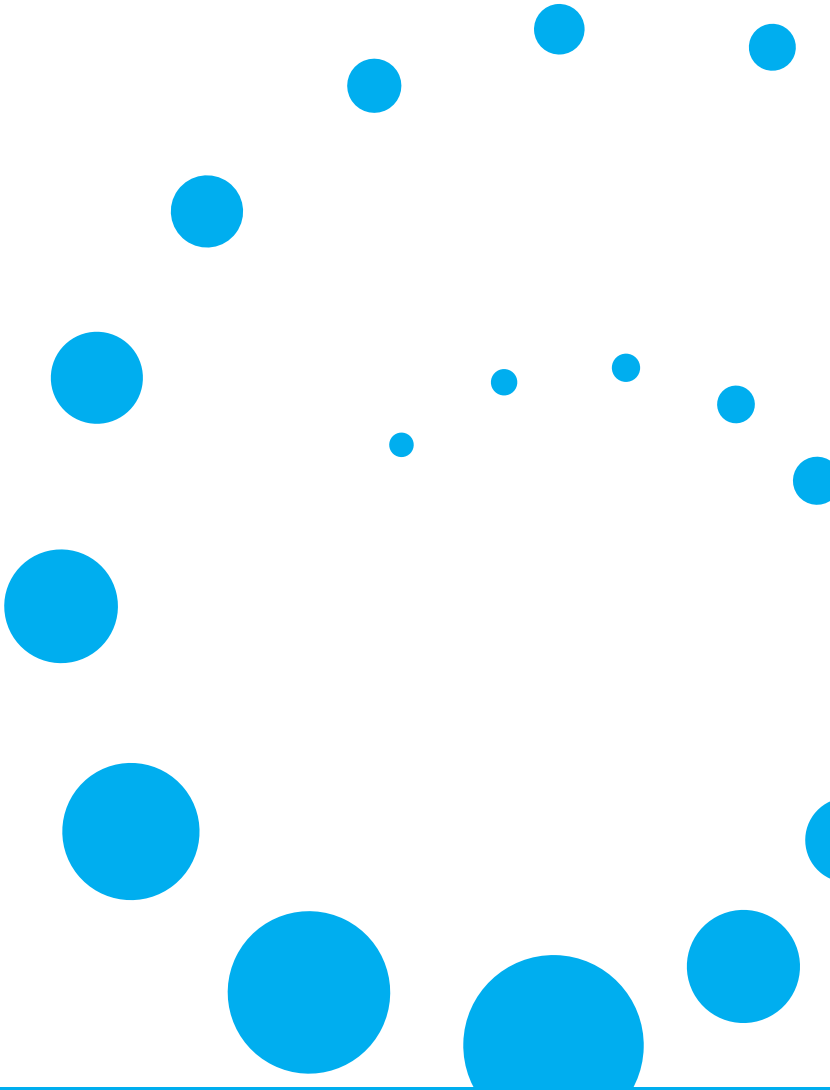




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1.0

Project Summary



The Mountain Landfill Gas Recovery Project is a 5 MW landfill gas-to-energy project located on Qizi Mountain, Mudu County, Wuzhong District, Suzhou City, Jiangshu Province in China. It is a combination project involving LFG collection, processing and electricity generation.

Landfill gas (LFG) is produced when organic matter decays in landfill sites. This power plant captures and uses the LFG to produce electricity via internal combustion engines and generators. The electricity is exported to Suzhou City local power grid, part of the East China Power Grid.

The project is forecast to generate 23,963 MWh per year on average, displacing approximately 117,477 tonnes of greenhouse gas emissions (GHG) annually.



Project Snapshot

Name:	Suzhou Qizi Mountain Landfill Gas Recovery Project
Location:	Qizi Mountain, Suzhou City, Jiangshu Province, China
Coordinates:	31°14'15"N / 120°33'9"E
Type:	Landfill gas to energy
Standard:	Gold Standard (GS)
Volume:	17,000 VERs
Vintage:	2009
Status:	Issued
Project Operator:	Everbright Environment and Energy (Suzhou) Landfill Gas to Energy Co. Ltd. and South Pole Carbon Asset Management Ltd.

2.0

Project Benefits



Environmental - The project reduces GHG emissions by capturing methane (CH_4), a potent greenhouse gas with a warming impact 21 times stronger than carbon dioxide. Besides GHG emission reductions, the installation of the LFG processing unit prevents the escape of hydrogen sulphide (H_2S , a poisonous and flammable gas), ammonia (NH_3 , a caustic hazardous gas) and other gases that are harmful to human health.

Social – The project has created local employment opportunities during both the project construction (54 additional employees) and operation periods (20 permanent jobs).

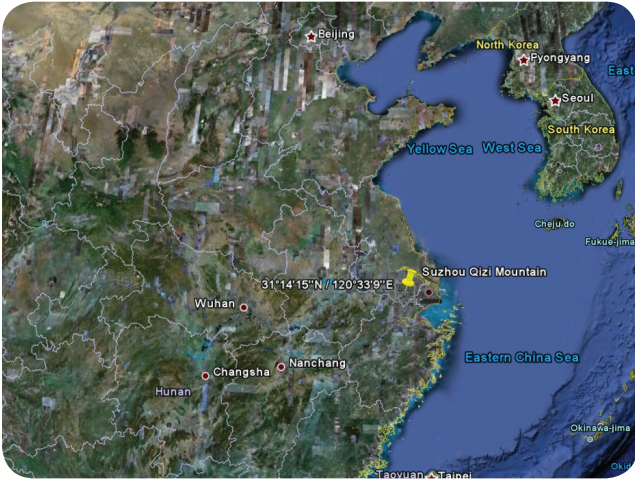
Economic – Implementation of the project involves imports of advanced generators and equipment from Germany and other countries. The project showcases an innovative way to use landfill gas for power generation in the solid waste treatment industry of China.

Key Achievements

- ☒ Reduces GHG emissions
- ☒ Promotes state-of-the-art technology
- ☒ Reduces local pollution and adverse health impacts
- ☒ Promotes alternative energy in China
- ☒ Supports local economic development
- ☒ Secures electricity supply

3.0

Background



The landfill gas recovery project is located in the partly industrialised Jiangsu Province, China, close to the city of Suzhou. The region is powered largely by fossil fuels and renewable power generation accounts only for 0.57% of the total capacity of Jiangsu.

There has been limited development of LFG collection and utilization projects in China. Very few landfills have been designed to collect and utilize LFG and those that do exist have been funded largely by development assistance.

4.0

Technical Details



There are four container engine units installed to generate electricity, each of which has a capacity of 1.25 MW.

The project involves three processes:

1. **Landfill gas collection system:** The LFG is extracted from the landfill site through an system consisting of vertical wells, collectors and piping.
2. **Processing system:** The extracted LFG is then pre-treated by a processing system. Water and impurities are removed and the gas is left with a high concentration of methane.
3. **Energy generation system:** Finally, the LFG is combusted to produce heat energy which is converted into electrical energy.

The generated electricity is transferred to the distribution and controlling system and is directed to Suzhou City local power grid.



5.0

How the project meets Climate Friendly's principles

Climate Friendly only invests in projects that:

Principles	How Suzhou Qizi meets these criteria
Address the root cause of climate change	✓ The project capture methane which is a potent GHG
Are permanent	✓ Emissions reductions can't be reversed
Are additional	✓ Carbon finance required to overcome financial barriers
Are verifiable	✓ Verified by SGS (independent 3rd party)
Are project based	✓ Not allowance-based under compliance requirements
Contribute to sustainable development	✓ Reduces pollution, improves health and provides local jobs
Are synchronous	✓ Emissions reductions have already occurred
Are exclusive	✓ Robust assurance process ensures no double counting

