

# Appendix

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## Appendix Summary of the Workshop

**Date:** 15–16 February 2017

**Venue:** Courtyard by Marriott Bangkok, Bangkok, Thailand

**Participants:**

- Mr Koh Sila, Ministry of Mines and Energy (Cambodia)
- Dr Gusti Suarnaya Sidemen, Directorate General of Oil and Gas (Indonesia)
- Mr Ardhy N Mocobombang, Pertamina (Indonesia)
- Mr Ahmad Zuhairi Muzakir, Prime Minister's Department (Malaysia)
- Ms Wan Rufiza Wan Yusop, PETRONAS (Malaysia)
- Ms Corina Samsor, PETRONAS (Malaysia)
- Ms Melita V. Obillo, Department of Energy (Philippines)
- Mr Prasert Sinsukprasert, Ministry of Energy (Thailand)
- Dr Siri Jirapongphan, Petroleum Institute of Thailand (Thailand)
- Mr Dang Hai Anh, Ministry of Industry and Trade (Viet Nam)
- Mr Cao Tuan Si, PetroVietnam (Viet Nam)
- Mr Jun Okunishi, Ministry of Economy, Trade and Industry (Japan)
- Mr Masaaki Sugiyama, Petroleum Association of Japan (Japan)
- Mr Toshinobu Ishikawa, Japan Cooperation Center Petroleum (Japan)
- Mr Shinji Marumo, Japan Cooperation Center Petroleum (Japan)
- Mr Surachit Songcharoen, ASCOPE
- Mr Techin Arunakul, ASCOPE
- Mr Shigeru Kimura, Economic Research Institute for ASEAN and East Asia
- Mr Han Phoumin, Economic Research Institute for ASEAN and East Asia
- Mr Tetsuo Morikawa, The Institute of Energy Economics, Japan
- Mr Kiminori Maekawa, The Institute of Energy Economics, Japan
- Ms Tomoko Maruyama, The Institute of Energy Economics, Japan
- Ms Mari Yoshida, The Institute of Energy Economics, Japan

## **Day 1**

### **Opening Session**

Mr Kimura (ERIA) and Mr Sinsukpraser (Ministry of Energy of Thailand) welcomed all participants with sincere gratitude, and pointed out the importance to improve the resilience of oil supply in the ASEAN countries.

### **Session 1: Introduction**

Mr Morikawa (IEEJ) briefed participants on the outline of the study. Mr Kimura suggested the study should consider not only national and international but also the regional aspects.

### **Session 2: Japan (Great East Japan Earthquake)**

Mr Morikawa, Mr Marumo (JCCP), Mr Okunushi (METI), and Mr Sugiyama (PAJ) explained how the Japanese government and the oil industry coped with and learned from oil supply disruption due to the Great East Japan Earthquake in 2011. The major discussion points were as follows:

- Japanese refineries are basically located according to demand distribution. During the closure of Sendai refinery, the demand was covered primarily by raising output at other refineries. Increase in product imports was limited. The government temporarily relaxed stockpiling obligation of oil companies from 70 to 45 days to increase the product supplies.
- As for dividing the roles within the government, the Basic Act on Disaster Control Measures stipulates that the Cabinet Office and local government(s) are in command in case of emergency. The METI, other government agencies, and Self-Defense Force operate under the supervision of the Cabinet Office and local government(s). The Revised Oil Stockpiling Law sets a rule to establish the Joint Operation Room at PAJ, which has the key role in distributing oil products in case of emergency.
- The government traditionally anticipates oil supply insecurity abroad (such as the supply disruption in the Middle East), but after the earthquake in 2011, the scope of oil supply security expanded to include domestic aspects. Measures taken after the earthquake include product reserves, enhancing resilience of refinery and terminals, selecting 'core stations', and fuel reserves at user level.
- Industry standard was already in place before the 2011 earthquake to cope with earthquake and other supply insecurity risks. However, fine-tuning of such standard has been ongoing since 2011 to incorporate the lessons from the earthquake and other supply disruption cases.

### **Session 3: Oil Supply Resilience in Southeast Asia**

Mr Songcharoen (ASCOPE, PTT) presented his view of oil supply resilience in the ASEAN, Mr Mocobombang (Pertamina) for Indonesia, and Mr Muzakir (EPU of Malaysia) for Malaysia. The major discussion points were as follows:

- ASCOPE described the outline of the ASEAN Petroleum Security Agreement (APSA), but revealed its uncertain future after the current agreement expires in 2023. ERIA argued the need to renew APSA.

- PTT identified tsunami and storm incidents; or sabotage at gas separation plants, refineries, pipelines, and other infrastructure as threats to the oil supply in Thailand. Major countermeasures include stockpiling (currently more than 25 days), transportation switch (e.g. lorry to railway), product swap among suppliers, and enhanced jetty. Business continuity plan (BCP) is already in place.
- Pertamina identified earthquake and tsunami as major supply risks in Indonesia. However, as far as refinery is concerned, Cilacap is the only refinery that is vulnerable to tsunami because of its location (facing the Indian Ocean). Refinery locations were strategically determined so as not to be affected by tsunami and other supply insecurity risks. The major countermeasure is stockpiling. The government is planning to establish a strategic petroleum reserve and a centrally crude terminal in Kalimantan, for which international cooperation is being sought.
- The Economic Planning Unit of Malaysia pointed out that the present Malaysian disaster management protocol at the national level only covers flood, landslide, typhoon, earthquake, and industrial disaster (mechanical troubles, accidents, etc.). These do not exclusively pose a threat to oil supply security in Malaysia but to economic stability and public order in general. BCP is in place at PETRONAS and electrical utility companies, including Tenaga Nasional Berhad (TNB). It is vital for the country to conduct a national-level risk assessment on energy sector. A study on this matter is being proposed.

## Day 2

### Session 1: Oil Supply Resilience in Southeast Asia

Mr Sila (Ministry of Mine and Energy of Cambodia), Dr Sidemen (Ministry of Energy and Mineral Resources of Indonesia), Ms Obillo (Department of Energy of the Philippines), Dr Jirapongphan (PTIT of Thailand), and Mr Anh (Ministry of Industry and Trade of Viet Nam) presented oil supply resilience in their respective countries. The major discussion points were as follows:

- The Ministry of Mine and Energy identified typhoon and flood as the main threats to oil supply in Cambodia. The government is working on upgrading roads, and developing other modes of oil transportation – such as railway and vessel – while setting further countermeasures such as developing oil terminals, refineries, strategic petroleum reserve, and onshore pipelines. The ministry values international cooperation, both bilaterally and multilaterally, like the ASEAN Petroleum Security Agreement/Coordinated Emergency Response Measures (APSA-CERM). A gas station is obliged to stockpile for its 30 days consumption but this regulation is not working (presumably due to lack of space and investment). Inter-ministry coordination, especially in terms of price regulation, is problematic due to political sensitivity.
- The Ministry of Energy and Mineral Resources identified excessive demand hike, natural disasters (tsunami, earthquake, and eruption), market and industry emergency, and political stability (instability) as major threats to oil supply in Indonesia. Emergency response system is available at company, regional, and national levels. Existing laws states oil supply security, disaster mitigation, and emergency response plan, but no detailed guideline is yet in place. Past oil supply disruption cases involved fuel switching (gas to diesel) at power plant, and oil transportation by air. The price policy (throughout Indonesia) creates difficulty in terms of fuel distribution in remote areas.

- The Department of Energy identified natural disasters, accidents, and terror attacks as major risks to oil supply in the Philippines. The department has an Oil Contingency Plan that outlines the supply priority of oil in the country, and encourages companies to hold inventories in vulnerable areas. It also issued circulars such as the Mutual Product Supply Accommodation and Minimum Inventory Requirement. A BCP is in place in the oil industry, but emergency exercises are not taken seriously by participants. The department is aware of the need to develop risk assessment, and improve communication and coordination among relevant entities.
- PTIT briefed participants on the developments of Thai oil security measures, such as stockpiling, and explained that social unrest (anti-government demonstration) necessitated companies to draw up BCP. PTIT also pointed out that different quality standards of gasoline could undermine the flexibility of the supply in the ASEAN region, and proposed to move the taxation point to pipeline depot to encourage companies to build inventory close to the demand site.
- The Ministry of Industry and Trade identified earthquakes, hurricanes, floods, fires, mechanical problems, accidents, terror attacks, and poor communication as major threats to oil supply in Viet Nam. A general institutional framework is in place to deal with emergencies. Stockpiling is the major countermeasure to oil supply insecurity, and the ministry calls for regional stockpiling initiatives.

## **Session 2: Possible International Cooperation**

Mr Okunishi (METI) briefed participants on the oil stockpiling of IEA and the ASEAN, and pointed out that refinery capacity plays a key role in oil product disruption. Mr Ishikawa explained aspects of the HRD, Joint Technical Cooperation Programs, and other customized training courses at JCCP.

## **Wrap Up and Closing Activities**

Mr Morikawa (IEEJ) summarized the discussion and requested participants to provide necessary information for the report that will be submitted to ERIA in June 2017. Mr Kimura (ERIA) and Mr Okunishi (METI) expressed gratitude for their participation and for the productive discussions during the workshop.