



BANGNA BIOGAS THAILAND

Capturing and repurposing harmful methane emissions creates cleaner energy at this Cassava starch factory



Harmful and odorous methane emissions from wastewater have been cleverly repurposed to generate biogas energy at a Cassava starch plant in the Kalasin Province. This has greatly improved the air quality of the area, and created new training and job opportunities for local workers.



Treated wastewater is much cleaner, and is now recycled in the starch-cleaning process saving many tonnes of freshwater a day.

Embedded in the forests at the foot of the Phu Pan hills, the Kalasin Province region is typified by agriculture. In particular, the growth and processing of Cassava starch is a huge aspect of the economy here. However these starch processing factories place significant strain on the environment, requiring a high demand of water for washing the cassava, with pungently odoured methane emissions and high fossil fuel reliance.

The Bangna Biogas Project neatly addresses all of these environmental issues by replacing the old cascading open anaerobic lagoon treatment system with a modern Upflow Anaerobic Sludge Blanket (UASB) reactor system. It captures biogas from plant wastewater that would have previously been emitted into the atmosphere, instead using it to replace fossil fuels to generate electricity which is then exported to the national grid. In addition to this, the treated wastewater can now be recycled and used for cleaning the cassava, which saves many tonnes of fresh water per day. For the local community, the air quality has improved vastly, special training opportunities have been provided and several permanent jobs created to operate and maintain the biogas facilities.



WATER

Treated wastewater can be recycled for washing cassava



8,800

MWh of clean electricity generated yearly



22

permanent jobs created including 15 from the local area



40,000

tonnes CO₂ prevented from entering the atmosphere yearly

PROJECT HIGHLIGHTS

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