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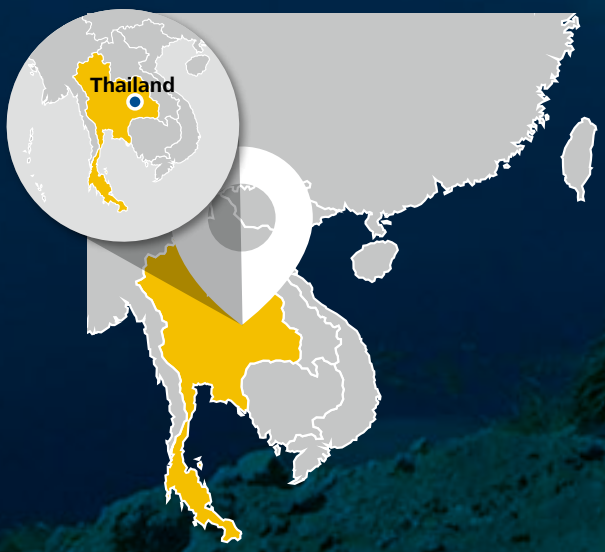

NAKHON BIOGAS THAILAND

Generating sustainable electricity from wastewater biogas

This project mitigates greenhouse gas emissions and prevents local air pollution from a Thai starch plant by capturing methane and generating sustainable energy which also benefits local communities.

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The Context

Cassava starch is a large industry in Thailand, but its production produces large amounts of wastewater. When stored in large open lagoons, this wastewater emits methane into the atmosphere; a greenhouse gas 21 times more potent than CO_2.

The Project

Prior to this project, wastewater was treated through cascading open lagoons. This process resulted in the steady release of methane into the atmosphere. This project installed a closed lagoon anaerobic system that captures methane gas emissions, and uses them to generate clean energy. This not only avoids the emission of potent greenhouse gases, but displaces energy sourced from the burning of fossil fuels.

The Benefits

The project has significantly improved local air and water quality. At the same time, the fossil fuel use of the starch plant has been significantly reduced. The project and the carbon revenue it generates provides jobs for locals and supports social and educational activities. The clean wastewater is used to irrigate nearby fields and allows fish farming, enabling local communities to increase their income.

Using methane from wastewater generates electricity and avoids burning thousands of tonnes of fossil fuels

SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD

Gold Standard

850,000 m^3 of water
treated each year on average, providing a clean recycled water resource to farmers

1,600 MWh
generated each year on average, providing an alternative to the burning of fossil fuels

11 permanent jobs
created, boosting local economies with new income streams

97,468 tCO_2e
mitigated each year on average, by capturing emissions and displacing fossil fuels

For more information on the UN Sustainable Development Goals, please visit: http://www.un.org/sustainabledevelopment/sustainable-development-goals/

Official name: CYY Biopower Wastewater treatment plant including biogas reuse for thermal oil replacement and electricity generation Project, Thailand
Registry link: https://mer.markit.com/br-reg/public/project.jsp?project_id=103000000002356 | **GS ID**: 560

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