



**Verified Carbon
Standard**

HUINENG LOW CONCENTRATION COAL MINE METHANE UTILIZATION PROJECT

Document Prepared by Vitol SA

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The project is registered under CDM, as per the VCS standard version 4.1, the cover page and sections 1.1, 1.2, 1.3, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.12, 1.13, 1.14, 1.15.1, 1.16, 1.17 and 3.6 of the VCS Project Description Template shall be completed.

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 will 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 will utilize low-concentration CMM with a concentration of around 25 %. The project activity will install the gas generators with the total capacity of 12,000 kW. The project activity will also install the waste heat recovery boilers for each gas generator which utilize the waste heat of them, but no VCUs 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 352,106 tCO₂ emission reduction over the crediting period. The estimated emission reductions are 3,521,060 tCO₂ over a fixed 10-year crediting period.

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.

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

- Avoiding greenhouse gas emissions by destroying CH₄, generating electricity that would otherwise have been provided by the North China Power Grid;

- Reducing the emission of air pollutants like SO₂ and so on, resulting from the power generation industry in China, compared with a business-as-usual scenario;
- Mitigating the pressure of local power supply; and creating new employment opportunities and helping to improve the livelihood of local residents;

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

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 VCS standard version 4. The project has been registered as a CDM project (CDM PA8006), and meet with the criteria set out for clarification 1 and clarification 3 by Errata & Clarifications, VCS Standard, v4.0.

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), CDM Letter of Approval (LoA) and the business license of the project are evidences 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– 03/11/2023 (10 years fixed)

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–	176,053

31/12/2013	
2014	352,106
2015	352,106
2016	352,106
2017	352,106
2018	352,106
2019	352,106
2020	352,106
2021	352,106
2022	352,106
01/01/2023 – 03/11/2023	176,053
Total estimated ERs	3,521,060
Total number of crediting years	10 years
Average annual ERs	352,106

As per VCS Standard, v4.0 and Registration and Issuance Process, v4.0 Errata and Clarifications, 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.



1.13 Conditions Prior to Project Initiation

The baseline scenario is the same as the conditions existing prior to the project initiation.

1.14 Compliance with Laws, Statutes and Other Regulatory Frameworks

The project complies with all Chinese relevant laws and regulations. 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).

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, status and other regulatory frameworks.

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 received CERs insurance during the period 1 January 2016 to 5 March 2021.

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 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 has not sought or received another form of GHG-related environmental credit.

1.17 Additional Information Relevant to the Project

Leakage Management

According to the registered CDM PDD and CDM methodology ACM0008, there is no leakage emission considered.

Commercially Sensitive Information

There is no commercially sensitive information in the project description.

Sustainable Development

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

- Avoiding greenhouse gas emissions by destroying CH₄, generating electricity that would otherwise have been provided by the North China Power Grid;
- Reducing the emission of air pollutants like SO₂ and so on, resulting from the power generation industry in China, compared with a business-as-usual scenario;
- Mitigating the pressure of local power supply; and creating new employment opportunities and helping to improve the livelihood of local residents;

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 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.