



**Asia-Pacific  
Economic Cooperation**

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Agenda Item: 6

## **Notable Energy Developments Since EWG45 Singapore**

Purpose: Information  
Submitted by: Singapore



**46<sup>th</sup> Energy Working Group Meeting  
Da Nang, Viet Nam  
18–21 November 2013**

## **NOTABLE ENERGY DEVELOPMENTS SINCE EWG45 SINGAPORE**

46th APEC Energy Working Group Meeting  
18 – 21 November 2013, Da Nang, Vietnam

### **Introduction**

1. As an island city-state with no indigenous energy resources, Singapore has more than its fair share of energy challenges. Nevertheless, we are committed to realising a smart energy economy, and to bringing about reliable, sustainable and competitively-priced energy to fuel our growth.

2. To achieve these goals, Singapore has adopted a long-term holistic approach based on the following key recommendations of the Economic Strategies Committee:

- Diversify energy sources
- Enhance infrastructure and systems
- Increasing energy efficiency
- Strengthen green economy
- Pricing energy right

3. Key developments since EWG 45 in Koh Samui in March 2013 include:

#### **(a) Liquefied Natural Gas (LNG)**

4. Singapore's first LNG terminal commenced commercial operations in May 2013. The LNG terminal has an initial throughput capacity of 3.5 million tonnes per annum (Mtpa), which will increase to 6 Mtpa by the end of 2013 with the completion of a third storage tank. To ensure that our infrastructure in Singapore can cater to our future energy needs, a fourth LNG storage tank will be built which will boost the capacity of the terminal to 9 Mtpa by 2016. This fourth tank will enhance our energy security by allowing further diversification of our fuel sources. The additional capacity will also allow Singapore to respond to new opportunities in global LNG markets and to play a greater role in the region by supporting LNG trade and providing ancillary services.

5. With regard to the proposed LNG import framework, the Energy Market Authority (EMA) has conducted the second round of consultation and decided on a Competitive Licensing Framework (CLF) to guide our procurement of future tranches of LNG. The CLF entails a competitive process to select the next LNG importer for Singapore, based on offers from sellers and feedback from buyers. EMA will be releasing its draft determination paper by the end of 2013, and the finalised LNG import framework is expected to be ready by 1Q 2014.

#### **(b) Renewable Energy**

6. EMA launched a micro-grid test-bed on Pulau Ubin, an offshore island to the northeast of Singapore in early October 2013. With this launch, residents and businesses on Pulau Ubin have access to cleaner, cheaper and more reliable electricity generated from renewable energy sources such as biodiesel and solar PV. The test-bed will also allow EMA to understand and better manage intermittent generation sources within the national grid on the mainland.

7. Singapore is also preparing our system to effectively incorporate solar energy when the technology becomes commercially viable. In this regard, EMA is enhancing its power system operations capabilities, by building up solar forecasting competencies, developing an understanding of the diversity of solar output across Singapore, and studying how intermittent sources can be accommodated without affecting grid stability. EMA will also be launching a public consultation on the regulatory framework for intermittent generation sources, such as solar energy.

#### **(c) Electricity Futures Market**

8. EMA is working with the electricity industry towards the development of an Electricity Futures Market in Singapore to enhance competition in the wholesale and retail markets. The electricity futures market provides a platform for the electricity industry and consumers to hedge their risks, and serves as an alternative avenue for independent retailers to enter the market by enabling them to purchase longer-term hedges, further spurring retail competition to the benefit of end-consumers.

9. To date, six generation companies in Singapore have already indicated interest in collaborating with the Singapore Exchange (SGX) to develop the futures market. Commercial discussions for the development of the futures market are in progress and an industry workgroup is in the process of designing the electricity futures contracts and establishing a market making arrangement that will ensure sufficient liquidity for the trading of electricity futures. SGX is also currently working on launching a trial for the futures market in 2014.

#### **(d) Demand Response Programme**

10. EMA is introducing a Demand Response programme to enhance competition in the National Electricity Market of Singapore (NEMS). The Demand Response Programme will enable consumers (under the contestable sector of the NEMS) to reduce their electricity demand voluntarily, in exchange for a share in the system-wide benefits. These reductions typically take place when wholesale prices in the NEMS are high or when additional resources can improve system reliability. The Programme is also expected to moderate price spikes, lower energy costs and generate system-wide savings. EMA has completed the consultation process and is currently finalising its review of the feedback. The scheme is expected to be implemented in 2015.

#### **(e) Energy efficiency**

11. An Energy Efficiency for Everyone (E<sup>3</sup>) Hackathon was held in October 2013 to crowd-source for ideas to encourage energy efficiency and conservation amongst household consumers. The winning idea was for a mobile phone application that allows users to determine how much energy to save in order to purchase an item they desire. Singapore seeks to continue these efforts to promote awareness of energy efficiency and leverage on technology to manage our energy demand.

**(f) Singapore Energy Statistics**

12. The Energy Market Authority released the third Singapore Energy Statistics (SES) report in October 2013. The SES is an annual publication which provides an integrated one-stop compilation of Singapore's key energy statistics (including supply, consumption, and prices) and trends in the electricity and gas sectors. This is part of Singapore's efforts to support the development of a dynamic energy sector. The SES is available for download at: <http://www.ema.gov.sg/media/files/publications/SES2013.pdf>

**(g) Singapore International Energy Week**

13. The sixth run of SIEW was successfully held from 28 October to 1 November 2013 and saw more than 10,000 participants from around the world. In the SIEW Opening Keynote, Qatargas CEO Sheikh Khalid bin Khalifa Al-Thani shared his views on the diverse challenges facing the global gas market, including the pricing, outlook and structural issues in North America, Europe and Asia. In addition, eminent energy leaders from the public and private sectors engaged in active discussions at the various conferences, roundtables and networking events taking place throughout the week.

14. Some of the notable participants were: H.E. Dr Cham Prasidh, Senior Minister and Minister of Industry, Mines and Energy of Cambodia; H.E. Datuk Seri Panglima Dr Maximus Ongkili, Minister of Green Technology, Energy And Water of Malaysia; YB Pehin Dato Dr Awang Haji Mohammad Yasmin bin Haji Umar, Minister of Energy of Brunei Darussalam; H.E. Suhail Mohammed Al Mazrouei, Minister of Energy of the United Arab Emirates; The Hon. Mark McArdle, Minister of Energy and Water Supply of Queensland, Australia; Mr Adnan Z Amin, Director General of the International Renewable Energy Agency; and Mr Jose Maria Figueres, President of Carbon War Room and the former President of Costa Rica. Senior official representatives from APEC economies including Japan, Thailand, United States and Vietnam were also present at SIEW 2013.

15. The next SIEW will be held from 27 to 31 October 2014.

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