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BIOMASS-EFB

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KUALA LUMPUR, 30 Aug (Bernama) -- The development of technology in the management of oil palm plantations has provided a well-secured future for an industry by-product, the "empty" fruit bunches (EFB) that remain after each harvest of fresh fruit bunches (ffb) are mechanically stripped of their oil-bearing nuts for further processing in so-called palm oil mills.

theirharvestedproduct of oil-palm growing is well secured as the usage of it is getting wider given the technology development in the industry, said an industry player.

According to Chew Kian Sang, director of Szetech Engineering Sdn Bhd, the development holds positive implications for the palm oil industry since it helps the productive potential of EFB to be fully realised.

"By using the oil palm waste as a biomass product, we are also contributing towards the environmentally-clean disposal of EFB," Chew said.

"The current practice is to throw (plough back) the EFB into the ground," he said.

Speaking to Bernama during a recent interview, Chew said that Malaysia can produce the EFB biomass in ample quantities every year without fail. "As long as we are processing the FFB to produce crude palm oil (CPO, from the flesh of the oil palm fruitlets), you will have this EFB left behind."

Malaysia produces approximately 10 million tonnes of EFB a year, he added.

Besides using the EFB for boiler fuel especially for the generation of power under the renewable energy (RE)) programme, the EFB can also be used as an organic fertilizer, in fibreboard and paper making, and as animal feed (by modify the nutritional composition of commercial feedmeal).

Chew added that palm oil producers based in Indonesia, Papua New Guinea and South America among others showed keen interest in the system developed by Szetech Engineering for the processing of EFB into biomass.

"2001 PIPOC (the recently-held International Palm Oil Congress) was a good platform to create awareness mainly about the exploitation of the renewable biomass source," he said.

Chew said the technology gave businessmen and investors a wider view of the potential avenues that are open to them.

Asked how long it took the company to develop the special tools and equipment for processing EFB, he said: "By tapping the experience we had gained in agricultural work, we were able to develop the system within a short period of three years, with an investment of RM1 million."

"The system enables the fibre to be conditioned into various lengths and to various degrees of dryness depending on the needs of individual customers," he added.

Chew said the company was aiming to integrate the system into the operation of oil palm mills because these mills offered the most conducive environment for processing EFB.

For a 60 tonne per hour (tph) mill, the integration of the system would cost about RM1.26 million.

Speaking at the same conference, the chief executive officer of Malaysia Energy Centre Dr Mohd Zam Zam Jaafar pointed out that renewable energy (RE) was not a new proposition for the oil palm industry.

In his 2001 PIPOC paper on "Policies and Incentives for the Generation of Renewable Energy in Malaysia" Dr Mohd Zam said the process formed part of the national fuel diversification policy, which required efforts to be

made (from the early 1980s) to investigate the technical and economic potentials of RE sources for electricity generation.

The focus was on three RE options namely, mini hydro, solar photovoltaic (PV cells and agricultural wastes (biomass), with most RE projects being implemented as part of the rural electrification programme.

"The effort proved that RE was not commercially viable unless the individual projects are subsidised," he added.

However, growing awareness and concerns on environmental issues in 1990s and the new 21st century had provided an added impetus for RE projects to be implemented worldwide.

During the June 1999 World Renewable Energy Congress in Kuala Lumpur, the Prime Minister Datuk Seri Dr Mahathir Mohamad announced the country's efforts to re-visit and examine promising RE and energy efficiency (EE) potentials as long-term mainstream energy options in Malaysia.

In the 2001 Budget, the then Finance Minister, Tun Daim Zainuddin announced significant fiscal incentives to promote the implementation of RE and EE projects.

This was subsequently incorporated into the Third Outline Perspective Plan (OPP3) and the Eight Malaysia Plan which explicitly stated that RE and EE was the fifth fuel in the five-fuel strategy of the national fuel-diversification policy.

It was projected that 95 percent of the total amount of electricity generated in 2005 would still be come from the four major sources of oil, gas, coal and hydro, with biomass contributing the remaining 5 percent.

In addition to EFB as an RE source, wood-based products and rice husk are also also energy rich or "self-sufficient", he added. -- BERNAMA

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