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CEO'S MESSAGE

I hope everyone had a good break over the Chinese New Year holidays.

We started the year with a series of new and re-appointments to our various governance panels. The Rules Change Panel (RCP), Market Surveillance and Compliance Panel (MSCP), and the Dispute Resolution Counsellor (DRC) are critical for the evolution

and governance of the National Electricity Market of Singapore (NEMS). I would like to take this opportunity to convey my sincere appreciation to members of the RCP and MSCP, as well as the DRC, for their dedication and invaluable contributions to improving the NEMS.

One of the rule changes that the RCP supported in recent months pertains to the compensation for generators adversely affected by price revisions. This rule change, which ensures that generators are fairly compensated when there are price revisions, was approved by the Energy Market Authority in February and will take effect in September this year.

In the wholesale market, we welcomed a new retailer and registered three new intermittent generation source facilities in the first two months of the year. In terms of performance, the Uniform Singapore Energy Price (USEP) rose to \$98.57/MWh in February as a result of a drop in the supply cushion. This is the highest monthly USEP since the \$105.91/MWh reached in August 2015.

As we commence another year of trading, I am glad to note that the NEMS has remained efficient and stable after 15 years of operation. We will continue to work closely with our regulator and market participants to develop the market so that it remains sustainable and relevant in the long-run.

At the same time, I hope to see EMC play a bigger role in helping other countries realise the benefits of market liberalisation. The NEMS today is a role model for countries in Asia and the Middle East that are looking at restructuring their electricity markets. The confidence that other countries have in the NEMS and in EMC is further affirmed with the signing of the memorandum of understanding between EMC and the Abu Dhabi Department of Energy in February. I look forward to more opportunities to export our knowledge and capabilities in support of Singapore's efforts to promote bilateral collaboration in the energy sector.

Toh Seong Wah
Chief Executive Officer

NEW ENTRANTS TO THE NEMS

New Market Participant and Facilities Registered in the NEMS

The National Electricity Market of Singapore (NEMS) welcomed a new market participant (MP), Peerer Energy Pte Ltd, which joined the market on 9 February as a retailer. Peerer Energy is the first new MP registered this year, bringing the total number of retailers to 23.

In addition, three new intermittent generation source (IGS) facilities were registered in the first two months of 2018 – Sembcorp Solar Singapore Pte Ltd registered a 2.02MW facility on 31 January, Sun Electric Energy Assets Pte Ltd registered a 0.15MW facility on 15 February, and Sunseap Leasing Pte Ltd registered a 1.02MW facility on 23 February. The three new facilities raised the total registered capacity of IGS facilities in the NEMS to 27.53 MW, or 0.2 percent of the total generation registered capacity.

APPOINTMENTS IN GOVERNANCE PANELS

Appointment of the 2018-2020 Rules Change Panel

The Rules Change Panel (RCP) plays an integral role in shaping the Singapore Wholesale Electricity Market (SWEM), enhancing its efficiency and maintaining a level playing field. It does so by recommending to the EMC Board changes to the Singapore Electricity Market Rules, which govern the wholesale electricity market operations of the National Electricity Market of Singapore (NEMS).

As the term of the previous panel members ended on 31 December 2017, the EMC Board has appointed the following members to the RCP for the new term that runs from 1 January 2018 to 31 December 2020.

Member category	Nominated by	Member
Chief Executive Officer of EMC (Chairman of Panel)	-	Toh Seong Wah
Employee of the EMC not being the Chief Executive	EMC Board Chairman	Henry Gan
Representative of the PSO	PSO	Soh Yap Choon
Representatives of the generation licensee class of market participant	PacificLight Power	Marcus Tan*
	Senoko Energy	Tan Jun Jie
	Tuas Power Generation	Tony Tan
Representative of the transmission licensee class of market participant	SP PowerGrid (agent of SP PowerAssets)	Carol Tan
Representatives of the retail electricity licensee class of market participant	Keppel Electric	Sean Chan
	Red Dot Power	Vijay Sirse
	Seraya Energy	Daniel Lee
Representative of the wholesale electricity trader class of market participant	Sembcorp Solar Singapore	Matthew Yeo
Representative of the market support services licensees	SP Services	Ho Yin Shan
Person experienced in financial matters in Singapore	Institute of Singapore Chartered Accountants (ISCA)	Tan Chian Khong
Persons representing the interests of consumers of electricity in Singapore	Consumers Association of Singapore (CASE)	Dr Toh Mun Heng
	Singapore Chemical Industry Council (SCIC)	Fong Yeng Keong

*Marcus Tan stepped down as a RCP member from 25 January 2018.

EMC thanks all outgoing members for their invaluable commitment and contributions to the RCP.

Re-appointment of MSCP Members

EMC is pleased to announce that the EMC Board has re-appointed Philip Chua and Professor Walter Woon to the Market Surveillance and Compliance Panel (MSCP). Their new three-year terms began on 1 January 2018.

EMC expresses its appreciation to Mr Chua and Professor Woon for continuing to devote their time and effort to support the National Electricity Market of Singapore (NEMS).

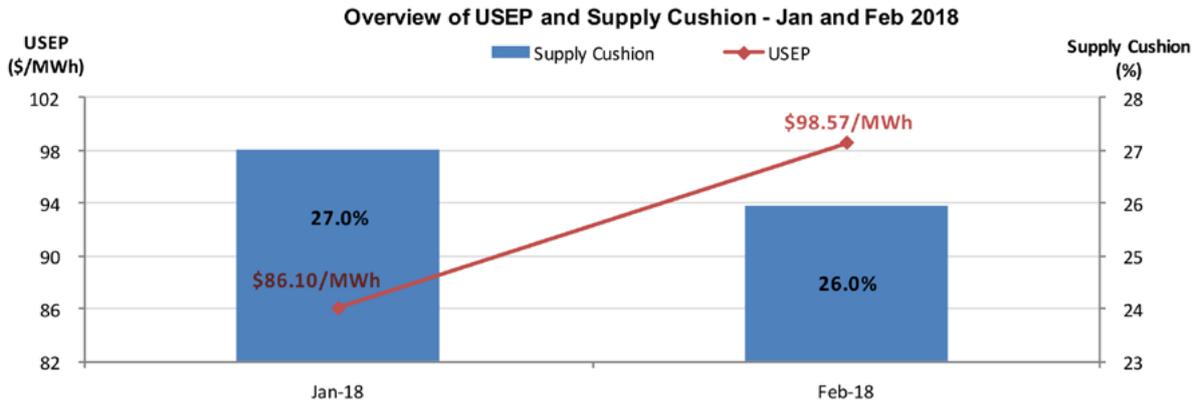
The MSCP comprises T P B Menon (Chair), Lee Keh Sai, Philip Chua, Professor Euston Quah and Professor Walter Woon.

Re-appointment of the DRC

The EMC Board has re-appointed George Lim as the Dispute Resolution Counsellor (DRC) for another three-year term beginning 1 January 2018.

EMC expresses its gratitude to Mr Lim for his continued commitment to the NEMS.

MARKET UPDATE



The supply cushion dropped 3.7 percentage points between January and February. This led to an increase in the monthly average Uniform Singapore Energy Price (USEP), from \$86.10/MWh in January to \$98.57/MWh in February. The monthly average USEP in February is the highest monthly level since August 2015's USEP of \$105.91/MWh.

RULE CHANGE UPDATE

Compensation for Generators Adversely Affected by Price Revision

In the Singapore Wholesale Electricity Market (SWEM), uniform marginal pricing is adopted to encourage generators to offer close to their true marginal costs.

However, when prices for a dispatch period are required to be revised ex-post, the revised market energy price (MEP) of a generator may be lower than the prices offered by the generator for offer quantities that were scheduled. A generator may therefore incur out-of-pocket costs or losses relative to its offer prices. This could increase uncertainty for generators, and undermine confidence in market prices.

A rule change was made to introduce compensation for generators if the revised MEP is lower than their offer prices for energy. This will ensure that the generators receive at least their offered prices for quantities that are generated in adherence to dispatch instructions.

This rule change was supported by the RCP in November 2017, and approved by the EMA on 8 February 2018. It will come into effect on 1 September 2018.

VISITORS TO EMC

EMC is privileged to be one of nine companies that signed memoranda of understanding (MOUs) with the Abu Dhabi Department of Energy (DoE) in February, for collaborations on smart utilities and capability development in UAE's largest emirate.

As part of the Abu Dhabi DoE's visit to Singapore in February, the delegation – led by Chairman, H.E. Eng. Awaidha Murshed Al Marar – also visited EMC's office to better understand the liberalisation journey and the operations of Singapore's electricity market. We look forward to sharing our knowledge and experience from operating Asia's first liberalised electricity market and collaborating with the DoE and its sector companies.



Minister for Trade and Industry (Industry), S Iswaran (third from right), with representatives from EMC and the Abu Dhabi Department of Energy at the MOU signing ceremony



EMC team with the delegation from Abu Dhabi

USER FORUMS

Market Information Sharing Forum (MISF)

The Market Operations team hosted the 97th session of the bi-monthly MISF on 11 January. During the forum, the following topics were shared with the attendees:

- Market performance and key highlights for 2017;
- System enhancements and projects; and
- Feature topics:
 - » Publication of risk exposure report; and
 - » Migration of Offer Management System (OMS) to the Submission Management System.

We would like to thank all participants for their continuous support and strong interest in the MISF. The next MISF is scheduled for 15 March. Market participants who are interested in presenting at future MISFs are encouraged to come forward.

Market Systems User Group (MSUG)

The bi-monthly MSUG forum was held on 22 February. EMC IT updated attendees on the following topics:

- Overview of NEMS systems availability year-to-date for FY17/18;
 - » Data Warehouse Server Refresh; and
 - » Server Hardware Application Refresh Project (SHARP).
- Overview of NEMS systems service desk calls received between February 2017 and January 2018;
- Overview of change releases deployed between February 2017 and January 2018;
- Major IT incidents and actions taken to resolve them;
- Upcoming planned NEMS maintenance;
- Completion of planned Disaster Recovery Exercise (Switchover);
- Upcoming planned Disaster Recovery Exercise (Switchback);
- Status updates on IT infrastructure projects:
 - » Status updates on application projects:
 - » Migration of Offer Management System (OMS) to the Submission Management System;
 - » Monthly Energy Uplift Charge (MEUC) system changes for Fixed Regulation Settlement Debit (FFSD);
 - » Publication of Risk Exposure Report;
 - » Net Allocated Regulation Price (AFP) for residential consumers with embedded Intermittent Generation Sources (IGS) facilities; and
 - » Review of mechanisms to mitigate credit default.

The next MSUG forum is tentatively scheduled for Thursday, 19 April.

EMC TRAINING PROGRAMME NEXT COURSE ON 17 AND 18 MAY 2018

EMC will be holding the next run of its two-day course *Understanding Electricity Markets* on 17 and 18 May 2018. Our staff will be conducting seven sessions covering the following topics:

- Understanding Electricity
- Why Reform and Regulation are Essential in the Electricity Industry
- The National Electricity Market of Singapore and its Unique Features
- Introduction to SGX Electricity Futures Market
- Pricing in Detail
- Market Settlement and Credit Risk Management
- How Consumers can Influence Electricity Markets
- The course dates for 2018 are as follows:
 - » 17-18 May
 - » 23-24 August
 - » 15-16 November

We advise you to book early to secure your place in the course date of your choice, and benefit from our early-bird discount.

Further details on the programme and on how to register are on our website, www.emcsg.com. For enquiries, please e-mail trainingprogramme@emcsg.com or contact Jan Lee at +65 6779 3000.

SEND US COMMENTS, FEEDBACK OR QUESTIONS

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Please send your comments, feedback or questions via e-mail to emc.newsletter@emcsg.com or via fax to +65 6779 3030. Thank you in advance for your time and effort.

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