Session 1: Policies and Status of Biodiesel Mandates

STATUS AND CHALLENGES OF BIODIESEL PROGRAMME IMPLEMENTATION IN MALAYSIA

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Presentation Outline

- Overview of Biodiesel Industry in Malaysia
- The Malaysian Biodiesel Mandate
- Challenges
- About MBA
OVERVIEW OF BIODIESEL INDUSTRY IN MALAYSIA
OVERVIEW OF THE INDUSTRY

- MPOB began R&D into palm biodiesel from the early 1980s; constructing pilot plants and conducting vehicle engine trials
- The first commercial palm biodiesel plant was built at Carotino with MPOB technology

1981-1984: MPOB starts palm biodiesel project, constructs first pilot plant
1984-1994: Palm biodiesel trials in taxis / buses
2000-2002: First commercial palm biodiesel plant at Carotino
2006: Commercial production of biodiesel commenced
2006: Voluntary use of B5 by Govt agencies / Introduction of National Biofuel Policy

Source: MPOB
Source: www.thestar.com.my
OVERVIEW OF THE INDUSTRY

- Total investments in the Malaysian biodiesel industry estimated about RM 2.2 billion
- Consist 18 biodiesel producers (and more) who are members of Malaysian Biodiesel Association (MBA)
- Biodiesel is a biofuel that is used as a direct substitute to conventional petroleum diesel (i.e. fossil fuel). Molecularly, biodiesel in general refers to fatty acids methyl ester (FAME) that is produced from vegetable and animal oils and fats through chemical processes such as transesterification and esterification with methanol. **Malaysian biodiesel is palm-based**
OVERVIEW OF THE INDUSTRY

- Supplied to the national biodiesel mandate for transport sector since June 2011. Total CPO stock consumed by the mandate to date exceeds well-over 4 million MT
- Exporting since year 2006 to several countries in the EU, to the US as well as Asia
- Biodiesel produced by MBA members conforms to international standards:
  - EN 14214 (European standards)
  - ASTM D6751 (US standards)
  - MS 2008 (Malaysian standards)
Malaysian Biodiesel Plants & Capacity *(as at Sept 2021)*

<table>
<thead>
<tr>
<th>Status</th>
<th>No. of Plants</th>
<th>Biodiesel Production Capacity (Tonnes / Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Operation</td>
<td>18</td>
<td>2 332 000</td>
</tr>
<tr>
<td>Not in Operation*</td>
<td>4</td>
<td>630 000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>22</strong></td>
<td><strong>2 962 000</strong></td>
</tr>
</tbody>
</table>

* Not in operation covers those established biodiesel plants but not producing biodiesel (hibernate / idle mode)
OVERVIEW OF THE INDUSTRY

Production, Export & Blending of Biodiesel

Source: Ministry of Plantation Industries and Commodities & Malaysian Palm Oil Board
OVERVIEW OF THE INDUSTRY

Malaysian Biodiesel Export Destinations (2021)

- EU: 68%
- China: 19%
- Japan: 7%
- Others: 4%
- Others: 2%

Total Exports in Value: RM 1,886.34 million

Source: Malaysian Palm Oil Board
THE MALAYSIAN BIODIESEL MANDATE
The Malaysian Biodiesel Mandate has its underpinnings from the **National Biofuel Policy (NBP)**

The NBP was launched in 2006 under the Five Fuel Diversification Strategy with a view to developing the biofuels industry.

Five strategic objectives underpin the NBP:

- Objective 1: Biofuel for Transport
- Objective 2: Biofuel for Industry
- Objective 3: Biofuel Technologies
- Objective 4: Biofuel for Export
- Objective 5: Biofuel for a Cleaner Environment

The NBP is primarily aimed at reducing Malaysia’s dependence on depleting fossil fuels, promoting the demand for palm oil, as well as stabilizing its price at a profitable level.

The Act was to regulate and ensure a structured development of the biofuel industry; to prescribe activities relating to mandatory use of biofuel, licensing the relevant biofuel activities and enforcement. Scope limited to palm methyl ester and palm olein and only focus on blending with diesel

Malaysian Biofuel Industry (Blending Percentage and Mandatory Use) Regulations - mandates the type of biofuel blended with any other fuel, blending percentage and use for transport and industrial sectors
THE MALAYSIAN BIODIESEL MANDATE

- Relevant Malaysian Standards developed and updated, i.e. MS 2008 (for PME) and MS 123 (for petroleum diesel). These standards are modelled after the benchmark EN 14214 biodiesel standards in Europe.
THE MALAYSIAN BIODIESEL MANDATE

- **2008:** Malaysian Biofuel Industry Act 2007 (Act 666) comes into force
- **2011:** Rollout of B5 programme
- **2013:** Southern July
- **2014:** Northern March
- **2014:** East Malaysia Dec
- **2019:** Feb: B10 in transport sector
- **2019:** July: B7 in industrial sector
- **2020:** Jan: B20 in transport sector

*Implemented in Pulau Langkawi, Kedah, Labuan & Sarawak only*
CHALLENGES
Malaysian Biodiesel Association (MBA)

SUPPORT

Obtaining full support from automakers, transporters & industrial sector for higher blends (e.g. B30: transport & B10: industrial sectors) for the national biodiesel mandate

AWARENESS

Lack of awareness about palm biodiesel usage and its benefits. There is a need to increase the confidence of users, seen as a clean / green energy source, energy security for the country
CHALLENGES

**TARIFF BARRIERS**

Malaysian exporters have to pay import duties for exports into EU and US; making it not competitive to export

**NON TARIFF BARRIERS**

EU’s policy on PO, sustainability certifications and policies (EU’s RED II & US’ EPA RFS II), impact of Indonesia’s PO export duty structure; affecting competitiveness of biodiesel players

**OTHERS**

Cost competitiveness vs gas oil, local capacity utilization less than 50%, expand palm biodiesel use in other sectors – marine & aviation
ABOUT MBA
ABOUT MBA: Introduction

- Established in September 2008
- Primarily established to represent the interest of the biodiesel industry in Malaysia
- Its vision is to establish a sustainable, environmentally-friendly and economically viable biodiesel industry in Malaysia and globally
- Works closely & represents industry in government dialogues, forums & committees
- Affiliated to Roundtable on Sustainable Palm Oil (RSPO) and Roundtable on Sustainable Biofuels (RSB) as members
ABOUT MBA: Members

Consist of 21 members (18 ordinary & 3 associate);
located in Peninsular Malaysia, Sabah and Sarawak

**ORDINARY MEMBERS**

1. Bremfield Sdn Bhd
2. Carotino Sdn Bhd
3. ExcelVite Sdn Bhd
4. FGV Biotechnologies S/B
5. Fima Biodiesel Sdn Bhd
6. Future Prelude Sdn Bhd
7. Genting Biodiesel Sdn Bhd
8. Green Edible Oil Sdn Bhd
9. Gulf Lubes Malaysia Sdn Bhd
10. KLK Bioenergy Sdn Bhd
11. Nexsol (Malaysia) Sdn Bhd
12. Petron Malaysia Refining & Marketing Bhd
13. PGEO BioProducts Sdn Bhd
14. Sime Darby Oils Biodiesel S/B
15. SOP Green Energy Sdn Bhd
16. SPC Biodiesel Sdn Bhd
17. Supervitamins Sdn Bhd
18. Vance Bioenergy Sdn Bhd

**ASSOCIATE MEMBERS**

1. May Chemical Sdn Bhd
2. Novozymes Malaysia S/B
3. Perusahaan Kimia Gemilang S/B
ABOUT MBA: Activities

Meeting with members, visits & networking sessions

Consultations / dialogue sessions / meetings with the Government on national biodiesel implementation
ABOUT MBA: Activities

Promotion of biodiesel implementation in Malaysia
THANK YOU FOR YOUR ATTENTION