



Gold Standard Project in Henan Province (China)

Xinyang MSW Landfill Gas Recovery to Power Project

Background

China has environmental regulations in place to deal with the management of landfills and to encourage utilization of landfill gas (LFG). However, due to a lack of environmental technology know-how, in China the municipal refuse is mainly still disposed using the technology of traditional landfill, without consideration of recovery and utilization of landfill methane. It is estimated that the annual quantity of municipal refuse filled is about 50 million tons. As nearly all landfills – except several recently built new landfills – are not equipped with landfill gas recovery mechanisms, enormous amounts of landfill methane are emitted into the atmosphere.

Project Description

The Xinyang MSW Landfill Site LFG Recovery to Power Project aims to recover and destroy landfill gas generated at the municipal solid waste (MSW) landfill site located in Xinyang city, Henan province (China). The collected LFG will be used for electricity production.

Xinyang landfill site started operation at the end of 2007 and is expected to be in operation for 13 years. The landfill is designed with acceptance capacity of 1.4 million tonnes. Degassing pipes have been installed on the landfill site for safety reasons only and since no LFG collection and/or destruction facilities existed prior to the proposed project activity, the baseline scenario without the project envisaged the release of LFG directly into the atmosphere.

The project will employ a gas collection, transmitting and pre-treatment system as well as gas engines with a capacity of 2 MW. The recovered LFG will be combusted in the gas engines to produce electricity which will be fed into the Central China Power Grid (CCPG) afterwards. GHG emission reductions will be claimed from both methane recovery and the replacement of electricity mainly generated by the utilization of fossil fuels.

It is estimated that during the 10 years crediting period the proposed project activity will destroy 21,259 tons of methane and replace 117,000 MWh of electricity otherwise generated via fossil fuel combustion: this will mean a potential GHG reduction of approximately 420,645 t CO₂e.



Degassification drilling at Xinyang landfill site.

Key Facts

Project Type
Project Owner
Project Developer
Location
Methodology

Landfill Gas (LFG)
Shanghai Baichuan Changyin Co., Ltd (BCCY)

Xinyang city, Henan province, China
Landfill methane recovery - AMS-III.G., ver. 6
Grid connected renewable electricity generation – AMS-I.D, ver. 15
Gold Standard (GS VERs)
Germanischer Lloyd Certification GmbH
Registered and Issued
03/01/2013
03/09/2013
approximately 42,000 GS VERs
10 years

Carbon Credit Standard
Validator (DOE)
Development Status
Registration Date
Date of First Credit Issuance
Annual Credit Volume
Crediting Period

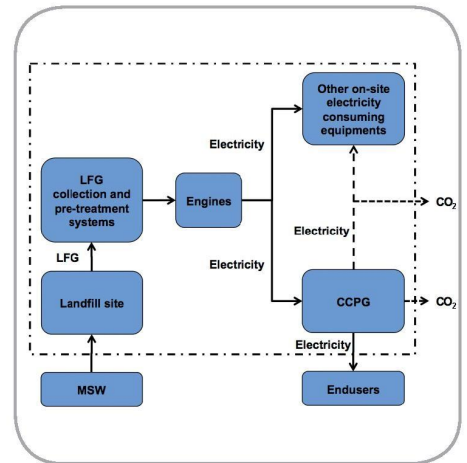




Sustainability Benefits

The proposed project activity not only reduces GHG emissions, but also brings the following economic, social, environmental and technological benefits to the local community:

- **Economic Benefits:** By replacing Central China Power Grid (CCPG) electricity based on fossil fuel use, the project activity allows to reduce China's dependency on fossil energy sources and contributes to stabilizing power supply for businesses and private households in the project area.
- **Social Benefits:** The project activity is expected to increase job opportunities by way of creating 15 new posts available to local residents during both construction and operation of the power plant. Furthermore, the LFG project reduces potential dangers of fire and explosion on the landfill site by recovering the LFG. This enhances the safety conditions of the landfill site.
- **Environmental Benefits:** The proposed project activity will reduce air pollution by destroying LFG which contains H_2S , thus avoiding unbearable H_2S odours. As a consequence, the living conditions of the neighbourhood are improved considerably.
- **Technological Benefits:** By promoting LFG recovery and utilization, the proposed project activity provides a tangible demonstration of successful application of this technology in China.

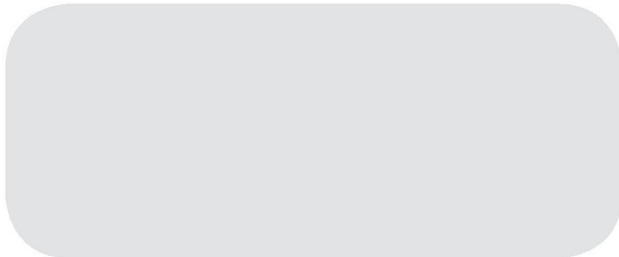


Flow diagram and project boundaries of the Xinyang landfill gas project.

Project Location

The project plant is located at Xinyang City MSW landfill site, west of Pipashan Village, Wuxing Town, 7 km away from downtown of Xinyang City in China's Henan Province.

Contact



The map shows the project location in China's Henan Province.

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