JENBACHER

POWERING JENBACHER ENGINES WITH BIOGAS MADE FROM PALM OIL BYPRODUCT IN MALAYSIA

Award-winning plant supports the country's net-zero emissions efforts

Background

The Sustainable Energy Development Authority (SEDA)'s Feed-in Tariff (FiT) mechanism in Malaysia supports a biogas production quota of up to 30 MW of biogas annually.

Relying on INNIO Group's Jenbacher technology, Concord Group is a leader in Malaysia's biogas industry, operating with the Build, Own, Operate, and Transfer (BOOT) business model. Concord Group uses palm oil mill effluent (POME) as the feedstock for the Jenbacher engines running its FiT biogas power plants. With its high organic content, POME is an excellent source of biogas production through a fermentation process.

Jenbacher technology power award-winning plant

With 12 Jenbacher engines, Concord Group has developed and is operating seven POME biogas plants with a total installed capacity of more than 13 MW.

One of those plants is the Adela Biogas Plant, powered by two Jenbacher J412 engines. Capable of exporting 1.5 MW of power to the national grid, the plant won the National Energy Award (NEA) in 2021. The award, spearheaded by the Ministry of Natural Resources, Environment, and Climate Change, recognizes the adoption of sustainable energy concepts and practices for Malaysia's business organizations across all industries and sectors.

»We have chosen Jenbacher technology for all of our palm oil mill effluent biogas projects. Obviously, we are very pleased with the outcome as we help our country meet its goal of 31% renewable energy contribution to the national energy mix by 2025.«

Datuk Khairuddin bin Tan Sri Mohd Hussin,
CEO of the Concord Group

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Results

Under Malaysia's FiT program, INNIO Group's Jenbacher engines are fueled by a palm oil byproduct that otherwise would be discharged, significantly helping to achieve Malaysia's environmental targets. With this profitable business model, Concord Group intends to continue to expand in support of Malaysia's aspiration for 31% renewable energy contribution to the national energy mix by 2025.

Customer benefits

Flexible Jenbacher engines can run on a variety of biogases, including biogas derived from POME. Concord Group's POME biogas plants:

- Support Malaysia's goal of becoming net-zero for greenhouse gas emissions by 2050 as pledged at the United Nations Framework Convention on Climate Change's 26th Conference of the Parties (COP26)
- Harness already available organic waste and use it as an alternative energy source, potentially reducing greenhouse gas emissions and avoiding the need to dispose of bio waste.

Key technical data

Installed engines	2 x J412
Electrical output	1,800 kW
Electrical efficiency	42.6%
Energy source	Biogas
Commissioning	2019

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