Biomass Landscape in Malaysia & Potential Collaborations with APEC

Presented by:

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PRESENTATION OUTLINE

• Malaysia Biomass Industries Confederation (MBIC)
• Biomass Industry Landscape in Malaysia: Availability, Utilization, Value Chain, Supply Chain
• Policies, Strategies & Actions by Malaysian Government
• Best Practices in the Industry
• Primer Capital Sdn. Bhd.
• Potential Synergy with APEC
Malaysia Biomass Industries Confederation (MBIC)

- Formed in 2012 as legacy of the EU-Malaysia Biomass Sustainable Production Initiative (biomass-sp.net), a development cooperation programme between the European Union (EU) and Malaysian Government (2010 – 2013)
- Main objective: to promote a growing and sustainable biomass industry in Malaysia as well as the ASEAN region
- Seeks to represent industry players in Malaysian biomass industry especially the small & medium companies (SMEs)
- Strive to achieve economic and environmental sustainability in Malaysia via adoption of Sustainable Consumption & Production principles
- MBIC website - www.biomass.org.my
MBIC Activities

- Annual / Biennial *Biomass Asia Conference*  
  - www.biomass-asia.org

- Business Networking Seminars

- Publication of the biomass related reference materials i.e. *Malaysia Biomass Industries Review 2015/2016*

- Dialogue with Government Ministries & Agencies
  - Ministry of Energy, Green Technology & Water (KeTTHA), Malaysian Investment Development Authority (MIDA), Malaysia Green Technology Corporation (GreenTech Malaysia), Ministry of International Trade and Industry (MITI), Malaysian Palm Oil Board (MPOB), Malaysia Industry-Government Group for High Technology (MIGHT)

- Information Sessions to Bankers, Financial Institutions & Investors
  - Association of Banks in Malaysia (ABM) / Malaysian Business Angel Network (MBAN)

- Linkages with Universities & International Bodies
  - Leading Research Universities in Malaysia, China-ASEAN Technology Transfer Centre (CATTC), United Nations Industrial Development Organization (UNIDO) etc.

- Overseas Promotion of Malaysian Biomass Industry – via international conferences & dialogues
  - Indonesia, Singapore, China, EU, Thailand, Korea, Japan
Biomass Availability in Malaysia

Total Projected Annual Biomass Availability in Malaysia

Million Metric Tonnes (wet)
- Palm EFB~: 22.43
- Palm Kernel Shell~: 10.50
- Oil Palm Fronds~: 6.63
- Oil Palm Trunks~: 5.61
- Rice Husk^: 46.53
- Rice Straw^: 1.63
- Wood Residues#: 2.82
- Municipal Solid Waste%: 0.39

Updated until 2015
Biomass Availability in Malaysia

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- Million Metric Tonnes (wet)
  - Palm EFB
  - Palm Kernel Shell
  - Oil Palm Fronds
  - Oil Palm Trunks
  - Rice Husk
  - Rice Straw
  - Wood Residues
  - Municipal Solid Waste

Availability vs. Accessibility
Value of Accessible Biomass in Malaysia

- 96.53 mil. MT total biomass
- X 30% Accessibility
- X RM500/MT Value Creation
- RM 14.5 bil. USD 4.4 bil. Economic Value/Year

- Mobilization 25 mil. tonne palm biomass
- 66,000 new jobs by 2020
- Gross Nat. Income RM 30 bil. USD 10 bil. by 2020
Utilization of Biomass in Malaysia

**Feedstock**
- Palm Biomass
- Rice Husk & Straw
- Municipal Solid Waste
- Kenaf
- Wood Biomass

**Products**
- Bio-Energy
- Green Chemical & Bio-Polymers
- Bio-Fertilisers
- Bio-Composites

**Applications**
- Steam
- Electricity
- Heat
- Transport Fuel
- Packaging
- Livestock Feed
- Agriculture
- Green Building Materials

**Substitution Targets**
- OIL & GAS
  - Diesel
  - Petrol
  - Natural Gas
  - Chemicals
  - Polymers
- MINING
  - Minerals
- FORESTRY
  - Timber
  - Plywood
  - Fuel Pellets
Policies, Strategies & Actions by Government

- Renewable Energy Policy & Act
- National Biotechnology Policy
- Green Technology Policy
Policies, Strategies & Actions by Malaysian Government

- Feed-in-tariff for renewable energy generation
- Bio-conversion of biomass into high value chemicals & liquid fuels
- Generation of power to national electricity grid via biogas from effluent waste
- Promote high value utilization of biomass by small & medium companies
- Development of market players & technologies for biomass pellets & biochemicals
- Green technology financing scheme USD1 billion in subsidized loans
- Investment tax incentives for green ventures in Malaysia

- Renewable Energy Policy & Act
  - Palm Oil Industry
    - Biogas power generations
- National Biomass Strategy
- Malaysian Biomass Industry Action Plan 2020
- Green Technology Policy
Best Practices: Making the Business Case

- Steering gov. & biz. towards sustainability
- Biomass as a resource for economic green growth
- Sustainable production & consumption agenda
- Market-based pull policies, strategies, & actions
- Macro (gov.) & micro (biz.) levels
Best Practices: Smart Utilization of Biomass

- Short Term: Low Hanging Fruit
- Long Term: High Value Utilization
- Technologies as Barriers
- SME
- Multi-Feedstock Technologies
- Biomass Commodities VS Differentiated Biomass Products
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.
Best Practices: Value Chain Approach
• Primer Capital Sdn Bhd. is an investment and advisory firm for innovative Green Financing Models, established in 2010.

• Involve in development of project proposals and implementation for international donors and economic development co-operations.

• Leverage on the expertise and experience prior proven investment strategies predominantly in Green Business (Renewable Energy – Solar, Biomass, Mini-Hydro and Energy Efficiency, Green Agriculture, Green Transportation).

• Created proprietary fund-raising methodology for various green business models.
GREEN FINANCE ADVISORY FOR SMEs & GREEN PROJECT DEVELOPERS

Engaged by Biomass-SP, an EU-funded project, to provide coaching in green financing for biomass entrepreneurs.

Engaged by Malaysia Biomass Industries Confederation (MBIC) to address the financial component for biomass projects/businesses.

Current consultancy portfolio includes bio-fertilizer venture, clean energy and waste-to-wealth projects.
Fund-raising for Green Projects

MULTIPLE FUND-RAISING MODELS FOR GREEN PROJECTS

BANKING INSTITUTIONS (Commercial Bankers)

Government Funds and Schemes

Credit Guarantee Schemes

DEVELOPMENT FINANCIAL INSTITUTIONS (Government Budget)

FINANCING ALTERNATIVES FOR DIFFERENT GROWTH PHASE

Angel Investing  Venture Capital Companies  Equity Crowd Funding (ECF)  Private Equity  Public Private Partnership (PPP)  Green Bonds & Sukuk  Offshore Fund  Capital Market (IPO)

Seed  Start-up  Early Stage  Growth  Expand  Transform

Climate Finance

© Multiple Fund-raising Solutions for Green Projects, Dato’ Leong Kin Mun
Potential Synergy with APEC

MBIC

• Co-host with APEC for Biomass Energy (RE) Forum 2018 in Kuala Lumpur

• Co-host workshops and forum related to biomass / RE technology and implementation best practices in Kuala Lumpur.

• Establish an APEC resource centre for biomass industries with consolidation of regional biomass database for benefit of all APEC member economies.
Potential Synergy with APEC

Primer Capital Sdn. Bhd.

- Green Financing Facilitation for Green Energy Projects
- Workshops and Forum Focusing on Financing of Renewable Energy/Green Technology Projects with Innovative Financing Models
- Co-research / Study on Green Financing Landscape in Malaysia: Best Practices & Lessons Learnt to be replicated in other APEC economies.
Contact Us

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