



# HDAX® 6500 LFG

## Doubled Oil Life, Doubled Your Savings

### The Situation

Thai Biogas Energy Company (TBEC), which is managed by Asia Biogas Group, owns and operates seven biogas projects in Thailand & Laos. TBEC has been creating biogas from fermentation of wastewater from Tha Chang Rubber and palm oil factory located in Surat Thani Thailand. The fermentation units were able to handle 1500 m<sup>3</sup>/day of wastewater to produce 67,000 KW of electricity for PEA (Provincial Electricity Authority).

The challenges of lubricating engines fueled by digester gas or biogas are the variation in the gas quality and the presence of corrosive substances in the fuel. TBEC was operating their engines at about 500hrs drain interval and have difficulty extending the drain intervals due to the gas quality.

### The solution

From 2016, HDAX® 6500 LFG was introduced to TBEC on 2 units Innio Jenbach Type 420 engines, having the capacity of 1.4 MW.

TBEC operations required a product with better qualities such as robust technology to handle severe operation, enhance oil integrity for longer oil drain intervals, and reduce emissions to protect the environment.

HDAX® 6500 LFG met TBEC requirement, the product is capable of delivering excellent acid control, wear protection, and deposit control in the fluctuating corrosive biogas quality condition.

The robust and reliable performance of HDAX® 6500 LFG had convinced TBEC to switch all their Innio Jenbach Type 420 engines to be lubricated with HDAX® 6500 LFG.



“Before using HDAX® 6500 LFG, we were using about 1,000 litres of lubricant and the drain interval was about 500 hrs. After we switched to HDAX® 6500 LFG, we still use the same amount of lubricant but the drain interval has been achievable at 1,250 hrs. As a result, our lubricant cost has reduced by more than 50%, productivity has increased, with cost savings of 31% and the burden on the maintainance department have been reduced by half. Tha Chang site is able to operate with optimal uptime assurance”

**Sorapong Nuraj**

Manager of Tha Chang Site, Thai Biogas Energy Co.,Ltd

### The Results

During the past 5 years, the stability and reliable performance of HDAX® 6500 LFG, TBEC was able increase the capacity of their gas treatment system producing higher power output to support local needs.

Watchara Jewmaidang, Head of Maintainance, Thai Biogas Energy, **“Since using HDAX® 6500 LFG, our engines efficiency has improved, no deposits on spark plug, piston, and our lubricant’s service life had doubled.”**

Each year, TBEC was able to reduce 80,000 tons of carbon dioxide emitted to the atmosphere. It is an approximate of carbon dioxide emissions from 12,656 homes’ electricity use for one year or 9.2 billion number of smartphones charged.

The reliable operation with optimal uptime assurance of the engines using HDAX® 6500 LFG enhanced TBEC to achieve circular economy and sustainable development goals in their quest to protect the environment.

Caltex Lubricants technical expertise has in-depth knowledge on gas engine oil segment, with premium lubricants like HDAX® 6500 LFG, and tailored programs to help your equipment and operations Run Better Longer.



### HDAX® 6500 LFG GAS ENGINE OIL SAE 40

- Maximizes Oil Service Life
- Lowers Operating Costs
- Minimizes Maintenance Costs
- Extends Engine Life to Overhaul



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