion**	**Are Goal/ Targets Likely to be Achieved?**
Describe UN SDG targets and indicators *See: https://unstats.un.org/sdgs/indicators/indicators-list/*	*Describe the UN-level target(s) and corresponding indicator no(s)*	*Has the host country declared the SDG to be a national priority? Indicate Yes or No*	*Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope.* ***For guidance see:*** *Integrating the SDGs into Corporate Reporting- A Practical Guide: https://www.unglobalcompact.org/docs/publications/Practical_Guide_SDG_Reporting.pdf* *Case-study from Coca-Cola and other organizations to develop organization-wide SDGs (page 114): https://pub.iges.or.jp/pub/realising-transformative-potential-sdgs*	*Define project-level targets/actions, by suitably modifying and customizing UN/Country-level targets to the project scope. Define the target date by which the Project Activity is expected to achieve the project-level SDG target(s). Refer to the previous column for guidance*	*Define project-level indicators by suitably modifying and customizing UN/Country-level indicators to the project scope or creating a new indicator(s). Refer to the previous column for guidance*	*Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined project-level SDG targets and is additional to what would have occurred in the absence of the Project Activity*	*Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG target and Indicator*	*Describe how the Project Owner has concluded that the project is likely to achieve the identified Project level SDGs target(s).*	*Describe whether the project-level SDG target(s) is likely to be achieved by the target date (Yes or No)*
Goal 1: End poverty in all its forms everywhere	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Goal 3. Ensure healthy lives and promote well-being for all at all ages	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Goal 5. Achieve gender equality and empower all women and girls	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Goal 6. Ensure availability and sustainable management of water and sanitation for all	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	SDG Target 7.2 "By 2030, increase substantially the share of renewable energy in the global energy mix" by the utilization of landfill gas as a renewable energy source.	Yes	Increase the share of renewables in the total installed power capacity connected to the power grid	Provide 7,665MWh clean energy annually	Enhance the share of installed Electricity generation capacity from renewable energy sources	The project increases the renewable energy share in energy production mix. It provides 7,665MWh annual clean energy to the grid	Monitoring the supplied electricity to SCPG by the project	The project fully commissioned in 2016. Project implementation goes on without any problem	Yes
Goal 8. Promote sustained, inclusive and sustainable economic growth,	SDG Target 8.5 "By 2030, achieve	Yes	Generated job opportunities and income period. It created long term employment for 16 people who are directly working at the site.	The project is expected to create 16 long-term job opportunities	16 people to be recruited including all levels	The project created job opportunity for both construction	Check employment records	Project owner employs people according to	Yes

full and productive employment and decent work for all	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"					and operation		the regulations. Social security payments are done regularly	
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	SDG Target 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and	Yes	Provides clean and renewable energy by adopting the environmentally sound LFG power generation technology	The Project provides 7,665MWh clean energy to the power grid annually	9.4.1 CO_2 emission per unit of value added. Project provides clean energy avoiding 44,811 tCO_2e emission annually	The project helps adaptation of clean energy technologies by implementing LFG power generation plant	Monitoring the supplied electricity to CCPG by the project and the LFG recovered and combusted. The GHG emission reduction is calculated accordingly.	Project owner operates the plant since 2016 and complies with targeted SDGs so far.	Yes

	industrial processes, with all countries taking action in accordance with their respective capabilities								
Goal 10. Reduce inequality within and among countries	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Goal 12. Ensure sustainable consumption and production patterns	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Goal 13. Take urgent action to combat climate change and its impacts	SDG Target 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact	Yes	Estimated 44,811 tCO_2e annually	Project expects to supply 7,665MWh clean energy to power grid	Project provides clean energy avoiding 44,811 tCO_2e emission annually	The project recovers LFG for power generation. The LFG was vented to atmosphere without recovery. The project avoids 44,811 tCO_2e GHG emission annually	Calculate avoided GHG emissions every year	Project owner operates the plant since 2016 and complies with targeted SDGs so far.	Yes

	reduction and early warning								
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

SUMMARY	**Targeted**	**Likely to be Achieved**
Total Number of SDGs	**4**	**4**

Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF	Gold	Gold

Section G. Local stakeholder consultation

G.1. Modalities for local stakeholder consultation

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The project owner distributed questionnaires to local residents who may be impacted by the project in order to collect advice for the project. The aim of these questionnaires was to collect opinions concerning the influence the project would have on the local society, environment, economy, daily life etc.
The following questions are from the questionnaires and stakeholder consultancy meeting:
1.What do you think about the environment of surrounding areas?
2.Do you support the construction of this LFG power station?
3.Do you think the implementation of the project will cause positive effect on living of local residents?
4.Do you think the implementation of the project will cause negative effect?
The stakeholders were informed about the stakeholder meeting through posters on 01/04/2016. In the bulletin, the company invited the potential stakeholders to get to know their opinions and/or suggestions about the implementation of the project and GCC application of the project. The stakeholder consultancy meeting for the parties interested in the project was organized at Rongchang landfill site on 22/04/2016 to collect opinions from all stakeholders, such as representatives of local residents, Rongchang solid waste management station, the project owner and so on. The project owner appointed one person to make a meeting minute.

G.2. Summary of comments received

>>
20 questionnaires were distributed, and 20 questionnaires were returned. The age range of questioned people was 24-65 years old.
•About 100% of questioned people think the environment of surrounding areas is acceptable and good.
•100% of questioned people support the construction of the project.
•100% and 100% of questioned people think the implementation of the project will mitigate air pollution and lack of electricity, respectively.
•6% of questioned people think the noise of implementation of the project will affect the living of local residents surround.
There are 10 stakeholders attended the stakeholder consultation meeting and the project owner had taken meeting minute.
During the stakeholder consultancy meeting, some stakeholders worried that the project will bring noise, land occupying and pollution on employees and local residents' living. For these issues, the project owner will offer some measures: i.e. installation of sound proof devices and plating of green isolation belts are used for mitigating noise; the area the project built on only will not occupy farms of local residents; at the project site, waste recycling will be carried out reduce emit of waste, and the project site meanwhile will be far from the residential area, so the effect of the noise from the plant is little to local residents. All attendances to the meeting were satisfied to the measures.

G.3. Consideration of comments received

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As a whole, the impacts of construction of the project are basically positive. All stakeholders were pleased with the development of the project. The project would actually facilitate the development of the local economy and increase the income of local residents.

Section H. Approval and authorization

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Appendix 1. Contact information of project owners

Organization name	Henan BCCY Environmental Energy Co., Ltd.
Country	China
Address	No.22,Floor 3,Unit 1, Building 4,No.26 Dongqing Street,Hi-tech Industrial Development Zone, Zhengzhou, China
Telephone	+86 371 5673 7901
Fax	-
E-mail	lwang@bccynewpower.com
Website	www.bccynewpower.com
Contact person	Lei Wang

Appendix 2. Affirmation regarding public funding

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Not applicable.

Appendix 3. Applicability of methodology(ies)

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Not applicable.

Appendix 4. Further background information on ex ante calculation of emission reductions

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Not applicable.

Appendix 5. Further background information on monitoring plan

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Not applicable.

Appendix 6. Summary report of comments received from local stakeholders

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Not applicable.

Appendix 7. Summary of de-registered CDM project (Type B)

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Not applicable.

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