

## **Statement from Dr Pang Teck Wai CEO, POIC Sabah Sdn Bhd**

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The introduction of a biomass policy driven by environmental considerations is the way forward for Malaysia in harnessing renewable energy from its massive oil palm industry.

“The volume of oil palm biomass available exists in figures, but getting one’s hands on it is quite another issue,” said Dr Pang Teck Wai, CEO of the state-owned POIC Sabah Sdn Bhd.

He was commenting on newspaper reports quoting Malaysia Palm Oil Board (MPOB) chairman Datuk Sabri Ahmad as saying that Sabah can tap its power-generating potential from oil palm biomass, including methane gas from what is known in the industry as palm oil mill effluent (POME, which is about 65% methane).

He added: “There is no doubt that we should be able to generate renewable energy from POME and empty fruit bunches (EFB), but it needs to be policy driven because there just isn’t enough incentives for oil palm players to consider renewable energy as part of their business plan, neither is there sufficient deterrent in our laws to compel players to reduce their carbon footprints.”

Dr Pang cited the example of Eco Biomass Energy Sdn Bhd, a Korean investor in the Lahad Datu palm oil industrial cluster (POIC Lahad Datu) which has encountered great difficulties in accessing biomass for their proposed biomass power plant.

Statistics show that Sabah produces over 30% of Malaysia’s palm oil but little of the oil palm biomass was being commercially utilized.

“It’s been more than 2 years now, and EBE is still unable to secure sufficient long term supply of EFB to enable them to start building their plant.

“The potential suppliers were wavering in their prices and terms, waiting to take advantage of the situation. There’s no urgency because selling EFB has never been a major part of an oil palm mill’s income, and there is no serious enforcement of laws to compel them to dispose of their EFBs, which is a major contributor of methane gas when they rot, and methane gas is 20 times more harmful a greenhouse gas than carbon dioxide.”

POIC Sabah had intended the EBE’s plant to produce power and steam to supply the myriad of palm oil-related industries at POIC Lahad Datu, which todate has 24 investors in refinery, biodiesel, fertilizers and logistics.

EFB's are ejected from oil palm mills after the fruits are stripped. EFBs were simply left to rot and, where viable, scattered as mulch in plantations near the mills or used as fuel for boilers. Mills have in recent years begun to install shredders and pressers to extract residual oil from the EFBs. The resulting EFB fibre, which contains 40-45% moisture (compared to 60-65% in raw EFB), is used by some mills as feedstock (together with palm kernel shells, another oil palm mill by-product) for their boilers. In Peninsular Malaysia, biomass downstream industries turn these fibres into briquettes, pellets or fibre materials for mattress-making.

Dr Pang said a biomass policy that, among other issues, spells out government incentives and strict environmental requirements is necessary not only for the production of renewable energy, but also for the country to be able to take advantage of the huge volume of oil palm biomass.

“For example, the estimated RM6 million needed for mills to install biogas-capture structure – unless there are incentives or legislative requirement or both, not many mills will bother to capture their POME gas.”

He also pointed out the numerous difficulties faced by players in claiming for carbon credits and complying with the Clean Development Mechanism principles.

“We have received feedback that the auditing process is very cumbersome, and a disincentive for millers to try for some of the money to fund their carbon-saving activities.”

According to Dr Pang, there are only four power plants in Sabah that are powered entirely on EFB, raw or in fibre form – two 10 megawatt facilities in Sandakan, one 7.5mw plant at Felda Sabahat (Lahad Datu) and one 14mw plant owned by public-listed TSH Resources in Tawau.

“As far as we know, none of these are running to full capacity, either because of inconsistent EFB supply, or technological drawbacks especially the build-up of clinker in the boilers, which apparently is a problem unique to EFB-burning.”

TSH plant has a contract to supply electricity to the Sabah Electricity Sdn Bhd grid at 21 sen per kilowatt/hour.

Dr Pang said that for most millers, the supply insecurity of EFB and its price fluctuation are enough for them not to think positively of the SESB tariff.

“We know for a fact that MPOB itself is struggling with the issue of biomass feedstock supply security. Unless there's a policy that addresses those concerns, renewable energy from biomass will be an uphill campaign and unlikely to progress much further.”

He said the policy must seek to unlock the dilemma that while there are lots of oil palm biomass, investors can't seem to secure supply. What needs to be done is to create a 'market' for, as an example, EFB. This can be attained by either a government agency or a government-authorized investor setting up collection centres to buy up the EFB within a certain price range, and ensuring that the EFB is available to investors in downstream industries.

In EBE's inquiries with mills for EFB supplies, prices quoted were within too broad a band of between RM5-RM70.

Another consideration in addressing the disposal, management and availability issues surrounding oil palm biomass is to treat biomass like municipal refuse, that is, the people generating the refuse in the oil palm mills must pay for the refuse disposal. Since oil palm wastes are serious environmental pollutants, they should be treated like scheduled wastes.

"In the cities, the people who generate the refuse pay for municipal authorities' services to collect and dump their refuse at landfills, where separation, incineration and other processes can be introduced to prevent the refuse from threatening the environment."

**Issued by POIC Sabah Sdn Bhd  
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