

Multiple Financing Solutions for Clean Energy Projects

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PRESENTATION OUTLINE

- Introduction of Malaysia Biomass Industries Confederation (MBIC)
- Introduction of Primer Capital Sdn Bhd
- Biomass in Malaysia
- Biomass Value Chain: 4 Major Directions
- Multiple Financing Solutions for Clean Energy Projects
- Considerations for Green Projects Financing
- Green Financing Scenario in Malaysia and Case Studies
- Green Technology Financing Scheme (GTFS)
- Global Development Trends in Green Financing

Malaysia Biomass Industries Confederation

- Formed in 2012 as legacy of the **EU-Malaysia Biomass Sustainable Production Initiative**, a development cooperation programme between the European Union (EU) and Malaysian Government (2010 – 2013)
- Launched by the **Royal Highness of the Negeri Sembilan State, Malaysia**
- Main objective: to promote a growing and sustainable biomass industry in Malaysia as well as the ASEAN region
- MBIC website - www.biomass.org.my



'Towards Sustainability'

Primer Capital Sdn. Bhd., Malaysia

- PRIMER focus on Malaysia and ASEAN countries, providing multiple financing model for green projects in Malaysia through multiple sources inclusive of **bank, climate financing, venture capital, private equity, angel investors, IPO** etc.
- Portfolio Fundraising Projects includes **Green Logistics, Green Agriculture (bio-fertilizer), Renewable Energy, Biomass Climate Change Programme** and **Green Private Equity Fund**.
- Has undertaken hundreds of case studies of green financing projects in ASEAN countries, China, Hong Kong, Europe and Australia. Has established the **Database of Green Projects Financing** based on innovation and best practices of **Multiple Financing Models**.
- Website: www.primer.my

Biomass & Types of Biomass

BIOMASS – any form of biologically-derived substance that, if not utilized would be an economic, environmental and social liability that needs to be properly disposed.



CANE BAGASSE



RICE HUSKS



COCONUT HUSKS



CORN STOVERS



WOOD



MUNICIPAL WASTE



EMPTY FRUIT BUNCH



PALM KERNEL SHELL (PKS)



OIL PALM TRUNKS (OPT)



KENAF



Palm Oil Mill Effluent (POME)

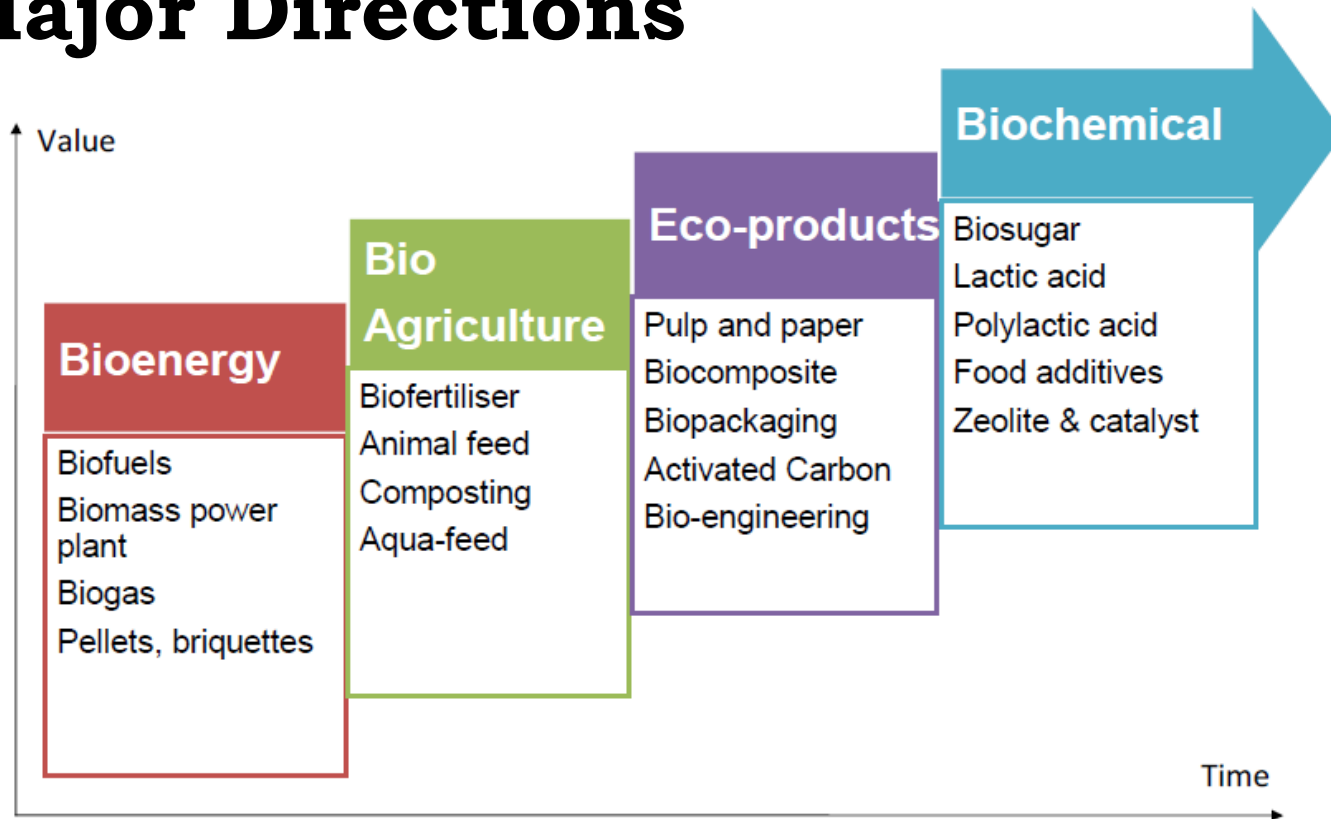


MANURE

Biomass Industry in Malaysia

- Annually, close to 100 million dry tonnes biomass is produced. - 94% palm oil industry, 4% wood residues, 1% rice biomass, 1% sugarcane industry wastes
(Malaysian Biotechnology Corporation & Malaysia Palm Oil Board)
- The majority of biomass stakeholders in Malaysia are from **palm oil and timber industry** i.e. palm oil millers, saw millers – producers of biogas, pellets and briquette, wood composites and particle boards, pulp & paper, fertilisers
- Other biomass stakeholders include rice millers

Biomass Value Chain: 4 Major Directions



Bio-Energy is the best approach towards mitigating climate change i.e. creating highest environmental benefits in term of Greenhouse Gas (GHG) emission reduction, but has low economic value from business standpoint.

Feedstock Currently Underutilised

Oil Palm Fronds



16.4 mil dry tonnes

Oil Palm Trunks



4.5 mil dry tonnes

Empty Fruit Bunches



2.3 mil dry tonnes

Downstream Opportunities

Value Adding Opportunities



Bioethanol



Biobased Chemical



Biofuels



Pellets



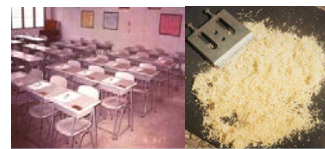
Furniture from Oil Palm Lumber



Wood Plastic Composite



Plywood



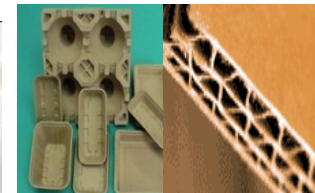
Particle Board / Moulded Particle Board



MDF



Pulp & paper



Finished Paper Product



Compost



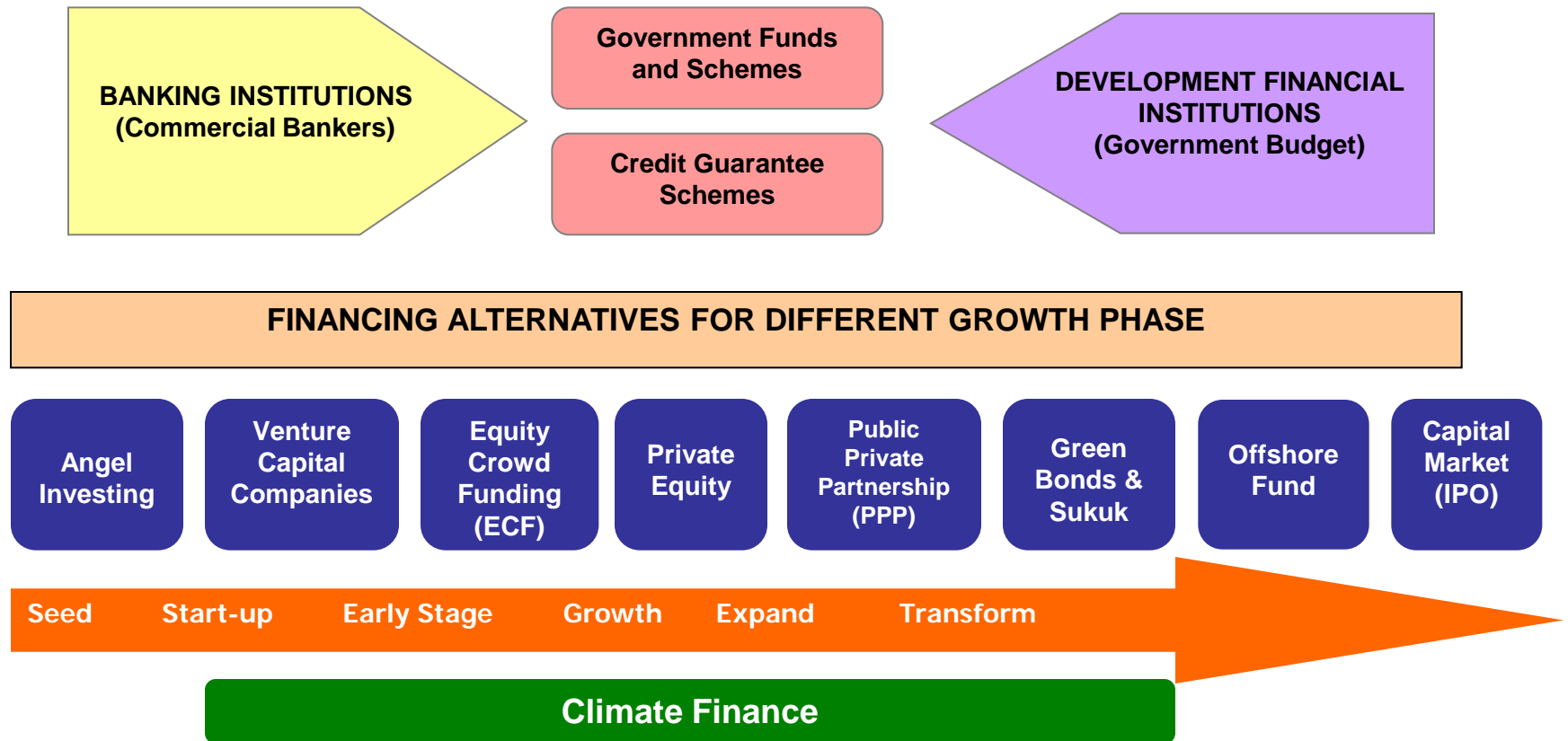
Fibre



Animal Feed from Oil Palm Fronds

Current focus: Biorefinery, Biofuels, Biochemicals, Biopellets

Multiple Financing Solutions for Clean Energy Projects



*Modified from © Multiple Financing Solutions for SMEs, Dato' Leong Kin Mun

Considerations for Green Projects Financing

1. **Security of feedstock** i.e. own plantation/mills or at least 10 years of fuel supply agreement
2. **Security of technology** i.e. mature and proven technology
3. **Security of management** i.e. experience in managing and operating power plants
4. **Security of project** i.e. all relevant licensing/legalities requirements should be met
5. **Security of systems**
 - Maintenance and servicing plan should be included
 - Warranty from equipment vendor
6. **Security of market** i.e. buy-back agreement, REPPA, letter of intent, etc.
7. **Debts to Equity Ratio**: Bank Financing vs. Equity Financing
8. **Debts to Assets Ratio**: Critical for Bank Financing
9. Impact on **Greenhouse Gas Emission Reduction** (to qualify for Preferential 2% Interest Rate Subsidized by Malaysia Government)

Financial Modelling for Project Evaluation

1. **Payback Period / Break-Even Analysis / IRR vs Interest Rate**
2. **Predictable Cash Flow Return**
 - Simulation
 - Sensitivity Analysis / Scenario Analysis
3. **Compound Annual Growth Rate (CAGR)**
 - Projection / Forecast
 - Peers Comparison
4. **Discounted Cash Flow (DCF) Method/Sales Growth**
5. **Application of Relevant Financial Ratios:** Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA)/Earning Per Share (EPS)/Net Tangible Assets (NTA) Valuation / Return on Equity (ROE)
6. **Customers/Suppliers Aging List**

Making Clean Energy Projects Commercially Attractive

- **Right Conversion Technology**
- **Proven Technologies**
 - Technology as Game Changer to Address Mass Demands, Industrial Issues/Problems, Create Value
- **Short Payback Period**
- **Very Good IRR >15%**
- **Favourable Framework and Enabling Environment**

What the Investors looking for?

- **Dividend**
- **Exiting gain/strategies**
 - Bottom line
 - 3 times ROI (300%)
- **Value creation**

How to Make It Interesting to Fund

Bank

- Demonstrate the Capability for Repayment of Loan (Principal & Interest)
- Decent Debt Servicing Ratio (as low as possible)
- Debts to Asset Ratio (the lower the better)

Angels/Venture Capital/Private Equity

- Exiting via IPO or Trade Sale or M&A
- Address Risk Management / Mitigation Plan for the Funder
- Value add synergy between these sophisticated investors and the project promoter / entrepreneurs

- **Bankable / Fundable Business Plan**
- **Bankable & Holistic Business Proposal for Financing Submission**

Green Financing Scenario in Malaysia

- **Sukuk (Malaysia):** facilitate financing of Renewable Energy & Energy Efficiency Project
- **Project Financing > MYR100 mil** (US\$23.8 mil) for a 10 MW Biomass Power Plant by Maybank Islamic Bank with Corporate Guarantee by a Singapore Public Listed Company
- **Equity Crowd Funding (ECF) for Malaysian SME** – Raised **MYR1 mil** (US\$0.24 mil) for biogas project from various retail investors based on fix-income approach and IPO's theme
- **Green Technology Financing Scheme in Malaysia** – **MYR3.5 bil** (US\$0.83 bil)

CASE STUDY 1 :

Green Lagoon Technology Sdn Bhd

- First green tech company in Asean to raise funds through an **equity crowdfunding (ECF)** platform
- Has raised **MYR800,000** (\$197,134) for **two 1MW biogas plants** located in Pahang to 40 per cent each (60 per cent is owned by Cenergi SEA)
- Fixed dividend of **6% per annum for 3 years**, with a mandatory conversion to ordinary shares in the event of an initial public offering exercise or at the 3rd year
- With the funding, the company will have a post-money valuation of **MYR12.2 million**, based on a price-to-earnings multiple of 4.5 on the forecast net profit after tax of the financial year of 2016
- GLT turns organic waste into renewable energy, completed more than 10 biogas projects, also provides Build-Own-Operate-Transfer (BOOT) and turnkey solutions for palm oil millers to manage biogas emitted by palm oil mill effluents

CASE STUDY 2 :

Maju Intan Biomass Energy Sdn Bhd

- A subsidiary of Asiatic Group (Holdings) Limited, a public listed company from Singapore
- Obtained **MYR105 million** financing from Maybank Islamic Bank Berhad for **12.5 MW** Biomass Power Plant project with Corporate Guarantee by Asiatic
- Loan backed by Green Technology Financing Scheme (GTFS)
- Power Purchase Agreement with Electricity Utility Company of Malaysia (Tenaga Nasional Berhad) for a concession period of 21 years
- Exports 10MW to TNB, with the remainder being kept for the plant's own use



Green Technology Financing Scheme (GTFS)

- The transformation of the economy to be driven by green technology have been spelled out as the main agenda under the **National Green Technology Policy** which was launched in July 2009
- Various programmes have been implemented to promote the application and development of green technology including the establishment of the **Green Technology Financing Scheme** in 2010.
- Offers a 60% guarantee of the financing amount and a rebate of 2% on the interest/profit rate charged by the financial institutions
- Available until **31 December 2017**
- **Approved GT Value** for Financing: **MYR2.79 bil** (US\$0.66 bil)
- **Balance of GT Value** for Financing: **MYR710 mil** (US\$169.13 mil)

GTFS Guidelines

For Producers

- Projects must be located within Malaysia, utilising local and imported technology.
- Financing Size : Up to **MYR100 million** (US\$23.8 mil) per company. **(effective from 15 June 2016)**
- Financing Tenure : Up to **15 years**.
- Eligibility Criteria : Legally registered Malaysian-owned companies **(at least 51%)** in all economic sectors.

For Users

- Projects must be located within Malaysia, utilising local and imported technology.
- Financing Size : Up to **MYR10 million** (US\$2.4 mil) per company.
- Financing Tenure : Up to **10 years**.
- Eligibility Criteria : Legally registered Malaysian -owned companies **(at least 70%)** in all economic sectors.

Global Development Trends in Green Financing

1. Hong Kong has established a conducive framework for Green Energy companies (**wind, solar, hydropower, waste to energy**) to raise fund through IPO. These green energy companies are trading between 6-20 times based on their PGR
2. Singapore has launched a **Private Equity Fund** through subscription from high net-worth individuals or social institutional investors to fund projects with the theme of “**Environment Sustainable & Governance**”
 - Clean Energy, Healthcare & Agriculture are the target sectors
3. **Green Bond (Hong Kong)**: First labelled green bond in 2015 raised **US\$300 million** and almost 5 times over-subscribed (wind energy firm)

Global Development Trends in Green Financing

4. **Corporate Bond**: Etrion (European RE Project Developer) – 8% Corporate Rate, raised **EURO 80 million**, solar farm projects across the globe, operates utility scale power generation projects (**139 MW installed solar capacity**)
5. **Bioplastics Project** funded by China Investor with **RMB1.2 billion** (Ecopha's technology)
6. Raised fund through **Labuan Private Fund** – **MYR25 million** for Biomass Pellets Project in Malaysia
7. **International Donors** – EU's Switch Asia Programme, United States Agency of International Development (USAID)

Conclusion

- There are more than 10 financing instruments to fund clean energy / low-carbon / energy efficiency projects depending on the size, phase and requirement of projects.
- Sizeable high-impact clean energy projects requires more than just a single financing instrument for greater risk and funds management.
- There is no one-size-fits-all financing mechanism for all projects, each has its unique properties which different financiers with different mandates / themes see fit.
- Continuous improvisation of financing instruments crucial for development and deployment of clean energy projects and their utilisation.