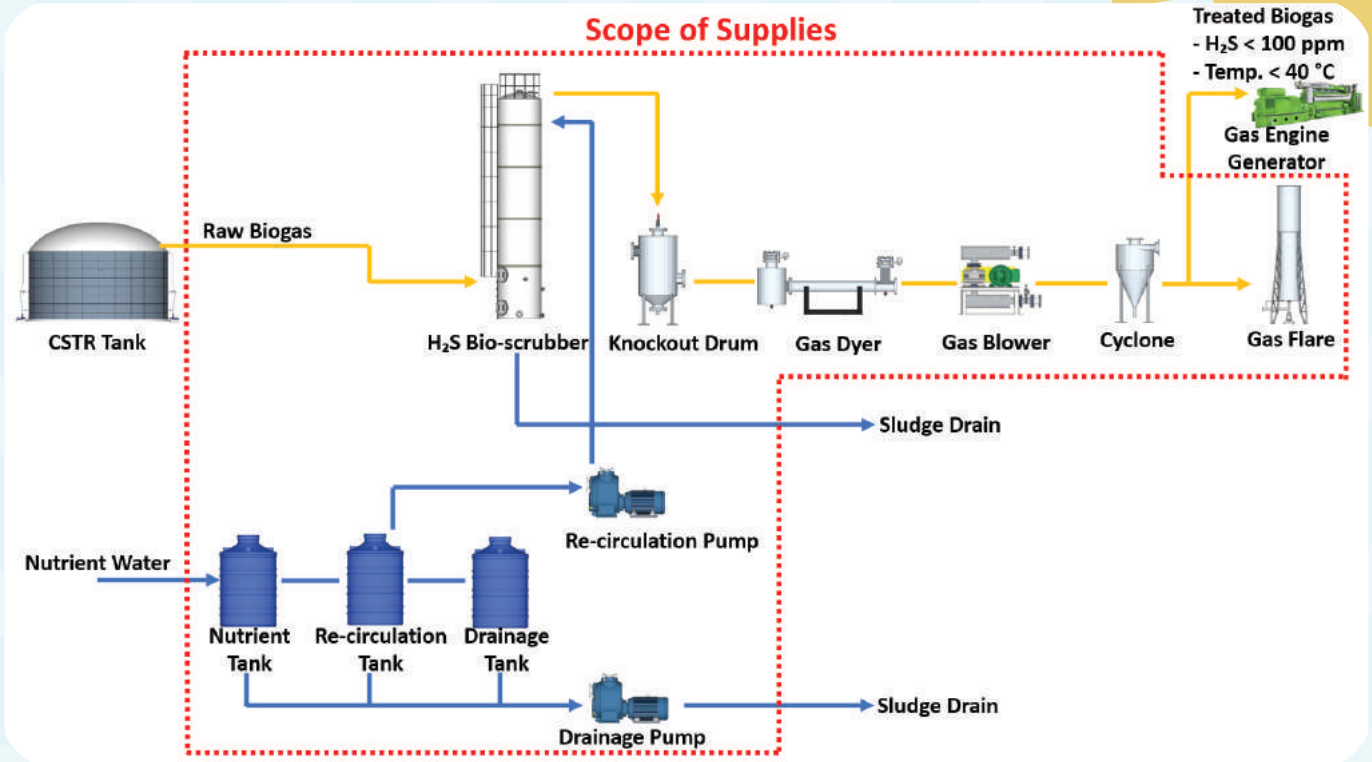


BIOGAS CONDITIONING & UTILIZATION SYSTEM



Biogas is normally comprised of mixed types of gases, i.e. Methane (CH₄), Carbon Dioxide (CO₂) and Hydrogen Sulfide (H₂S) gases. The content of H₂S in raw biogas is typically in the range of 1,000 – 20,000 ppm, which its combustion and humidity in gases can produce Sulfuric Acid and leads to severe corrosion of engine parts, valves and pipes in biogas systems.



H₂S BIO-SCRUBBER UNIT

H₂S bio-scrubber is used to reduce the content of H₂S gas in raw biogas providing a cleaner and less corrosive gas for engine combustion and gas burner. **Green Energy Network Company Limited** provides services and products for biogas conditioning and utilization systems by using H₂S biological reducing unit, called H₂S bio-scrubber.

Thiobacilas Sp. is groups of bacteria to be used in H₂S Bio-Scrubber system, which is the most economical and efficient method that can transform H₂S gas to be solid elementary sulfur and then washing out as the discharge effluent. We have supplied our biogas conditioning and utilization systems to many biogas plants in palm oil mills, starch factories, ethanol plants, food processing plants, and energy crop biogas power plants.



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GAS DRYER

Gas dryer is a gas dehumidification unit, using shell-and-tube heat exchanger, equipped with chillers, providing chilled water to cool down biogas until moisture in biogas condensed into liquid condensate, and taken out.



BIOGAS BLOWER

We supplies biogas blowers, using for boosting gas pressures to meet widely range requirements of gas burner and gas engine. Our Biogas Blower is well & proven in design and manufacturing, which its vertical structure that has suction side at the top and discharge side at the bottom, can prevent any accumulation of corrosive matter inside the casing. High quality material with optional anti-corrosion coating, such as, Teflon is used for blower's gas contacting parts for reliable and less maintenances.



BIOGAS FLARE

Biogas Flare Systems are designed to perform duties regarding to the highest industrial standards (Enclosed and open type) of safety, high durability of use, and high combustion efficiency.

BIOGAS UTILIZATION EQUIPMENT CAPACITY

Gas Engine Generator (MW)	Biogas Flow (m ³ /hr)	Gas Dyer Type	Flare Type	H ₂ S Scrubber	
				Inlet gas (ppm)	Outlet gas (ppm)
0.5	250	AIR COOLED	OPEN/ENCLOSED		
1	500	WATER/ AIR COOLED	OPEN/ENCLOSED		
1.2	600	WATER/ AIR COOLED	OPEN/ENCLOSED		
1.4	700	WATER/ AIR COOLED	OPEN/ENCLOSED		
1.5	750	WATER/ AIR COOLED	OPEN/ENCLOSED		
1.8	900	WATER/ AIR COOLED	OPEN/ENCLOSED	3,000-15,000	< 100 - 200
2	1,000	WATER/ AIR COOLED	OPEN/ENCLOSED	ppm	ppm
2.4 (1.2 MW x 2)	1,200	WATER/ AIR COOLED	OPEN/ENCLOSED		
3.0 (1.5 MW x 2)	1,500	WATER/ AIR COOLED	OPEN/ENCLOSED		
3.6 (1.2 MW x 3)	1,800	WATER/ AIR COOLED	OPEN/ENCLOSED		
4.0 (2 MW x 2)	2,000	WATER/ AIR COOLED	OPEN/ENCLOSED		

Remarks: The presented biogas utilization unit model is for reference only. The final detailed design shall be revised and finalized according to each special requirement.