



ASIA PACIFIC
**GREEN
HYDROGEN**
2024
CONFERENCE & EXHIBITION

Biohydrogen- Carbon Neutral/Carbon Negative H₂ from Organic Waste for Sarawak

Another – Pioneering Initiative from Sarawak Government

By

KR Raghunath

CEO – KIS Group

Chairman – Asian Biogas & Biofuel Association



Company with 100% track record & 70% revenue from repeat orders



Most Awarded Brand For Biogas, BioCNG[®]



9001:2015
14001:2015
45001:2018



UNFCCC Approved CDM-POA Since 2012



182,000 sq. ft. State-of-the-art manufacturing unit

>3.1 Million m³/day

ASIA'S LARGEST BIOGAS/BIOMETHANE PRODUCER

>3 Million

ASIA'S LARGEST CARBON CREDITS PRODUCER

KIS GROUP GROWTH



WE ARE 110+ PROFESSIONALS EXPERTS & 300+ TECHNICIANS



**POME & OTHER
EFFLUENT**



EFB



PRESS MUD



COW DUNG



SAGO WASTE



NAPIER GRASS



PIGWASTE



MSW



PADDY STRAW



**FOOD & VEGETABLE
WASTE**



CHICKEN WASTE



ETP SLUDGE



STP SLUDGE



**OLIVE OIL
EFFLUENT**



**ANIMAL
HUSBANDRY**



**MUSHROOM
WASTE**



**Biogas Power
BioMethane/BioCNG[®]
BioLNG & BioHydrogen**

**BioCO₂ Carbon Capture &
Utilization/Storage- CCU/CCS)**

BioLiquid Fertilizer

BioFertilizer (PROM)

BioSulphur Recovery

Carbon Credits

Anaerobic Technologies For All Types of Organic Wastes

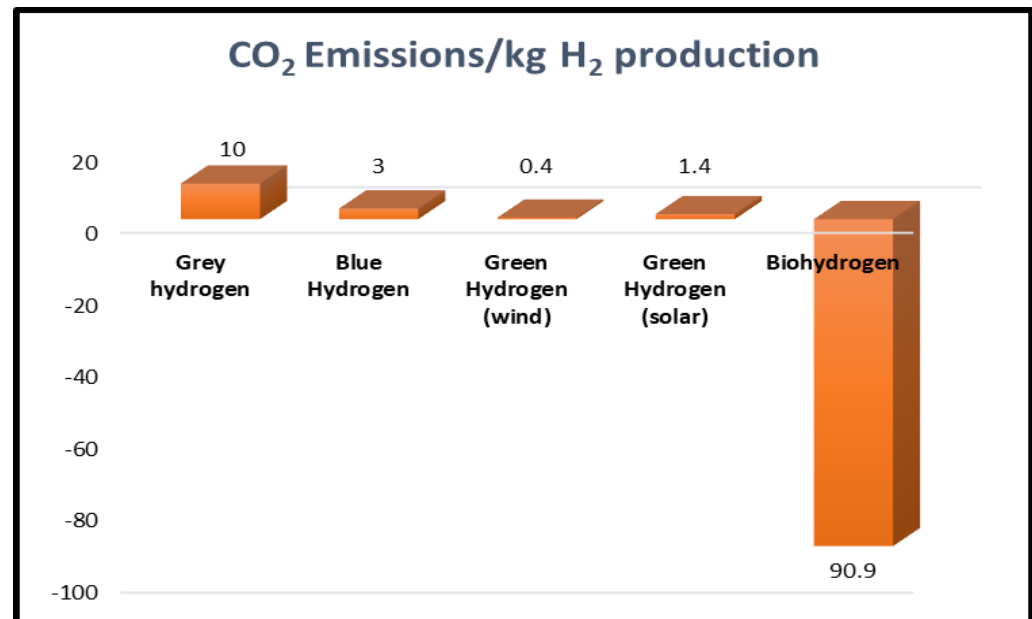


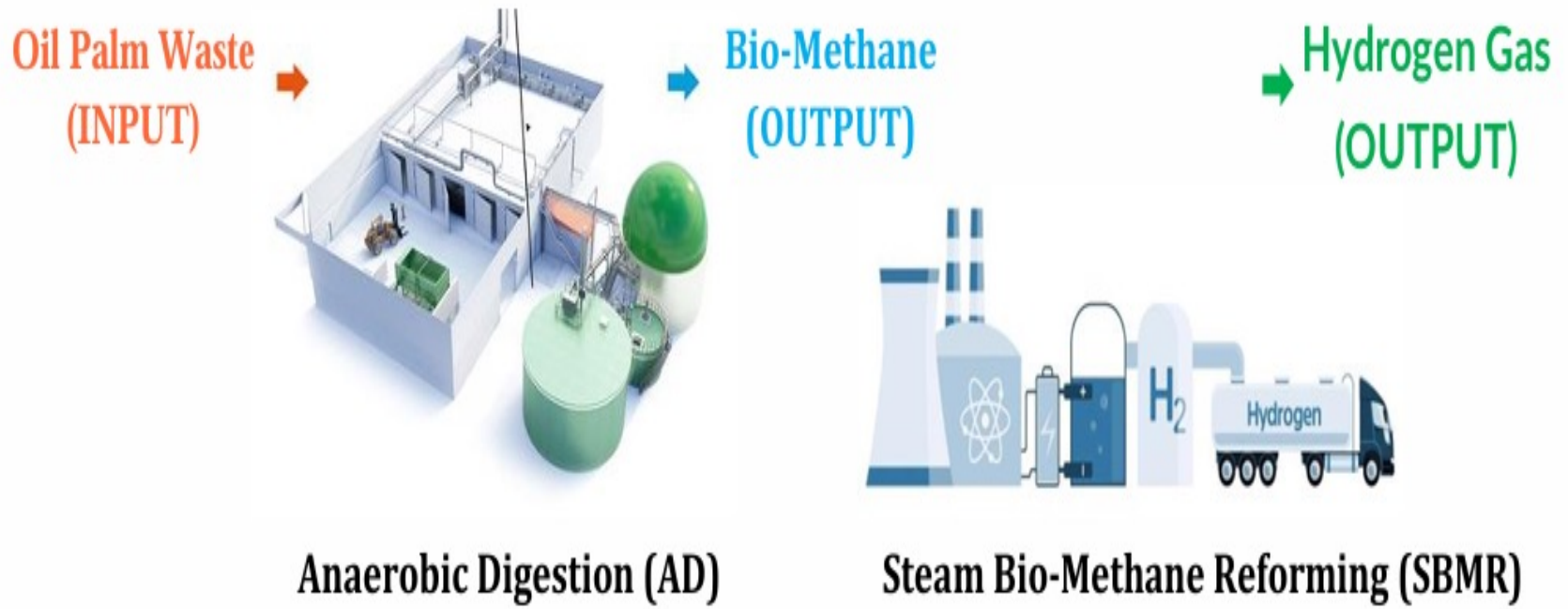
Products - Scrubbers & Biogas Upgrading Systems



- BioHydrogen™ is produced from Biomethane. The only net zero/carbon negative hydrogen is biohydrogen.
- Production of Hydrogen from BioMethane by SMR Steam methane reforming process to produce Clean energy with High Energy Efficiency.
- BioHydrogen™ can be used as alternative fuel for transportation, industrial and Power generation.

| Source | Hydrogen variety | Net carbon emission (kg/kg H ₂ production) | CO ₂ emission status | |
|--------------------------------|------------------------|---|---------------------------------|---|
| Natural gas (without CCS) | Grey hydrogen | 10 | +ve | Into atmosphere |
| Natural gas (with CCS) | Blue Hydrogen | 3 | +ve | Restored/reused |
| Renewable energy (electricity) | Green Hydrogen (wind) | 0.4 | +ve | Emitted during the electricity production |
| | Green Hydrogen (solar) | 1.4 | +ve | |
| BioCNG | Biohydrogen | -90.9 | -ve | Captured |





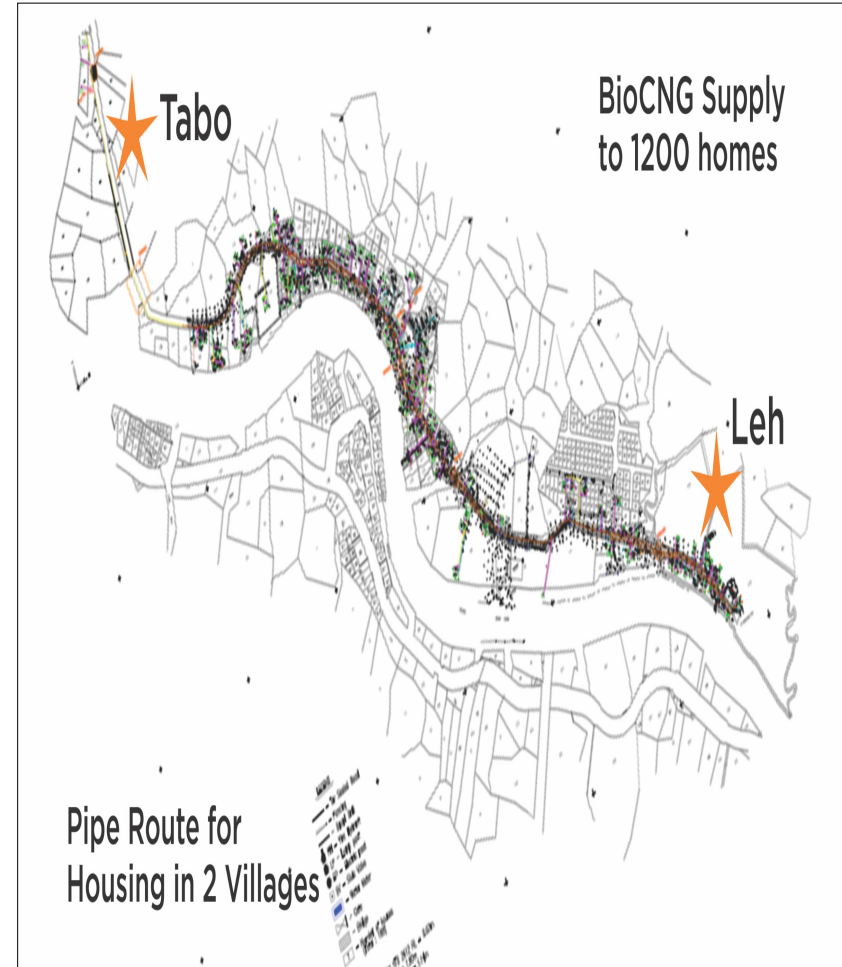
- **Name: DD Plantation, Malaysia, commissioned in March, 2024**
- **Potential CO₂ Emissions Reduction of 82,892 tCO₂/year**



- **Input POME: 1080 m³/day.**
- **Biogas Potential: 28000 m³/day.**
- **BioCNG[®]/Biomethane potential: ~ 11 Tons/day.**
- **Biohydrogen Potential: > 3 Tons/day.**

ASIA'S FIRST SUPPLY OF PIPED BIOMETHANE 2 VILLAGES IN SARWAK – COMMISSIONING BY Q4 2024.

- LOCATION- SARAWAK, MALAYSIA
- 60 TPH- SAGO WASTE BASED PROJECT
- BIOGAS GENERATION- 3500 m³/d
- BIOCNG[®] GENERATION – 1260 Kgs/d



Decarbonize Sago Mill Effluent, Transportation Sector Potential Carbon Emissions Reduction of 10,755 tCO₂/year

GLOBALLY MOST AWARDED TECHNOLOGY PROVIDER



KEMENTERIAN ENERGI DAN SUMBER DAYA MINERAL
REPUBLIK INDONESIA



Pabrik BioCNG Komersial Pertama di Indonesia Diresmikan

Selasa, 23 Januari 2024 - Dibaca 285 kali

**KEMENTERIAN ENERGI DAN SUMBER DAYA
MINERAL**

REPUBLIK INDONESIA

SIARAN PERS

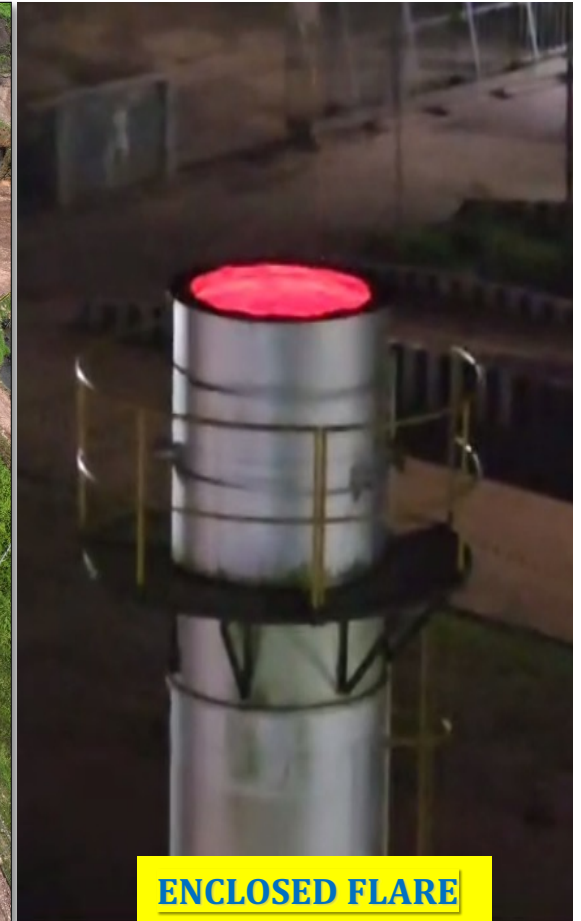
NOMOR: 80.Pers/KM.03/SJI/2024

Tanggal: 22 Januari 2024



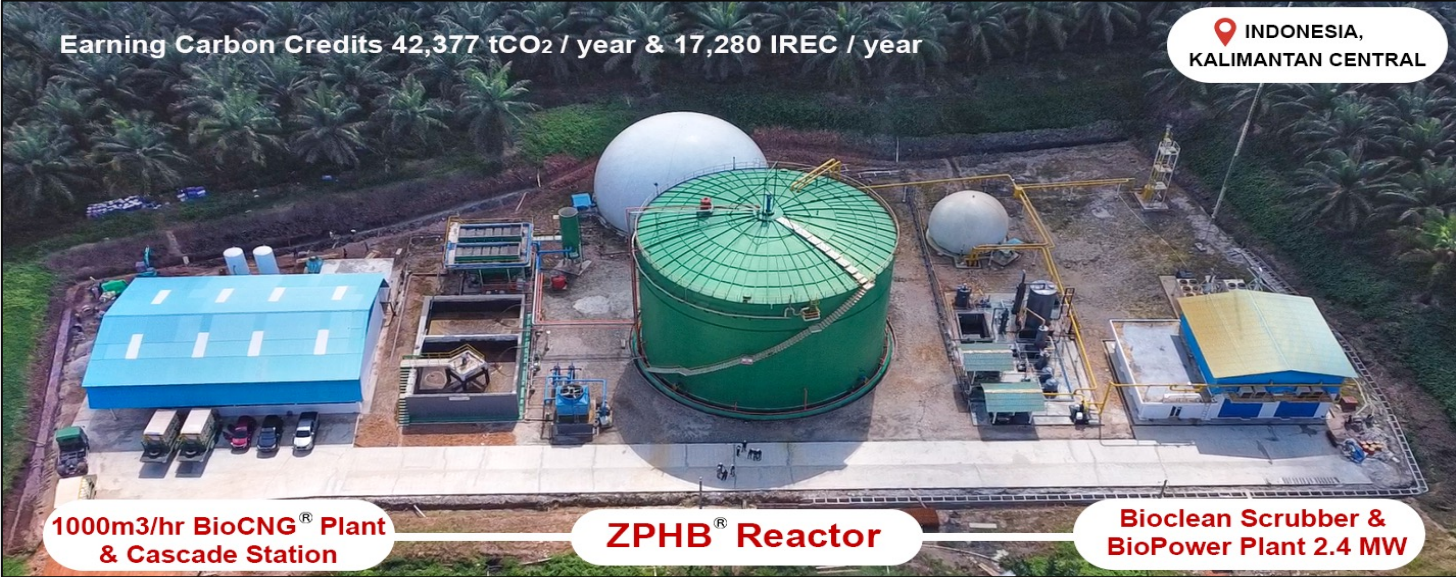


Inauguration of Indonesia's First commercial BioMethane / BioCNG[®] project



- **Name: PT. TBSM, Indonesia**
- **Successfully commissioned in March 2024**
- **Registered under CDM project activity-10661**
- **Potential CO₂ Emissions Reduction of 49,101 tCO₂/year**

Project Operating Since November 2023



KIS Group[®]
SUSTAINABILITY²

Earning Carbon Credits 42,377 tCO₂/year
& 17,280 IRECs/year



BioCNG[®] & Biogas Power

GAS MALAYSIA, JGC & PERTAMINA MOU'S WITH KIS



Subholding Gas Pertamina memanfaatkan biometana bagi pelanggan ritel

11 Januari 2024 18:04 WIB



Kerja sama pengembangan biometana sebagai green energy di Riau. ANTARA/HO-PT PGN Tbk

Jakarta (ANTARA) - Subholding Gas PT Pertamina (Persero), PT PGN Tbk memanfaatkan biometana terkompresi (Bio-CNG) dengan volume



SOLVING 4 MAJOR PROBLEMS WITH ONE SOLUTION

- 1) **Avoid emissions in Palm Oil industry to move towards NetZero**
- 2) **Produce Green /Sustainable fuel – BioCNG and or BioHydrogen**
- 3) **Earn Carbon credits for capturing methane from waste**
- 4) **Employment generation**

MANY THANKS / TERIMA KASIH

VISIT OUR BOOTH : G102 FOR MORE DETAILS

raghu@kisgroup.net

Mobile : +65 – 9798 1554

www.kisgroup.net