



Sustainability action · Project Renewable Energy and Energy Efficiency

Zhujiang energy from wastewater, China

This project captures methane that is emitted from wastewater in a brewery and uses it for clean power generation. The project improves the lives of locals and contributes to sustainable development in China.

Project

Because of its long-standing efforts to improve the environmental performance of its facilities, the Zhujiang Beer Company has gained strong recognition as an environmental leader in the Chinese brewery industry. In 2005, the company won the “National Environmentally Friendly Enterprise” award by the State Environmental Protection Agency.

With their climate protection project, developed under the strict rules of the Gold Standard, the company is diminishing their carbon

footprint and generating sustainable energy from wastewater that is released during the brewing process. In addition, strong odours and potentially harmful gases are being avoided, which benefits the local population.

Prior to the implementation of the improved wastewater treatment project activity, anaerobic digestion was a part of the wastewater treatment process. The system did not have biogas recovery devices, and methane-rich gas was released to the atmosphere. Methane is a greenhouse gas 21 times stronger than CO₂.

The project activity consists of a biogas recovery system, a biogas purification device, and power generators. The project activity is generating 6,7MWh of electricity per year, which is fed directly into the South China grid where it displaces fossil-fuel fired electricity.

Checklist	Additionality and permanence	3 rd party verified	Transparency	Annual CO ₂ -reduction	Social and environmental benefits	Marketing material
Project 300 068	According to the rules of the Gold Standard and the UNFCCC	By CEPREI	Provided by the Gold Standard Registry	35,000 tCO ₂ e	As documented in our database	pictures available



Location

The project is located at the Zhujiang Beer Company in Guangzhou, the capital city of Guangdong Province. Guangzhou, situated north of the Pearl River delta, is an important trading center and busy port.

Project achievements

Socio-economic impact

- Workers are learning about the Kyoto Protocol and are being trained to operate the power generation facility (thus meeting a capacity improvement goal set by the project owner).
- The project activity is generating 18 permanent jobs and improving job quality. Most of these jobs involve either monitoring or the operation of advanced equipment.
- The project is showcasing the environmental potential of the brewery industry in China - showing how biogas from wastewater can be used to produce sustainable energy.

Environmental impact

- The introduction of a biogas desulfurization and recovery system is improving local air quality by preventing the emission to the atmosphere of hydrogen sulphide (a highly toxic gas).
- Sulphur dioxide and nitrous oxide emissions produced by the biogas-fired power plant are significantly lower than the average (mainly coal fired), grid-connected power plants.



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