BIOTHANE

POMETHANE®: Sustainable and profitable

POMETHANE® provides an immediate opportunity to improve your environmental performance toward a responsible model of sustainable production.

Together we can explore the possibilities of optimizing the energy use and maximize the biogas production.

Energy-producing wastewater treatment plants are the future, but it is important to take the right steps forward.

For further information, please contact our teams.

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BIOTHANE

POMETHANE®

Waste to energy solution
for palm oil production

VEOLIA WATER
Solutions & Technologies

Affordable & efficient palm oil mills effluents treatment

POMETHANE® is an **anaerobic thermophilic digestion** process which **maximizes the yield of biogas production** and offers an attractive solution for the treatment of **high concentrated and hot water streams**.

This new technology developed by Veolia Water Solutions & Technologies' subsidiary Biothane, treats efficiently palm oil mills effluents (POME) thanks to an optimized process design that operates at higher loading rates compared to conventional mesophilic digester or lagoon system.

The technology's **economic viability** and the **dramatic reduction of the environmental impact** hold out the potential to revolutionize the palm oil industry wastewater treatment practices.

"Through POMETHANE®, we help you to meet your operational, economic and environmental challenges"

Effective biogas treatment

Attractive business model

Veolia offers long term financing and operation of the plant through a BOT (Build Operate Transfer) arrangement or undertake the Operation and Maintenance of the completed plant providing strong operational guarantees of continuing performance of your wastewater treatment and energy production assets.

Converting POME to energy

As best practice application for managing palm oil industrial wastewater, the process captures the methane from the waste organic matter to run a gas engine to **generate electricity**.

An alternative option is to burn the biogas in a boiler to **generate steam and hot water**.

- Use the energy produced with the biogas plant for your mill production and staff quarters
- Generate revenue through the sale of excess electricity back to the grid

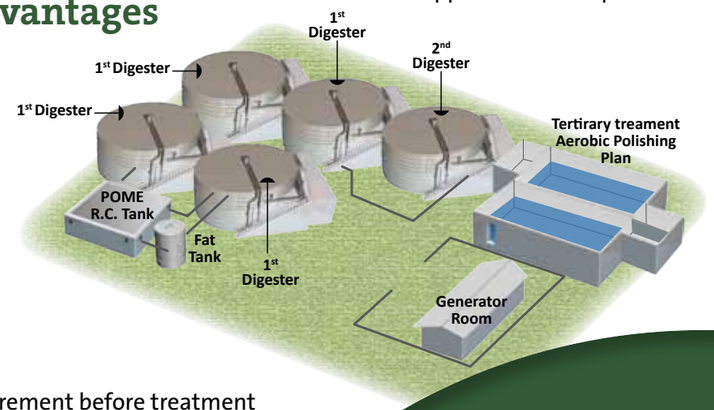
Reducing your environmental impact

POMETHANE® is specially designed to reduce the impact of your activities since the energy is produced from a **renewable source** and producing biogas as an **energy source is CO_2 neutral**.

We help you to meet stringent environmental regulations and minimize the river and soil pollution.

The combination of POMETHANE® with a tertiary treatment step opens up additional value creation potential through the **reuse of water for irrigation** and the application of surplus biomass as **fertilizer**.

Main advantages



- No cooling requirement before treatment
- Operation of the plant at a temperature of 52-55°C
- Highest biogas yield
- Significantly shorter retention time
- Compact design & small footprint
- Safe & reliable process design
- Renewable energy production
- Minimization of the environmental pollution

A fully implemented solution

. . . FELDA: Serting Hilir palm oil mill, Malaysia

Treatment of 770 m^3/day of Palm Oil Mill Effluent
(Capacity of 60 tonnes/hour FFB)

SOLUTION

- POMETHANE® thermophilic anaerobic digestion process is combined with an aerobic polishing plant

BENEFITS

- The plant is fully automated and generates **1.2 MW/day of electricity**
- The electricity is supplied **24/7** to the mill production site and is also connected to the local energy provider
- Highly efficient treatment process with a **COD removal exceeding 90%**
- Significant **reduction of greenhouse gas emissions**