



HUINENG LOW CONCENTRATION COAL MINE METHANE UTILIZATION PROJECT

Document Prepared by Vitol SA

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Prepared By	Vitol SA
Contact	Place des Bergues 3, 1201 Geneva, Switzerland Inl@Vitol.com +86 136 9360 7932 www.vitol.com

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1 PROJECT DETAILS

1.1 Summary Description of the Project

Huineng Low Concentration Coal Mine Methane Utilization Project (from hereafter referred to as the project activity) is located in Huineng coal mine area in Pingding County, Yangquan City, Shanxi Province, People's Republic of China.

Without implementing the project activity, the coal mine methane (CMM) gas extracted due to safety reasons from the Huineng coal mine would be vented into the atmosphere. One of the main components of the CMM gas is methane, a potent greenhouse gas, which would contribute to accelerating the climate change if released into the atmosphere. The project activity is designed to capture a large part of the CMM gas and destroy it through utilizing it for electricity production.

The mining capacity of the Huineng coal mine is 1.8 million tonnes per year. The project activity utilizes low-concentration CMM with a concentration of around 25 %. The project activity installed the gas generators with the total capacity of 12,000 kW. The project activity also installed the waste heat recovery boilers for each gas generator which utilize the waste heat of them, but no GHG emission reductions from waste heat recovery are claimed.

The annual operating hours of the project activity are 6,000 h and the gross production is 72,000 MWh of electricity per year. The annual net generation of 68,500 MWh of electricity is provided to the North China Power Grid (NCPG) annually. The project is expected to have an annual average of 352,106tCO₂ emission reduction over the crediting period. The estimated emission reductions are 3,399,511tCO₂ over the crediting period 04/11/2013–30/06/2023, only emission reductions from 01/01/2016 to 30/06/2023 will be claimed with expected amounts of 2,639,348 tCO₂e.

The baseline scenario is the same as the scenario existing prior to the implementation of the project activity, i.e. gas extraction is a combination of pre and post mining CMM extraction, all the CMM is vented into the atmosphere without destruction or utilization, and an equivalent amount of electricity is generated in the NCPG. NCPG is dominated by fossil fuels, so the project activity reduces CO₂ emissions by replacing electricity produced by fossil fuels and also avoids CH₄ from being emitted into the atmosphere.

1.2 Sectoral Scope and Project Type

Scope 8: Mining/mineral production

Scope 10: Fugitive emissions from fuels (solid, oil and gas)

The project is not a grouped project.

1.3 Project Eligibility

As per the clarification 1 by Errata & Clarifications, VCS Standard, v4.0:

Projects registered under an approved GHG program, with activities that are included within the scope of the VCS Program (see VCS Standard, v4.2 Section 2.1), shall only be eligible to complete a gap validation and/or transfer to the VCS Program where the project initiates the pipeline listing process with the VCS Program on or before 31 December 2021 and completes gap validation on or before 31 March 2022. The project shall also submit a request for registration with the VCS Program on or before 30 June 2022.

The following also applies:

For a project that does not include afforestation and/or reforestation activities:

- a) The project shall have an original project crediting period start date on or after 1 January 2016 with an approved GHG program; or*
- b) Where the project has an original project crediting period start date from 1 January 2013 to 1 January 2016, the project shall have issued credits during the period 1 January 2016 to 5 March 2021, or shall have a status of “issuance requested” on the CDM Registry by 5 March 2021.*

The project avoids greenhouse gas emissions by destroying CH₄, generating electricity that would otherwise have been provided by the North China Power Grid, which reduces the emissions of CO₂, and falls into the category of the six Kyoto Protocol greenhouse gases. CDM methodology ACM0008 Version 07: “Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction through flaring or flameless oxidation.” is adopted, which is the methodology approved under a VCS approved GHG program and is eligible for VCS by Verra.

The project activity is to recovery and utilize the CMM gas extracted from Huineng coal mine for power generation, which would be vented into the atmosphere prior to the implementation of the project activity. Apparently, the project does not generate GHG emissions primarily for the purpose of their subsequent reduction, removal or destruction.

The project belongs to Scope 8 Mining/mineral production and Scope 10: Fugitive emissions from fuels (solid, oil and gas), and does not fall into the excluded project activities list of section 2.1.1 of VCS standard version 4.2.

Therefore, the project is eligible under the scope of VCS program.

The project has been registered as a CDM project (CDM PA8006), with the crediting period started on 01 July 2013. The project had CERs issuance on 09 November 2017. Thus, the project meets the criteria set out in above b) of Clarification 1.

The pipeline listing process (under development) has been initiated in 23 December 2021, which is before 31 December 2021. The gap validation will be completed with CTI before 31 March 2022, and the request for registration will be submitted before 30 June 2022.

Thus, the project activity is eligible to complete a gap validation and/or transfer to the VCS Program.

1.4 Project Design

n.a.

1.5 Project Proponent

Organization name	Beijing Yonder Environmental Energy Technology Co., Ltd
Contact person	Mr. Wang Chao
Title	Carbon Manager
Address	1707-A021, Floor 17, No.9 North Fourth Ring West Road, Haidian District, Beijing, China
Telephone	+86 183 0341 5669
Email	wangchao@china-yonder.com

1.6 Other Entities Involved in the Project

Organization name	Vitol SA
Role in the project	VCS account manager
Contact person	Ms. Livia Li
Title	Carbon manager
Address	Place des Bergues 3, 1201 Geneva, Switzerland
Telephone	+86 136 9360 7932
Email	lnl@vitol.com

1.7 Ownership

Beijing Yonder Environmental Energy Technology Co., Ltd has the legal right to control and operate the Huineng Low Concentration Coal Mine Methane Utilization Project through its fully owned subsidiary Pingding County Yonder Coal Mine Methane Development Co., Ltd.

Beijing Yonder Environmental Energy Technology Co., Ltd has full legal and beneficial title to all of the GHG reductions generated by Huineng Low Concentration Coal Mine Methane Utilization Project. The approval of Environmental Impact Assessment (EIA), Feasibility Study Report (FSR), and the business license of the project are evidence for legislative right.

Beijing Yonder Environmental Energy Technology Co., Ltd. hereby assigned Vitol SA as the carbon manager on its behalf.

1.8 Project Start Date

The project started operation on 04/11/2013, thus the project start date is 04/11/2013.

1.9 Project Crediting Period

04/11/2013– 30/06/2023 (9 years 239 days)¹

1.10 Project Scale and Estimated GHG Emission Reductions or Removals

Project Scale	
Project	
Large project	√

Year	Estimated GHG emission reductions or removals (tCO _{2e})
04/11/2013 - 31/12/2013	55,951
2014	352,106
2015	352,106
2016	352,106
2017	352,106
2018	352,106
2019	352,106

¹ As per clarification 2 of Verra 19 April 2022 clarifications document, the VCS project crediting period must start on the same day as the project start date. Though the project may not issue VCUs with vintages prior to 1 Jan 2016, the crediting period start date must still equal the project start date. Thus the crediting period is determined as 04/11/2013– 30/06/2023. The project proponent will not claim VCUs for vintage prior to 01/01/2016.

2020	352,106
2021	352,106
2022	352,106
01/01/2023 – 30/06/2023	174,606 ²
Total estimated ERs	3,399,511
Total estimated ERs since 01/01/2016	2,639,348
Total number of crediting years	9 years 239 days
Average annual ERs	352,106

As per VCS Standard, v4.2 and clarification 1 by Errata & Clarifications, VCS Standard, v4.0, only emission reductions with vintages beginning on or after 1 January 2016 will be claimed under VCS.

1.11 Description of the Project Activity

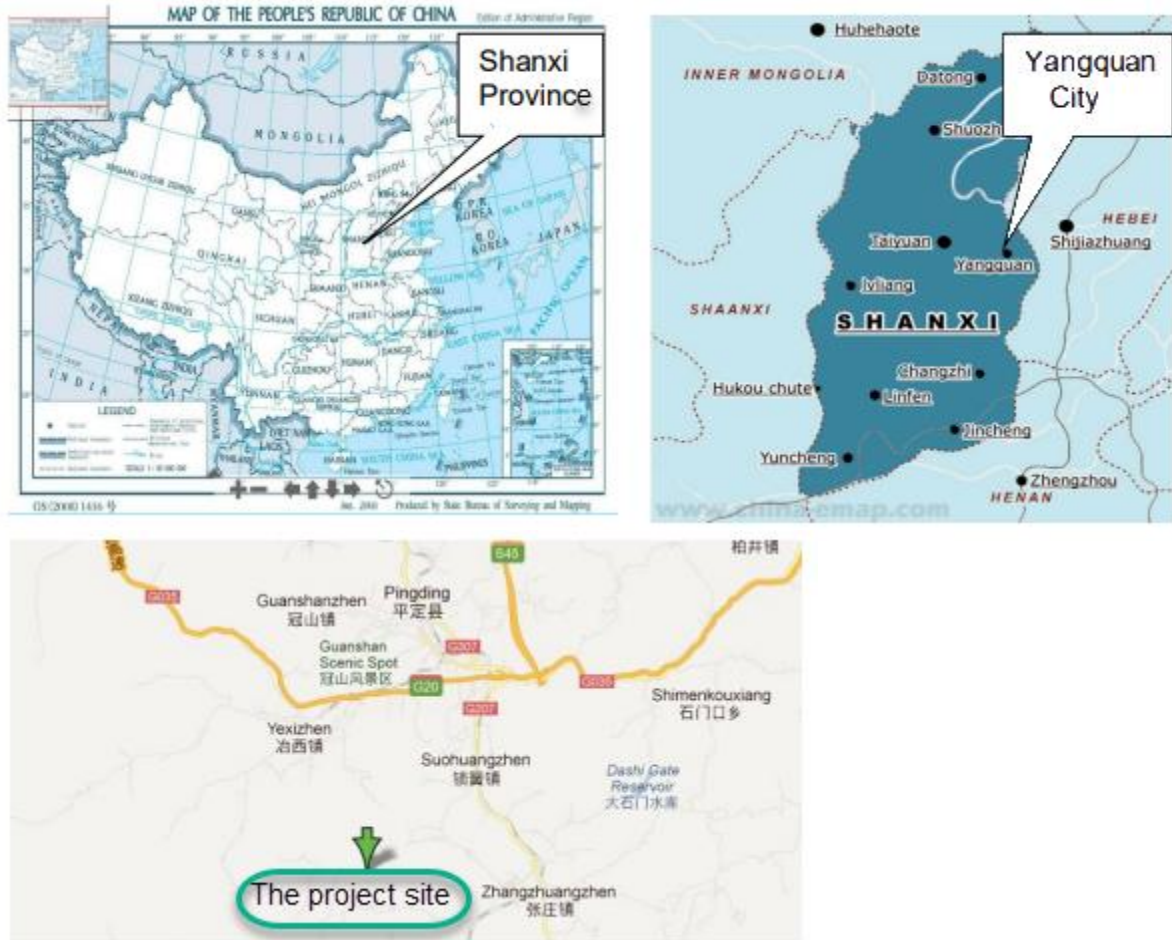
n.a.

1.12 Project Location

The project activity is located in Xincheng Village, Zhangzhuang Town, Pingding County, Yangquan City, Shanxi Province, People's Republic of China. The geographical coordinates are 113°34'15"~113°39'40" East and 37°41'11"~ 37°43'57" North. The location of the project activity is presented in the below figure.

² The emission reduction for year 2013 is calculated as $352,106 \times 58/365 = 55,951$ tCO₂e.

The emission reduction for year 2023 is calculated as $352,106 \times 181/365 = 174,606$ tCO₂e.



1.13 Conditions Prior to Project Initiation

The baseline scenario is the same as the conditions existing prior to the project initiation, i.e. gas extraction is a combination of pre and post mining CMM extraction, all the CMM is vented into the atmosphere without destruction or utilization, and an equivalent amount of electricity is generated in the NCPG. NCPG is dominated by fossil fuels, so the project activity reduces CO₂ emissions by replacing electricity produced by fossil fuels and also avoids CH₄ from being emitted into the atmosphere.

1.14 Compliance with Laws, Statutes and Other Regulatory Frameworks

The project obtained the approval letters from governmental authorities: Shanxi Province Environmental Protection Bureau, as well as Shanxi Province Development and Reform Commission. The two approvals well demonstrate that local government permits the construction of the project. Consequently, the project is compliance with laws, statues and other regulatory frameworks mainly include:

1. Renewable Energy Law of the People's Republic of China;

2. Guidance Catalogue for the Development of Renewable Energy Industry;
3. Opinions of the General Office of the State Council on Further Accelerating the Extraction and Utilization of Coalbed Methane (Coal Mine Gas);
4. Chinese National Coalmine Safety Regulation;
5. Notice of the National Development and Reform Commission on the issuance of the twelfth Five-Year Plan for The Development and Utilization of Coalbed Methane (Coal Mine Gas).

1.15 Participation under Other GHG Programs

1.15.1 Projects Registered (or seeking registration) under Other GHG Program(s)

The project has been registered under CDM under ACM0008, the CDM reference number is 8006. The crediting period under CDM is 01/07/2013 – 30/06/2023 (Fixed).

The project has not been, and will not seek registration under other GHG Programs, except for CDM and VCS.

1.15.2 Projects Rejected by Other GHG Programs

The project has not been rejected by any other GHG programs.

1.16 Other Forms of Credit

1.16.1 Emissions Trading Programs and Other Binding Limits

The project has not been and will not apply for China Certified Emission Reduction (CCER), and is not in the project data base of CCER.

Beijing Yonder Environmental Energy Technology Co., Ltd and its fully owned subsidiary Pingding County Yonder Coal Mine Methane Development Co., Ltd, who is in operation of the project activity, is not included in the compliance entity list by China national ETS. Shanxi Province, where the project is located, have not been implemented for pilot ETS scheme.

The project is not involved in an emission trading program or any other mechanism that includes GHG allowance trading. The GHG emission reductions and removals generated by the project will not be used for compliance in China. The project proponent has signed declaration on not being used for the compliance and no double counting claiming of the credits.

The project is not involved in an emission trading program or any other mechanism that includes GHG allowance trading.

1.16.2 Other Forms of Environmental Credit

The project hasn't sought or received another form of environmental credits.

1.17 Sustainable Development Contributions

The project activity will contribute to the sustainable development through the following ways:

Job creation

Implementation of the Project will generate employment opportunities for local contractors and suppliers, while operation and maintenance of the plant will create additional long-term employment opportunities for skilled professionals. For the Project operation PP is planning to employ a number of skilled workers, while more additional jobs were created by sub-contractors for construction of the Project.

Thus, the project achieved **SDG 8 Decent Work and Economic**.³

Reduction in GHG emissions

The project will avoid greenhouse gas emissions by destroying CH₄. Without the project, all the CMM would have been vented into the atmosphere without destruction or utilization, the electricity generated by the project would have been generated from fossil fuel dominated generators from NCPG. The project is expected to have an annual average of 352,106tCO_{2e} emission reduction over the crediting period. The estimated emission reductions are 3,399,511 tCO₂ over the crediting period 04/11/2013–30/06/2023, only emission reductions from 01/01/2016 to 30/06/2023 will be claimed with expected amounts of 2,639,348 tCO_{2e}.

Thus, the project achieved **SDG 13 Climate Action**.⁴

Reduction of fossil fuel use

The project will reduce the consumption of the fossil fuels of NCPG, which will contribute to increasing China's energy security.

Thus, the project achieved **SDG 7 Affordable and Clean Energy**.⁵

1.18 Additional Information Relevant to the Project

Leakage Management

³ <https://sdgs.un.org/goals/goal8>

⁴ <https://sdgs.un.org/goals/goal13>

⁵ <https://sdgs.un.org/goals/goal7>

According to the registered CDM PDD and CDM methodology ACM0008, there is no leakage emission considered. No leakage management as the project is not an AFOLU project

Commercially Sensitive Information

No commercially sensitive information has been excluded from the public version of the project description.

Further Information

There is no additional relevant legislative, technical, economic, sectoral, social, environmental, geographic, site-specific and/or temporal information that may have a bearing on the eligibility of the project, the net GHG emission reductions or removals, or the quantification of the project's net GHG emission reductions or removals.

2 SAFEGUARDS

2.1 No Net Harm

n.a.

2.2 Local Stakeholder Consultation

n.a.

2.3 Environmental Impact

n.a.

2.4 Public Comments

n.a.

2.5 AFOLU-Specific Safeguards

n.a.

3 APPLICATION OF METHODOLOGY

3.1 Title and Reference of Methodology

The project activity uses the following CDM methodologies and tools:

- Approved consolidated baseline and monitoring methodology ACM0008 Version 07:
“Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction through flaring or flameless oxidation.”
- Methodological tool “Tool to calculate the emission factor for an electricity system” Version 2.2.1
- Methodological tool “Demonstration and assessment of additionality” Version 06.0.0.

The methodologies and tools are publicly available at:

<https://cdm.unfccc.int/methodologies/PAmethodologies/approved>

3.2 Applicability of Methodology

n.a.

3.3 Project Boundary

n.a.

3.4 Baseline Scenario

n.a.

3.5 Additionality

n.a.

3.6 Methodology Deviations

There is no methodology deviations applied for the project.

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

4.1 Baseline Emissions

n.a.

4.2 Project Emissions

n.a.

4.3 Leakage

n.a.

4.4 Net GHG Emission Reductions and Removals

n.a.

5 MONITORING

5.1 Data and Parameters Available at Validation

n.a.

5.2 Data and Parameters Monitored

n.a.

5.3 Monitoring Plan

n.a.

APPENDIX

n.a.