S. Korean biodiesel plant proves 'Malaysians boleh'

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WHEN one mentions Korea, the Winter Sonata drama series comes to mind.

MPOB's proven and scalable technology made commissioning of the plant a little easier, says Dr Cheah

For Malaysian Palm Oil Board (MPOB) scientist Dr Cheah Kien Yoo, however, it brought back memories of many sleepless nights.

"It wasn't that much of missing my wife back in Kuala Lumpur.

It was more of being on call 24 hours, seven days a week at the biodiesel plant in Pyeongtaek port.

"There was a lot of snow but there was no romantic background music," the scientist laughed as he recalled his work stint in South Korea two years ago.

Positive feedback has given due recognition to Malaysia's process engineering know-how and skills, says Koh

"It was quite an experience working there," Cheah said, adding that most of the time, he and other Malaysian process engineers had to work late into the night when the temperature dropped below freezing.

"We were constantly tuned to the weather forecast and worked quickly to drain off fluid in the pipes whenever the temperature dropped," he said.

If they did not, the fluid would solidify and the pressure would have caused the pipes to burst.

"These were the extra steps we had to attend to, when compared to putting up a biodiesel plant in Malaysia," he added.

As head of milling & processing unit at MPOB's engineering & processing research division, Cheah was assigned to Korea as part of the team of scientists to export MPOB's know-how in building biodiesel plants.

There, he worked with Lipochem Sdn Bhd's engineers during the winter months of November 2006 to January 2007 to commission a 60,000-tonne-per-year biodiesel plant in Pyeongtaek port.

It was not easy earning the respect of Lipochem's client, Enertech Co Ltd.

Cheah recalled operators at the biodiesel plant were expected to work long and hard hours without any complaint.

The work culture is such that every worker has to be diligent, self-sacrificing and dedicated.

Asked on the critical moments throughout the commissioning of the plant, he likened the process to anxious fathers waiting for the birth of their first-born.

After the first few drops of palm methyl ester emerged from the plant, the operators rushed the sample to the lab to be tested.

"As soon as the sample met all the performance tests, everyone cheered and celebrated," Cheah said.

He explained that the product, palm methyl ester, has to consistently meet the international performance specifications.

"If it doesn't, it can't be used.

That is the biggest fear for any biodiesel investors, whether Malaysians or Koreans," he added.

The fact that MPOB's technology is proven and scalable made commissioning of the plant a little easier.

Still, Malaysian process engineers have become familiar with their client's meticulous approach in their investments.

Lipochem managing director Koh Pak Meng recalled that, prior to the commissioning of the plant in Korea, Enertec flew their own team of engineers to Kuala Lumpur and parked them at his office to keep tabs on the work progress.

It took quite a while to pack the parts of the biodiesel plant into containers to meet international shipping requirements.

Lipochem also took up insurance of up to RM15 million on the components, just in case it got damaged or lost along the way. It took 30 days before the parts of the biodiesel plant reached Pyeongtaek port in good condition.

The construction of biodiesel plant in Korea was a very important milestone as it showed Malaysia is capable of exporting professional services, despite it being a developing nation.

Lipochem's licence to export MPOB's know-how in the construction of biodiesel plants has put Malaysia's standards in process engineering on the global map.

"As MPOB's business partner, we help catalyse the exports of government-funded technology," said Koh.

"So far, the biodiesel plant in Korea is still running smoothly," he said, with a smile.

Indeed, positive feedback has given due recognition to Malaysia's process engineering know-how and skills.

Lipochem is now midway in completing two more plants in Indonesia, each of 66,000 and 40,000 tonnes-per-year using palm fatty acid distillate (PFAD), a cheaper feedstock and a by-product of refineries.

When completed, it will be another achievement for Malaysia's process engineering industry because these plants use PFAD feedstock that are not edible and yet renewable.

MPOB wants closer ties with private sector

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THE Malaysian Palm Oil Board (MPOB) pledges closer co-operation with the private sector to boost the current technology commercialisation rate of 20 per cent.

This step in the right direction is in response to oil palm planters' complaints that they are not receiving just return on the cess paid to MPOB for research.

All oil palm planters via millers pay cess of RM7 per tonne of oil to MPOB for research and another RM2 per tonne to fund licensing activities.

When asked to comment on MPOB's research work, chairman Datuk Sabri Ahmad said the government agency's technology commercialisation rate stands at 20 per cent, four times higher than local universities.

"Last year, out of 34 research and development (R&D) projects, four were adopted and five commercialised," he told Business Times in an interview in Petaling Jaya.

"Still, we need to bring up the success rate by engaging in closer collaboration with companies in the private sector," he said.

He plans for MPOB to be more engaging with the private sector.

"We will aim for more win-win collaboration to reduce duplication and improve on efficiency," he said.

Among big names partnering MPOB scientists are Sime Darby Bhd, Asiatic Centre for Genome Technology Sdn Bhd (Genting Group's research arm), Brandies University in the US, Johor-based JC Chang Group and CB Industrial Product Bhd.

On export of MPOB’s technologies, Sabri said while this role is usually undertaken by big companies, there had also been mid-sized enterprises that leverage on these opportunities.

He named Lipochem Sdn Bhd, a licensee to commercialise MPOB’s know-how in designing and constructing biodiesel plants.

Having built a handful in Malaysia, process engineer Lipochem had, in the last couple of years, ventured out to South Korea and Indonesia.
