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CEO'S MESSAGE

In April, EMC celebrated a major milestone with the successful rollout of the Demand Response scheme for the National Electricity Market of Singapore (NEMS). This marked the completion of our journey for the Demand Response, Compensation and Penalty (DRCAP) project, which started in 2014.

Undoubtedly the most extensive undertaking for the NEMS since the market started in 2003, the DRCAP project involved changes to almost every part of the NEMS systems. As with any job of this scale, there are bound to be challenges and setbacks along the way. I am impressed by the resilience shown by the EMC team in overcoming these challenges, as well as the teamwork that went into getting the job done. I would like to express my sincere appreciation to all who have contributed to the success of this project.

Separately, an important exercise that we go through at the beginning of each calendar year is the Rules Change Panel (RCP) work plan prioritisation exercise. The rigorous exercise involves consultations with stakeholders of the NEMS to determine the rule changes that the RCP should focus on for the year.

I thank all NEMS market participants (MPs) and service providers for participating in

this critical process which helps to keep the Market Rules relevant and current.

We welcomed two new MPs in the NEMS in the last two months: a retailer and a generator. In terms of the market's performance - after falling below \$50/MWh in February, the monthly average Uniform Singapore Energy Price (USEP) remained below this level in March and April at the back of a strong supply cushion.

Finally, I would like to extend a big 'Thank You' to all our friends who took time off to join us in March for our official Office Opening as well as the subsequent Open House. For our friends who were unable to join us, we look forward to welcoming and hosting you at our regular industry forums.

Toh Seong Wah
Chief Executive Officer

COMPLETION OF DEMAND RESPONSE, COMPENSATION AND PENALTY PROJECT (DRCAP)

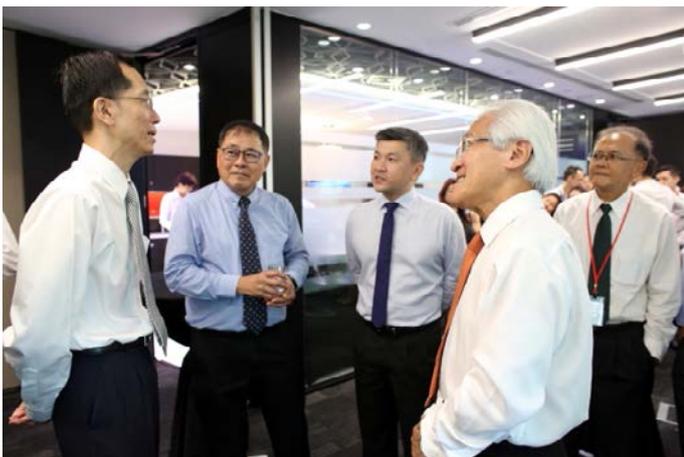
EMC successfully rolled out the system changes for the Demand Response (DR) scheme on 19 April. These changes took effect from 28 April.

The rollout marks the completion of the whole Demand Response, Compensation and Penalty (DRCAP) project. We take this opportunity to thank all stakeholders for their support and cooperation in this project.

NEW ENTRANTS TO THE NEMS

The National Electricity Market of Singapore (NEMS) welcomed two new market participants in the last two months - Tong Teik Pte Ltd, which joined the NEMS as a retail electricity licensee on 10 March and Singapore Refining Company Pte Ltd, which joined as a generation licensee on 14 April.

EMC OFFICE OPENING AND OPEN HOUSE



Guests networking at the EMC Office Opening



(L to R) – Michael Syn, Chng Lay Chew, Teh Tee Hooi, Lee Chuan Seng, Muthukrishnan Ramaswami, Wong Meng Meng, Ng Wai Choong, Toh Seong Wah, Chew Choon Seng, David Wong and Loh Boon Chye



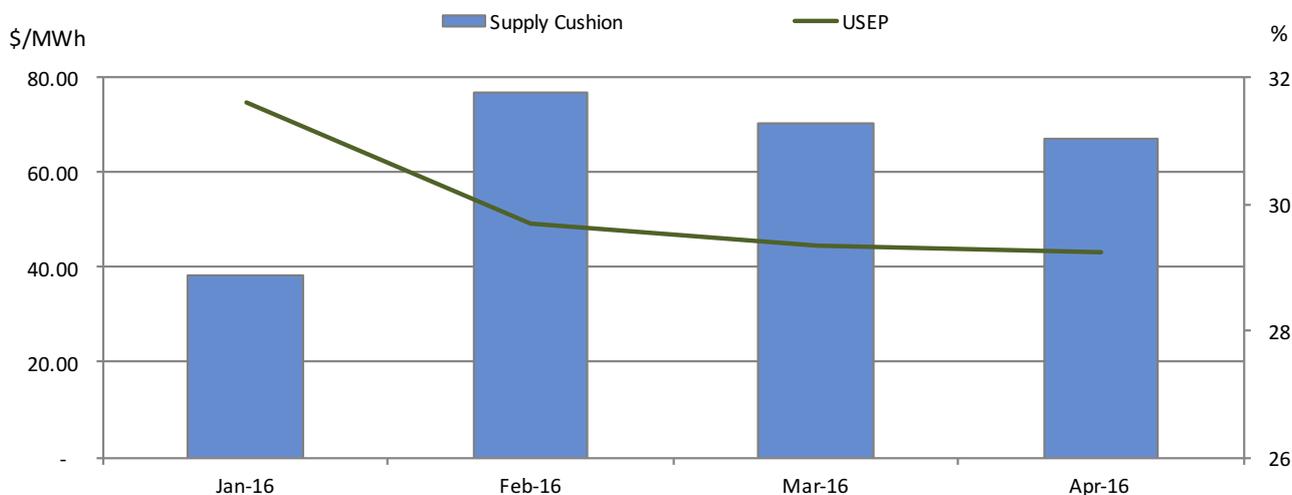
Guests touring the EMC office during the Office Opening

The official opening of our new office in SGX Centre 2 was held on 10 March. We were honoured to have many distinguished guests join us for this memorable event, including Ng Wai Choong, Chief Executive of Energy Market Authority, Wong Meng Meng, Chairman of EMC, Chew Choon Seng, Chairman of Singapore Exchange (SGX), and Loh Boon Chye, CEO of SGX who officiated the opening ceremony of the new office.

EMC also held a separate Open House on 18 March for market participants of the National Electricity Market of Singapore and other industry stakeholders.

MARKET UPDATE

Overview of Uniform Singapore Energy Price (USEP) in 2016



Data for April is up to 24 April

The monthly average Uniform Singapore Energy Price (USEP) started at \$75/MWh in January before falling to a record low for this year at \$43/MWh in April. On the other hand, strong supply cushion over the 30.0 percent benchmark was recorded in February, March and April. The supply cushion for February to April was 2.5 percent higher on average compared to January when it was 28.9 percent.

RULES CHANGE PANEL WORK PLAN PRIORITISATION EXERCISE 2016

In January and February this year, EMC consulted stakeholders of the National Electricity Market of Singapore (NEMS), including market participants (MPs), Singapore Power (SP) Services, SP PowerGrid and the Power System Operator (PSO), for the annual Rules Change Panel (RCP) work plan prioritisation exercise.

Issue identification

The first stage of the prioritisation exercise involved seeking inputs for new issues which stakeholders wished to address. The following 24 new issues were raised for inclusion in the updated work plan:

1. Review of sections 9.1.2.2 and 9.1.3 of Chapter 5 Market Rules (Proposed by: PSO)
2. Period-based minimum demand forecast by day types (Proposed by: PSO)
3. Regulation effectiveness factor (Proposed by: PSO)
4. Allowing MPs without embedded generators to have multiple settlement accounts (Proposal Arising from 82nd RCP Meeting)
5. Load restoration command from PSO to be in sync with the periods for which loads offered to provide reserve (Proposed by: CPvT Energy Asia)
6. Review constraint violation penalty associated with violation of Type-2 Artificial Lines (Proposed by: EMC, Market Administration)
7. Proposals to mitigate the impact of price separation (Proposed by: YTL PowerSeraya, PacificLight Power and Tuas Power Generation)
8. Provision of real-time estimates of HEUC (Proposed by: Senoko Energy and Senoko Energy Supply)
9. Removal of redundant FSC settlement provisions (Proposed by: Senoko Energy and Senoko Energy Supply)
10. Review of methodology for recovery of EMC/PSO fees (Proposed by: Senoko Energy and Senoko Energy Supply)
11. Publication of the system aggregated half-hourly actual solar export on monthly basis (Proposed by: PacificLight Power)
12. Adjustment for regulation charges and price neutralisation after final settlement (Proposed by: SP Services)
13. Review of the timeline for meter data investigation and adjustments after notice of dissent has been raised (Proposed by: SP Services)
14. Update of Settlement Market Manual (Chapter 7 Market Rules) (Proposed by: EMC, Market Administration)
15. Enabling more than a single retailer for single off-take premise (Proposed by: Singapore Oxygen Air Liquide)
16. Review of credit default mechanism (Proposed by: Tuas Power Generation)
17. Review of Automatic Penalty Scheme (APS) (Proposed by: Tuas Power Generation)
18. Waiver of registration for embedded generation facilities which would not produce more than 1MW, regardless of nameplate rating (Proposed by: Eco Special Waste Management)
19. Enhancement to the existing process for releasing AGOP to market participants (Proposed by: Diamond Energy Supply)
20. Enhancement to the existing process of releasing security limit advisories to market participants (Proposed by: Diamond Energy Supply)
21. Introduction of settlement account flexibility and settlement bank diversification (Proposed by: Diamond Energy Supply)
22. Reserve requirements to reflect the largest contingency in the interconnected system (Proposed by: Diamond Energy Supply)
23. Removal of price warning advisory notices (Proposed by: EMC, Market Operations)
24. Review composition of the Market Surveillance and Compliance Panel (MSCP) (Proposed by: Diamond Energy Supply)

Meeting with stakeholders

In the second stage of the prioritisation exercise, EMC met stakeholders individually to clarify and refine the scope of both existing and new issues. Stakeholders also ranked each issue according to its importance and urgency, or voted for issues to be removed.

Updated RCP Work Plan from April 2016 to March 2017

After incorporating feedback from the stakeholders, EMC presented the proposed update to the two-year work plan to the RCP for consideration at its 85th meeting in March.

The RCP agreed to work on the following issues within the next 12 months.

1. Removal of Section 4.3.10 of Chapter 3 Market Rules
2. Price assignment for an islanded GRF/GSF
3. Combining Primary Reserve and Secondary Reserve into a single class of Reserve
4. Review of Automatic Penalty Scheme (APS)
5. Enhancement to the existing process of releasing security limit advisories to market participants
6. Update of Settlement Market Manual (Chapter 7 Market Rules)
7. Review of methodology for recovery of EMC/PSO fees
8. Review of Credit Default mechanism
9. Enhancement to the existing process for releasing AGOP to market participants
10. Review of classification of market participants and review composition of the Rules Change Panel to better reflect diversity of market participants
11. Publication of the system aggregated half-hourly actual solar export on monthly basis
12. Provision of real-time estimates of HEUC

Issues prioritised within the next 13 to 24 months, including a detailed description of all issues in the next two years, can be found on EMC's website at <https://www.emcsg.com/marketrules/ruleschangepanel/workplan>

USER FORUMS

Market Information Sharing Forum (MISF)

Johanna Toh from the Market Operations team hosted the 86th session of the bi-monthly MISF on 10 March. The following topics were shared with the attendees:

- Market Performance and key highlights in January and February;
- System Enhancements and Projects; and
- Feature Topics:
 - » Brief overview of Demand Response (DR);
 - » Public Website with DR changes;
 - » Market Clearing Reports with DR changes; and
 - » Settlement Reports with DR changes.

We would like to thank all participants for their continuous support and strong interest in the MISF. The next MISF is scheduled for 19 May and will be presented by Tan Choon Kiat 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 28 April. 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 March 2015 and March 2016;
- Overview of Change Releases deployed between March 2015 and March 2016;
- Completion of planned Disaster Recovery Exercise (switchover) on 19 April;
- Upcoming planned Disaster Recovery Exercise (switchback) on 25 May;
- Renewal of EMC helpdesk and settlement certificates;
- Major IT incidents that occurred in March and April, and actions taken to resolve them; and
- 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, 28 June.

EMC TRAINING PROGRAMME NEXT COURSE ON 18 AND 19 AUGUST 2016

EMC will be holding the next run of its two-day course *Understanding Electricity Markets* on 18 and 19 August 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 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. 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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