

A BUSINESS PROPOSAL FOR MANUFACTURING BIO MASS PELLETS FROM PALM OIL MILL WASTE.



FRESH FRUIT BUNCHES



FRITTLETS



EFB



PALM PELLETS

CMS WASTE MANAGEMENT SDN BHD.

No 29 & 31, Jalan Industri USJ 1/4,

Taman Perindustrian USJ 1,

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TAN CHIOW WAH (RONNIE)

Founder & Managing Director

CONCEPT ENGINEERING SDN BHD (1986)

CMS WASTE MANAGEMENT SDN BHD. (2010)

Qualification

**Bachelor Degree in (Chemical & Material) Engineering,
Auckland University, New Zealand 1977**



EXPERIENCES

- **A member of the Marketing Institute of Malaysia since 1983**
- **The Founder and the Managing Director of Concept Engineering Sdn Bhd (CESB) 1986.**
- **Appointed as the Regional Application Engineer from 1979 to 1983 in the regional office in Singapore for Goulds Pump Inc of the USA.**
- **In 1983, he was appointed as Sales/ Market Development Manager by Mecomb Malaysia Sdn Bhd, a company under the Sime Darby Group, to market the industrial products to the Asean market**
- **Has more than 15 years proven track record in filtration field and 20 years in the Oil Palm Industry**
- **He has designed many clean room & environmental systems for various industries.**
- **In year 2000, his company received a grant of RM 1.6 million from the Ministry of Science and Technology to do research on “ finding solutions to the environmental problems of the Palm Oil Mills and converting the palm waste into useful by products”.**

ACHIEVEMENTS

- **Anugerah Perekacipta Negara – 1999 (Kementerian Sains dan Teknologi dan Alam Sekitar)**
- **Perandingan Rekacipta Antarabangsa Geneva – 1999 (“Zero Discharge”) - Pingat Gangsa**
- **Invention and Design Competition – 1999 (“Zero Effluent/ Discharge for Palm Oil Mill”)**
 - Gold
- **Invention and Design Competition – 1999 (A Process for Clarifying Crude Palm Oil Slurry by Filtration Method) - WIPO Gold by United Nations, Geneva.**
- **Invention and Design Competition – 1999 (A Process for Clarifying Crude Palm Oil Slurry by Filtration Method) – Gold**

COLLABRATION WITH MPOB (SINCE 1994)

- # **Presented an environmental solution paper on “ Zero Waste / Zero Discharge System for Palm Oil Mill (PIPOC 2002)**
- # **Presented a technology paper entitled “ New Oilsep Recovery System for Palm Oil Mill (PIPOC 2009)”**
- # **Presented an economic paper on “Economic Study on Zero Waste/ Zero Discharge System”(PIPOC 2011}**
- # **Presented an environmental paper on “ Tertiary Polish Plant for achieving BOD < 20 ppm for POME before discharging into rivers” (POMREQ 2013)**

Cert. No : GTFS/W/C0016



Green Project Certificate

Project Name : Zero Waste / Zero Discharge For Palm Oil Mill
 Project Serial No. : GTFS/W/P022
 Category : Producer
 Sector : Waste & Water
 Company Name : CMS Fertiliser Sdn Bhd
 Company Registration No. : 877922-U
 GT Project Cost : RM 48 Million

This is to certify the above project fulfill Green Technology Financing Scheme Project Eligibility Criteria


 Y. BRS. PUAN LOO TOOK GEE
 Secretary General

Ministry of Energy, Green Technology and Water



Date : 10 August 2010
 Validation Date : 10 February 2011

DISCLAIMER
 This certificate issued for Green Technology Financing Scheme only. It should not be use for any other purpose.



Rakyat Didahulukan
 Pencapaian Diutamakan

GREEN TECHNOLOGY GRANTED IN 2010

Benefits:-

- Government Guarantees 60% bank loan.**
- Pioneer status.**
- Approves by Dept. of Environment. (DOE)**
- Encouraged by the Government.**

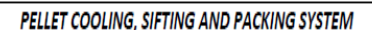
EXISTING PROBLEMS IN MILLS

- Environmental issues:
- POME: Meeting DOE requirement of 20 PPM BOD discharge into water course or Zero Waste/ Zero Discharge.
- Incineration of EFB no longer allowed.

Using Bio Mass Waste for Incineration.

- * Biomass is fuel that is developed from organic material.
- * A renewable and sustainable source of energy used to create electricity or other form of power.
- * Malaysia has 25 million tones per year of Bio Mass EFB waste
- * Many of the EFB waste are used for other purposes like producing paper, fibre particle board, compost, fibre mat for soil holding and bio mass for burning etc.
- * The Oil Palm waste offers many business opportunities.
- * In this presentation, we intend to use Oil palm waste to produce Bio Mass pellet as a business model as renewable energy / power source.

Output Pellets Size: 8 mm or 10 mm



THE PELLETING PROCESS

Shredding of EFB



Drying of EFB Fibre



Dried Cut EFB Fibre.



Pellet Mill



**Palm
Pellets.**



Pulverized Fiber



Hammer Mill

SUMMARY OF FINANCIAL ANALYSIS

Investment Loan : RM 25,000,000 (20 m ton /hr. Plant)

- A) Total Out Put / Year (ton) : 144,000 tons.
- B) Total EFB needed per year : 320,000 tons
- C) Conversion Rate of EFB to Pellet is 1 : 0.45
- D) Production cost per ton (Pellet) : RM 220 /ton (FOB Port)
- E) Target Selling Price per ton : RM 310 /ton (FOB Port)
- F) Gross Profit per ton : RM 90.
- G) Estimated Profit per year : RM 12,960,000
- H) Estimated Profit Margin : 30 % (Gross)
- I) Return of Investment (Years) : RM 25.0 m. / RM 12.96 m
: 2.0 Years.(From Production)

Detailed Financial Projections, available if needed.

Is this Bio Mass Pellets business Viable???

Questions we usually asked before we proceed with any project.

a) Do we have the raw waste material?

Malaysia has 25 million tons of EFB waste every year.

We have indeed, found a very suitable industrial land of 7 acres in Parit Sulong Johor for the plant.. This area is surrounded by 5 Palm Oil Mills, within a radius of 25-30 kilometers from the plant. The surrounding mills can give us a yearly supply of 600,000 tons of EFB waste. Our plant only needs 330,000 tons per year. We indeed have ample supply.

b) Do we have the Technology and Management skills?

Pelleting Technology is available worldwide. We can source this technology from China, Japan, USA and Europe. However, we are working closely with a reputable China company, who have supplied many pelletizing plants in Malaysia, Indonesia and Thailand for wood pellets, rice stalk pellets and oil palm pellets.

c)

d)

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c) Do we have the market for the product?

We have LOI's from two reputable Chinese Companies from China (GLC) They need 20,000 to 30000 tons per month which they agree to convert to a 3 year contractual order, once our production starts.



Thank you.