

**Report on the 8<sup>th</sup> Annual LNG Transport, Handling & Storage Forum, 4<sup>th</sup> – 7<sup>th</sup> September, Bali, Indonesia**

This annual LNG event was held at Padma Resort, Kuta, Bali, Indonesia. It was organized by All Events Group (AEG), Singapore and endorsed by ANGVA. The event comprised of one day Master Class workshop on 4<sup>th</sup> Sept 2018, followed by two days forum, and a site visit to a Small Scale LNG FSRU at Benoa, Bali on the last day. The forum was attended by 120 delegates while the Master Class was attended by 18 people, and site visit by 20 people.

The Master Class was facilitated by Mr. Nor Aslam Khan of newGAS Pte Ltd, Singapore and Mr. Vincent Chua of Bureau Veritas M&O Southeast Asia. Nor Aslam covered “Strategies for Small Scale Fuel Infrastructure for “LNG to Power” Projects in Indonesia” and Vincent Chua covered “LNG Floating Power Plants” and “Qualification of New Technology Methodology and Type Approval Process”.

The forum with the theme “Accelerating Infrastructure and Distribution Projects along the Natural Gas and LNG Value Chain for Power Generation” saw speakers from Indonesia, Philippines, Singapore, Pakistan, and Korea presenting on markets, projects and technologies related to LNG and LNG for Power.



**Top:** At the Forum

**Highlights of presentations:**

**Indonesia:**

- i. Indonesia’s Primary Energy Mix in 2050 is expected to be: Renewables 31%, Coal 25%, Gas 24 %, and Petroleum 20%, as compared to 2015 whereby Petroleum was 46%, Coal 26%, Gas 23%, and Renewables 5%.
- ii. Indonesia Domestic gas demand is growing. Since 2013 gas supply to Domestic was higher than export with 60% of gas distributed domestically. Domestic demand average increase was 8% from 2003 to 2017.
- iii. Utilization of gas in Indonesia in 2017 was: LNG Export 28.49%, Industry 23.53%, Electricity 13.67%, Piped Gas Export 12.62%, Fertilizer 11.15%, LNG Domestic 5.53%, Oil Lifting 2.77%, LPG Domestic 2.11%, Gas for Transport 0.08%, and City Gas 0.05%.

- iv. By 2035, Indonesia is expected to have a gas deficit of ~ 5 bcfd, requiring significant infrastructure to be built and LNG to be imported.
- v. Since 2012, LNG plays a vital role for domestic gas utilization in Indonesia with first LNG supplying Power Plants in Java island: Currently LNG terminals are:
  1. LNG Terminal in Arun, Aceh – (operated by PT Perta Arun Gas), supplying gas Power Plants and Fertilizer Plant in Sumatera island.
  2. FSRU in Lampung – (operated by PT PGN LNG), supplying gas to industrial customers including PLN in Lampung and West Java area.
  3. LNG Terminal in Benoa, Bali – (operated by PT Pelindo Energy Logistics), supplying gas for Pesangaran Power Plant in Bali.
- vi. The Power Sector brings great opportunity for the development of LNG infrastructure throughout the nation, however it has to face the challenging price policy set by the government of ceiling selling price of LNG at 14.5% ICP (ICP – Indonesian Crude Price). At current condition of ICP 70 USD/bbl and LNG FOB Price at 11.5% ICP, it is hard to commercially meet the CAP price of 14.5% ICP.

### **Pakistan**

- i. Pakistan has been facing shortage of gas supply. In the year 2017, Gas Demand was 6,200 mmcf/d while supply was only 3,800 mmcf/d creating a shortfall of 2,400 mmcf/d. It was projected that by year 2020, Gas Demand will be 7,000 mmcf/d with supply only at 3,000 mmcf/d thus creating shortfall of 4,000 mmcf/d.
- ii. To make up for the gas supply shortfall Pakistan has started to import LNG since 2015. Oil and Gas Regulatory Authority (OGRA) of Pakistan has introduced a Third Party Access Regulation for the importation and utilization of LNG into Pakistan. Pakistan currently has two LNG Receiving Terminals in operation.
- iii. The cost of imported LNG is higher than that of domestic gas. Imported LNG volumes are expected to be around 2 bcfd in a short time. Cost of imported LNG is variable and presently around USD10/mmbtu. If costs of domestic gas and imported LNG are pooled, the end-tariffs of gas must be raised or revenue deficit issues will arise.

### **Site Visit**

A site visit was made to the Benoa LNG Terminal, Bali. This was reportedly the world first small scale LNG Chain project. The facility comprised of FSU of 26,000 m<sup>3</sup>, and FRU of 50 mmscd gas sent-out. The gas was sent to a 200 MW Plant via a 3.7 km gas pipeline from the port. LNG is sourced from Bontang LNG Plant using an LNG carrier of 22,000 m<sup>3</sup> storage capacity.

