

26/04/2003

LNG venture yields valuable benefits

Kamarul Yunus

MALAYSIA'S involvement in the liquefied natural gas (LNG) business since 1983 has managed to put a lid on the loss of some US\$300,000 (US\$1 = RM3.80) a day from burning of associated gas.

Petronas president and chief executive officer Tan Sri Mohd Hassan Marican said long before the development of the LNG complex, flaring of associated gas took place during the oil development in offshore Sarawak.

"We were actually flaring associated gas to a tune of US\$300,000 a day.

It is not just burning money but also destroying the environment.

"But when we started producing natural gas, the flaring of associated gas came down, and at the same time, we used the associated gas as feed stock into the LNG facilities," he told senior editors and journalists on

a familiarisation trip to the LNG complex in Bintulu recently.

The trip was held in conjunction with the opening of the Bintulu complex

by Prime Minister Datuk Seri Dr Mahathir Mohamad scheduled for May 8.

Besides saving the losses in burning gas, Mohd Hassan said the LNG complex has also contributed to the preservation of the environment as well as lengthening the life of natural resources.

"We made the environment cleaner and prolonged the life of oil fields offshore Sarawak.

"Taking into account how long the oil had been produced offshore Sarawak

and the US\$300,000 a day loss of burning associated gas, it shows a significant amount of value destroyed at that stage," he said.

Malaysia's LNG project was first mooted in 1967 when substantial natural

gas reserves was discovered in Central Luconia area offshore Sarawak, which is located between 125km and 275km from Bintulu.

When Petronas was incorporated in 1974 to exercise Malaysia's sovereign

right of the national petroleum resources, detailed feasibility studies were carried out to implement the LNG project in Sarawak. This led to the

formation of Malaysia LNG Sdn Bhd (MLNG) of Petronas on June 14 1978.

MLNG, with an authorised share capital of RM700 million, is a joint-venture company consisting of Petronas (95 per cent) and Sarawak State Government (5 per cent).

Previously, Shell Gas BV and Mitsubishi Corp were shareholders of MLNG,

each holding a 15 per cent stake. However, under the 20-year agreement which ended in March, both companies ceased to be shareholders but expressed interest to buy back the shares.

Mohd Hassan said Petronas is in discussion with the two companies to see

how best their interest would benefit Petronas.

Located at the north of Tanjung Kidurong, about 20km from Bintulu, MLNG commenced commercial operation in January 1983. The plant is among the world's largest, producing 7.6 million tonnes per annum (mtpa) of LNG.

When further gas discoveries were made in the Central Luconia area, coupled with the increasing demand for LNG, another joint-venture company, Malaysia LNG Dua Sdn Bhd, was formed in 1992 to undertake the country's second LNG project. The second plant was constructed adjacent to the MLNG plant.

With its three processing trains, the second plant has a combined capacity of 7.8 mtpa of LNG.

To meet the increasing demand for LNG, a third LNG plant is being constructed next to the two existing plants.

This plant, owned by Malaysia LNG Tiga Sdn Bhd, will utilise newly-discovered gas reserves offshore Sarawak producing 6.8 mtpa, thus increasing the country's total LNG production to about 23 mtpa, making the Petronas LNG complex the world's largest production facility at a single location.

MLNG Tiga has two train facilities, with the first operational since March, while the second train is scheduled to come onstream in December this year.

The integrated Petronas Bintulu LNG complex is divided into three areas namely process, utilities, and storage and terminal.

MLNG process area comprises three identical liquefaction modules, each containing processing units like slugcatcher and gas metering station, acid gas removal, dehydration, mercury removal, heavy hydrocarbon separation, fraction or stabilisation, and liquefaction.

Others include storage for refrigerant components, flare, main control room and common facilities.

MLNG Dua, meanwhile, has three additional liquefaction modules bringing the combined processing trains to six.

With improved technology and experience gained from other LNG plants worldwide, these additional modules feature improved design and include an incineration unit.

The utilities area comprises three identical modules, each containing steam and condensate systems, power generation, cooling system, fuel gas system and instrument air and nitrogen.

The Bintulu LNG complex has five insulated storage tanks of 65,000 cu m each, which are specially constructed to meet stringent safety requirements. LNG produced is stored at -160 celcius.

Another tank of 130,000 cu m is being added for MLNG Tiga, with three 112-inch pipelines to transfer chlorinated seawater to the LNG modules, three pipelines to transport LNG from the liquefaction modules to the storage tanks, and two LNG pipelines to the loading jetty.