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## CEO'S MESSAGE

The last two months of 2015 were relatively busy ones for all of us at EMC.

We leveraged on our regular Business Continuity Preparedness exercises in November and December to roll out the system changes for the Automatic Financial

Penalty Scheme (AFPS) as well as the Modelling of Minimum Stable Load (MSL), and to prepare our office systems for our office move in January. I am glad that the exercises proceeded smoothly despite the additional activities built in, and would like to thank our market participants (MPs) for your support.

With the systems rolled out for AFPS and MSL, we have successfully completed Phase 1 of the Demand Response, Compensation and Penalty (DRCAP) project. We are now focusing our efforts to ensure the smooth implementation of Phase 2 in 2016 for the Demand Response scheme.

Aside from system changes, we registered two new interruptible load (IL) facilities in the National Electricity Market of Singapore (NEMS) in November with a combined capacity of 2.1MW. We also welcomed two new retailers in November and December.

Still on the NEMS, the Energy Market Authority approved two rule changes in November – *Extending Planning Horizon of Annual Outage Plan* and *Rectification*

*of Settlement Formula for Net Participant Settlement Credit*. The first rule change took effect in the same month, while the second rule change will take effect in April 2016.

In the wholesale market, the monthly average Uniform Singapore Energy Price (USEP) fell below \$60/MWh in the last two months of the year at the back of a strong supply cushion. The USEP hit a historical low of \$57/MWh in November when the supply cushion exceeded 30 percent.

On a lighter note, my team and I look forward to moving into our new Shenton Way office in the new year. We have been preparing for the move since the second half of 2015, and welcome you to our office at SGX Centre 2 from 25 January 2016.

As a round up to 2015, I thank our MPs and other NEMS stakeholders for your ongoing support of the NEMS and the EMC team. I wish everyone good health and success in 2016.

**Toh Seong Wah**  
Chief Executive Officer

## DEMAND RESPONSE, COMPENSATION AND PENALTY PROJECT (DRCAP) – AN UPDATE

In November, EMC successfully rolled out the system changes for the Automatic Financial Penalty Scheme (AFPS) as well as the Modelling of Minimum Stable Load (MSL) and its financial compensation. This marked the completion of Phase 1 of the Demand Response, Compensation and Penalty (DRCAP) project.

The EMC team is now focusing on Phase 2 of the project which involves the system changes for the Demand Response (DR) scheme, scheduled to be rolled out in 2016. The exact implementation date has yet to be confirmed.

The first round of market trials for DR has been scheduled between 30 December 2015 and 26 January 2016, while the second round of market trials has been scheduled between 22 February and 21 March 2016. All market participants are encouraged to attend.

# EMC'S OFFICE MOVE

# Market



Reception



Boardroom



Pantry

As part of overall efforts to maximise synergies with our shareholder, Singapore Exchange (SGX), Energy Market Company (EMC) will be moving to SGX Centre 2 in January 2016.

We are excited about the move to the heart of Singapore's financial and commercial hub, and look forward to welcoming you at our new office. Accompanying this article are a few artist drawings, which provide a glimpse of our new office.

For those who regularly contact or visit us, you may wish to note our new address and contact details below, which are effective 25 January 2016:

Energy Market Company  
4 Shenton Way  
#03-01 SGX Centre 2  
Singapore 068807  
T: +65 6779 3000 F: +65 6779 3030

## RULE CHANGE UPDATES

The following rule changes were approved by the Energy Market Authority (EMA) in November 2015:

### Extending Planning Horizon of Annual Outage Plan

Under the Market Rules, the Power System Operator (PSO) conducts an annual exercise to coordinate the outage plans of market participants (MPs) for the upcoming year. This exercise produces an approved annual outage plan, which lists the outages scheduled to occur in the upcoming calendar year.

The EMA had, in a determination paper in July 2014, required that outage plans cover a three-year period instead of the previous one-year period. This rule change gives effect to the EMA's decision, by requiring MPs to submit indicative outage plans for the second and third years, and the PSO to form and publish a pro forma biennial outage plan based on these indicative outage plans. The pro forma biennial outage plan would be formed and published at the same time as the approved annual outage plan.

This rule change took effect on 12 November 2015.

### Rectification of Settlement Formula for Net Participant Settlement Credit

This rule change aims to correct an error in the formula for calculating the Net Participant Settlement Credit.

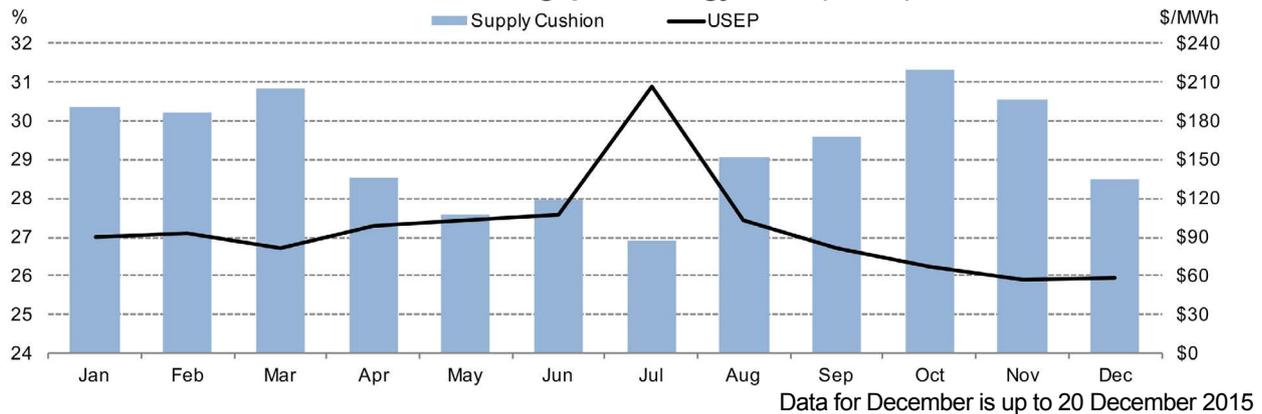
The original formula was based on the assumption that every MP had only one settlement account. In reality, an MP can have more than one settlement account if it owns embedded generators (EGs), as each group of EGs will be assigned a unique settlement account.

The Net Participant Settlement Credit of such an MP should therefore be the aggregate of settlement credits across all settlement accounts associated with the MP, and a rule change was made to reflect this.

This rule change will take effect on 28 April 2016.

# MARKET UPDATE

## Overview of Uniform Singapore Energy Price (USEP) in 2015



The monthly average Uniform Singapore Energy Price (USEP) declined in the last two months of the year and recorded a historical low in November at \$57/MWh. This was in line with the strong supply cushion, which hovered over 30 percent in November. Supply cushion measures the percentage of total supply available after matching off forecasted demand. With a drop in supply cushion in December to 28.5 percent, the monthly average USEP moved up marginally to \$58/MWh.

## NEW MARKET PARTICIPANTS AND INTERRUPTIBLE LOAD FACILITIES REGISTERED IN THE NEMS

The National Electricity Market of Singapore (NEMS) welcomed two new market participants, Sunseap Energy Pte Ltd and Best Electricity Supply Pte Ltd, which joined the wholesale electricity market as retailers in November and December respectively.

In November, the NEMS registered two new interruptible load (IL) facilities with a combined capacity of 2.1MW. This raised the total IL capacity registered in the NEMS to 31.2MW.

## EMC'S BUSINESS CONTINUITY PREPAREDNESS EXERCISES IN NOVEMBER AND DECEMBER

EMC conducted a series of Business Continuity Preparedness (BCP) exercises in November and December.

Besides testing our systems and processes to ensure that we were well prepared for crises, we also took the opportunity to roll out system changes and enhancements related to the Demand Response, Compensation and Penalty (DRCAP) Project, and to prepare for our office move in January 2016. This way, the overall amount of systems downtime required was reduced and we should have a smoother move to our new office come January 2016.

An overview of the exercises and the activities involved is provided in the table below. The exercises are important and necessary, and we thank all market participants once again for their continued understanding and support.

Business Continuity Preparedness (BCP) Exercise	Date	Activities
Disaster Recovery Preparedness Exercise	12 November to 1 December 2015	<ul style="list-style-type: none"> <li>• Switchover of NEMS systems from primary to backup site on 12 November 2015</li> <li>• Deployment of system changes for Automatic Financial Penalty Scheme (AFPS) and Modelling of Minimum Stable Load (MSL)</li> <li>• Upgrade and enhancement of EMC's corporate website</li> <li>• Switchback of NEMS systems from backup to primary site on 1 December 2015</li> </ul>
BCP Site Readiness Test	3 December 2015 to 14 January 2016	<ul style="list-style-type: none"> <li>• Switchover of office systems from primary to backup site on 3 December 2015</li> <li>• Critical staff relocated to BCP office on 22 and 23 December 2015</li> <li>• Switchback of office systems from backup to primary site on 14 January 2016</li> </ul>

## Market Information Sharing Forum (MISF)

The 84<sup>th</sup> session of MISF, hosted by Chen Jian Hong from the Market Operations team, was held on 12 November. Jian Hong covered the following at the forum:

- Summary of the market's performance and key highlights in September and October;
- Update on the progress of all ongoing projects in the NEMS;
- Feedback on the Automatic Financial Penalty Scheme (AFPS) and Minimum Stable Load (MSL) arising from the recent training and market trial for market participants;
- Update on the Risk Exposure Assessment Procedure;
- Update on the Probability of Failure Calculation Methodology arising from AFPS;
- Follow-up on July price spikes; and
- Price Separation on 20 and 21 October.

We would like to thank all participants for their continuous support and strong interest in the MISF. The next MISF is scheduled for 14 January 2016 and will be presented by Cherie Chen from the Market Operations team. 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 17 December. EMC IT updated attendees on the following topics:

- Overview of NEMS systems availability year-to-date for FY 15/16;
- Overview of NEMS systems service desk calls received between November 2014 and November 2015;
- Overview of Change Releases deployed between November 2014 and November 2015;
- Successful completion of Disaster Recovery Preparedness Exercise from 12 November to 1 December 2015;
- Successful migration of EMC corporate website [www.emcsg.com](http://www.emcsg.com) SSL certificate to SHA-2 hashing algorithm;
- IT incidents that occurred from October to December 2015, and actions taken to resolve them;
- Status updates on IT Infrastructure projects:
  - » NEMS data storage replacement;
  - » NEMS Server virtualization;
  - » Data Centre consolidation;
  - » Enterprise Monitoring System replacement; and
  - » Novena Office Move
- Status updates on key on-going Application projects:
  - » Demand Response, Compensation and Penalty Project; and
  - » Provision of Regulation by Batteries

The next MSUG forum is tentatively scheduled for Thursday, 25 February 2016.

## EMC TRAINING PROGRAMME NEXT COURSE ON 18 AND 19 FEBRUARY 2016

EMC will be holding the next run of its two-day course *Understanding Electricity Markets* on 18 and 19 February 2016. Our staff will be conducting six sessions covering the following topics:

- Understanding Electricity
  - Why Reform and Regulation is Essential in the Electricity Industry
  - The National Electricity Market of Singapore and its Unique Features
  - Pricing Mechanism and Economic Dispatch
  - Settlement
  - How Consumers can Influence Electricity Markets
- The course dates for 2016 are as follows:
- » 18-19 February
  - » 12-13 May
  - » 18-19 August
  - » 10-11 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](http://www.emcsg.com). For enquiries, please e-mail [trainingprogramme@emcsg.com](mailto: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](mailto:emc.newsletter@emcsg.com) or via fax to +65 6779 3030. Thank you in advance for your time and effort.

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