

Appendix. Outcomes of the Seminar

The Seminar on

'Create a Better Social Acceptance for Electric Power Infrastructure – Coal-fired Power Plant'

26 June 2017

Grande Centre Point Ratchadamri, Bangkok, Thailand

08:00 - *Registration and Welcome*

09:10 - 09:20 Opening Session

Opening Remarks

*By **Mr. Shigeru Kimura**, Special Advisor to President for Energy Affairs,
Energy Unit, Research Department, Economic Research Institute for
ASEAN and East Asia (ERIA)*

Key messages of the session:

- Coal is currently one of the main power sources in the East Asia Summit region. In its Energy Outlook 2016, ERIA forecasts that coal power generation will still be dominant in the EAS region through 2040. While this power source is expected to contribute to the '3 E's' (Energy security, Economy, and Ecology) in each country's energy mix, it should be used in a clean manner.
- Today's seminar will be a good opportunity to consider not only ways to improve social acceptance of coal-fired plants but also the best energy mix for each country.

09:20 - 09:25 Welcome Remarks and Keynote Speech

*by **Dr. Twarath Sutabutr**, Director-General, Energy Policy and Planning
Office (EPPO), Ministry of Energy (MOEN), Thailand*

Key messages of the session:

- Today's seminar will have presentations of panelists from Indonesia, Japan, the Philippines, and Viet Nam. Each of these countries is doing its utmost to achieve the best energy mix by satisfying the 3 E's. Thailand appreciates the opportunity to share information and experiences with the panelists.

09:25 - 09:30 *Group Photo*

09:30 - 10:05 Session 1: Coal Policy in Thailand

- Policy, trend and role of coal

Presentation 20 min. + Q&A

*by **Dr. Prasert Sinsukprasert**, Deputy Director-General, EPPO, MOEN,
Thailand*

Key messages of the session:

- Thailand revised its Power Development Plan (PDP) in 2015 with the purpose of building an optimal energy mix. The principles behind the plan were: enhancement of reserve margin, promotion of power system infrastructure investment projects, integration with the Energy Efficiency Development Plan, the Alternative Energy Development Plan and fuel diversification.
- Reduction of fuel dependency on natural gas is one of the most important issues in the PDP. In addition to renewable and nuclear energy, clean coal is expected to contribute to fuel diversification.
- Of the total new installed capacity of around 57 GW, nine clean coal-fired power plants with a total capacity of around 7 GW are projected to be installed by 2036. Today, new coal-fired power plant (CPP) projects such as Krabi and Thepa are facing some difficulties. The government of Thailand has exerted every effort to increase acceptance of CPPs and responses from various sectors have been encouraging, with

the notable exception of those from some international non-governmental organizations and political interest groups.

10:05 - 10:25 *Coffee Break*

10:25 - 12:35 Session 2: Sharing Experiences in Asian Countries

- *How are emissions from CPPs controlled and managed?*

- *How are stakeholders involved?*

- *What role does the government play?*

Moderator: Dr. Yanfei Li, Energy Economist, Energy Unit, Research Department, ERIA

Presentation 20 min. each + Q&A

by Dr. Eri Prabowo, Director Operation I, PT. Indonesia Power, Indonesia

by Mr. Motohisa Sakurai, Manager, Engineering Office, International Business Development Department, Electric Power Development Co., Ltd. (J-POWER), Japan

by Mr. Edgardo Cruz, President, Philippine Coal Plant Users' Group (PCPUG), Philippines

by Mr. Vu Viet Dung, Deputy Director of Thermal and Nuclear Power Engineering Center, Power Engineering Consulting Joint Stock Company 2 (PECC2), Viet Nam

Key messages of the session:

- In Indonesia, though, continuous emission monitoring systems (CEMS) and electrostatic precipitators (ESP) have been installed in all coal-fired plants, only a few of these plants are equipped with flue gas desulphurization systems (FGD) due to their high cost. Fly ash and bottom ash from coal-fired power plants are recycled by transforming them into concrete, paving blocks, and cement.

- The government of Indonesia has the corporate performance assessment program in environmental management called 'PROPER', which has been developed by the Ministry of Environment in 1995. In the program, the maturity of the environmental management schemes of each company (including electric utilities) is evaluated according to five grades: gold, green, blue, red, and black. Companies that comply with all the requirements of environmental management are awarded the blue grade.
- However, to gain the higher grades (gold or green), companies have to undertake other Corporate Social Responsibility activities such as wildlife conservation. Results of the assessment are regularly announced in newspapers.
- In Japan, emission standards applied to coal-fired power stations vary based on each plant's commercial operation date, location, and municipal government. In the case of the replacement of the Isogo coal-fired power station of J-POWER, the local government of Yokohama City asked the company to comply with emission standards that were as strict as the standards set for the gas-fired power plant located next to the coal-fired power station.
- Data from the emission monitoring system at the Isogo power station are transmitted to Yokohama City in real time for monitoring. The transparency that this system provides allows the company to gain the local government's trust.
- The Isogo power station also accepts about 6,000 visitors and holds an 'Annual Open Day' every year. The site tour and family events organized by the facility help foster good relationships with the locals.
- In the Philippines, the law provides that the private sector meet the environmental standards set by various government agencies, including the Department of Environment and Natural Resources.
- In addition to the environmental standards, the Department of Energy has a financial program for host communities of the coal-fired power plants. The host communities are entitled to one centavo per kilowatt-hour of the electricity sales of the generation facilities and/or energy resource development projects located in all *barangays*, municipalities, cities, provinces, and regions.

The main objective of the program is to recognize and provide recompense for the contribution made by the host local government units or municipality. The funds will be used for such projects as electrification (50%), education and livelihood (25%), and reforestation, health, and environmental enhancement (25%).

- In Viet Nam, EVN power plants make up as much as 60% of the country's total power capacity, including the coal-fired power stations using subcritical and supercritical technology such as Duyen Hai and Vinh Tan.
- However, some coal-fired power plants had serious environmental incidents recently: Vinh Tan 2 had a fly ash incident in May 2015, and Formosa had polluted the waters by discharging untreated chemical waste water into the sea in April 2016. The incidents caused a shift in residents and governmental authorities' sentiments toward CPPs. Locals protested while local governments and other authorities spent a longer time reviewing and approving new CPPs.
- This experience clearly shows that compliance with the environmental protection law and other regulations during the construction and operation of a plant is one of the most important factors that can enhance social acceptance.

12:35 - 12:40 Closing Remarks

by **Mr. Ichiro Kutani**, *Sub-Leader of the Project, Senior Economist, Manager of Global Energy Group 1, Assistant to Managing Director, Strategy Research Unit, The Institute of Energy Economics, Japan (IEEJ), Japan*

Key messages of the session:

- The importance of coal-fired power in each country's energy mix was validated by today's seminar. Sharing information and experiences with other countries, too, is one way to improve social acceptance of CPPs.