

Report on the 4th LNG Supply, Storage & Transportation Philippines Forum 2017, 8 – 10th Nov 2017, Manila, Philippines

The event was held at the SMX AURA, Manila. It was organized by All Events Group, Singapore. The event comprised of one day training workshop on 8th Nov 2017, followed by two days forum. The training workshop on “Developing LNG Infrastructure for Power” was facilitated by Mr. Nor Aslan Khan, Director, NEWGAS Pte Ltd, Singapore. Total of 137 delegates from 13 countries attended the Forum.

Among speakers were those from Philippines Department of Energy, PNOC, Shell Global, TOTAL, Wartsila, Energy World Corporation, Thailand Ministry of Energy, and PT PGN Indonesia. Executive Director of ANGVA presented on “LNG as a Clean & Sustainable Fuel for the Transport Sector in Philippines”.



Top: At the Forum

Highlights of presentations:

Philippines:

- i. In 2016, natural gas made up 6.3 % of the total Primary Energy Mix of Philippines. Oil 35.5%; Coal – 20.5%; Geothermal – 18.2%; Biomass – 14.3%; Hydro – 3.9%; Biofuel – 0.9%; and Solar/Wind – 0.3 %. Total energy was 52.2 Mtoe.
- ii. The Malampaya Gas Field, producing ~380 mmscfd, is the ONLY source of natural gas for Philippines and production is declining. The Gas Field concession expires in 2024 and the field is expected to be depleted by 2027. The gas supply is mainly to Power Plants for generation of electricity:

<i>KEPCO Power Plant at LLijan</i>	– 1200 MW.
<i>First Gen Power Plant at Sta Rita</i>	– 1000 MW.
<i>First Gen Power Plant at San Lorenzo</i>	– 500 MW
<i>First Gen Power Plant at San Gabriel</i>	– 414 MW
<i>First Gen Power Plant at Avion</i>	– 97 MW
<i>Shell Pilippinas Refinery</i>	– 214 MW.

- iii. Philippines does not have enough gas for further expansion of the gas infrastructure and to supply to non-power sectors. Previously a small amount of gas was supplied to CNG buses in Manila however these buses had ceased operation a few years ago.
- iv. Philippines need to take action to ensure enough gas supply to the existing power plants with the depletion of the Malampaya gas field. The only logical source of new gas supply for Philippines is to import Liquefied Natural Gas (LNG). With the importation of LNG, gas infrastructure can be expanded to supply gas to the industrial, commercial, residential and transport sector.
- v. Department of Energy plan to build an integrated LNG receiving and distribution terminal at Batangas with a reserve initial power plant capacity of 200 MW. Target date of completion is 2020. The plan includes transforming Philippines as the LNG trading and trans-shipment hub in the Asia Pacific region. The project implementer is PNOG.
- vi. Energy World Group, an independent, integrated energy company engaging in the production and sale of power and natural gas, has independently developed an LNG Hub Terminal at Pagbilao to act as an onward distribution of LNG throughout the Philippines. This Hub is ready to be used pending resolving of some issues. A 650 MW CCGT Power Plant is also being constructed at this site.

Thailand:

- vii. Thailand relies heavily on gas (e.g. 70% of power generation is using gas) as source of energy. Domestic production of natural gas is declining and soon Thailand will have to rely on imported LNG.
- viii. In addition to the expansion of the current Map Ta Phut LNG Terminal (increase to 1.5 MTPA by 2019), a new LNG Receiving Terminal (7.5 MTPA) has been approved to be constructed by 2022. There are plan to construct three FSRUs off the coast of Thailand. PTT is also conducting a feasibility for construction of LNG distribution / receiving terminal in Myanmar (annual capacity of 10 million tons), in order to facilitate onshore LNG transportation to Thailand.

Indonesia:

- ix. Indonesia offers big investment opportunity related to LNG infrastructure, mainly for small scale LNG. With current supply & demand condition, LNG supply opportunity to Indonesia would be expected to occur post 2020. LNG import to Indonesia is highly regulated by government based on national gas balance.
- x. Existing LNG facilities in Indonesia: LNG Plants at Bontang, Tangguh & Donggi-Senoro; Regas Terminal at Arun; FSRU at Lampung and Jawa Barat; FSU at Benoa; and FSU and FRU at Bali.
- xi. Indonesia's plan for LNG facilities (~ 5 LNG Receiving Terminals, > 20 Small LNG Receiving Terminals, and > 10 Small LNG Carriers). Most projects will be Small Scale LNG Projects (capacity of 2 – 195 mmscfd). Most projects will be for power sector, with preference for total control of supply chain, exclusive access, and short BOOT scheme.
- xii. Biggest challenge will be the Government Policy on Gas Allocation and Price. Gas Price at plant gate is capped at 14.5 % ICP (Indexation with Crude Price).

Reported by: Lee Giok Seng, Executive Director, ANGVA, 14th Dec 2017.