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CEO's Message

This is the first Bulletin of 2005. This issue covers a few of our upcoming activities, provides you with an overview of what happened during the first two months of the year and takes an in-depth look at the Rules Change Panel's work in 2004.

The Rules Change Panel and its work play a critical role in the continuous evolution of the National Electricity Market of Singapore (NEMS). The article provides an overview of the panel's work in 2004 and its main achievements. EMC values hugely the contributions the panel makes. Therefore, I would like to take this opportunity to thank all panel members on behalf of NEMS and EMC for their excellent work, only possible due to their total commitment. I would also like to thank everyone else for supporting the rule change process.

EMC is pleased to announce the next EMC Speaker Series on Thursday, 17 March 2005 at the Grand Hyatt. The topic is Managing Energy Risks, which is a hot topic for Asia as our markets continue to mature, bringing new risks and opportunities.

We have two distinguished speakers, Mr Finn-Bjørn Ruyter, CEO, Elkem Energy AS, and Mr Jomar Eldoy, EMC Board Member and CEO, M-co Group. They will offer insights into the role of energy trading, and how it supports production, consumption and hedging of electricity based on experiences gained in Europe, the United States and Australia. Mr Ruyter will showcase how Elkem, once an electricity consumer, took advantage of a liberalised electricity market and transformed itself into a leading energy trader in Europe. The agenda and registration form are enclosed in this Bulletin.

Looking at the major activities of EMC during the first two months, I must point out the article on our successful Business Continuity Plan Exercise Thunderbolt. This exercise is vital to ensure the preparedness of EMC in any crisis situation. Not only was Exercise Thunderbolt 2005 successfully completed, but we also received very positive feedback from the representatives of our key market participants, whom we had invited to attend as observers. It is yet another example that sharing best practices and working closely together is very important for our market, especially when testing possible crisis situations.

EMC is finalising the 2004 NEMS report which will be published in April. We are also expecting the results of the Market Operator Benchmarking Survey, a study EMC is conducting for the Association of Power Exchanges (APEX) to benchmark electricity market operators globally, to be available around the same time as the collation of our results is in its final stage.

Rules Change Panel's Achievements November 2003 – December 2004

Overview

Following one year of successful operation in 2003, the NEMS matured considerably in 2004. As market participants became more familiar with the workings of the market, the issues they raised became increasingly complex. Hence, the Rules Change Panel (Panel) was faced with significantly more challenging work in 2004. The work began to involve subtle design issues that have a profound impact on market efficiency.

Increasingly, many of these issues also depended on qualitative economic reasoning and cost-benefit analysis for resolution.

The 2003 Rule Change Work Plan (two-year plan) was adopted by the Panel in October 2003. It contains 19 projects scheduled for completion by October 2005. As of 31 December 2004, ten of these projects were completed and 90 per cent had been completed on or ahead of schedule. From

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With much already happening in the first two months of the year and more lined up for 2005, there will be many opportunities to interact, exchange ideas and address the issues of our maturing market. I look forward to a very interactive year with all of you and hope to see many of you at the EMC Speaker Series on 17 March.



Allan Dawson
CEO, Energy Market Company



Rules Change Panel's Achievements November 2003 – December 2004

these projects, a total of six rule modification proposals were approved by the EMA.

Besides projects from the 2003 Work Plan, the Panel also worked on other rule modification submissions. In total, the Panel considered 28 submissions. In this period, the EMA approved a total of 26 rule modifications.

Significant Achievements

As market issues became increasingly complex and with varying impact on the different parties, it became more difficult to always arrive at a consensus. However, commitment and perseverance drove the market rule change process and the Panel was able to make a number of substantial achievements in this period. Among others, these include:

- Removing the effect of constraint violation penalty (CVP) on settlement prices when load is not shed
- Implementing an Interruptible Load (IL) scheme
- Implementing a new short term schedule (STS) for greater trading efficiency
- Shortening gate closure and tightening the rules around it
- Implementing dynamic Load Participation Factors (LPF) to improve the accuracy and efficiency of nodal load forecasts
- Devising an automated wholesale settlement re-run regime to improve the efficiency of wholesale market settlement in dealing with metering errors

Impact of Major Achievements

The major achievements of the Rules Change Panel can be grouped into four important areas:

Improving Efficiency of Market Clearing

The most significant contribution of the Panel in this period has been in the efficiency of market clearing. The gate closure, STS and LPF projects all ensured that the dispatch and pricing schedules would reflect the latest available information. As a result, the short-term or static efficiency of market clearing was improved. The CVP project ensures that prices reflecting market fundamentals are used for settlement. This sends the correct economic signals to market participants,

enhancing the dynamic (long-term) efficiency of the market.

Improving Potential for Competition in the Reserve Market

The introduction of Interruptible Load for reserves provides several benefits to the market. Firstly, an increase in the availability of operating reserves and a diversification of the source of the reserves (to load) improves system security. Secondly, IL helps to lower reserve prices because of increased competition in the reserve market. Thirdly, IL helps, in the long run, to reduce investment in generation and transmission needed to cater to peak demands.

Improving Efficiency of Market Settlement

The wholesale settlement re-run project was a major undertaking because of the inevitability of metering errors. When the Task Force on Settlement Re-runs failed to come to a consensus, the Panel took over. The end result was adoption of an Automated Partial Wholesale Settlement Re-run with Nominated Days regime that would eradicate all of the inefficiencies and risks associated with manual settlement re-runs. When the IT development of this regime is delivered to the market in April 2005, market participants can look forward to automated, hassle-free settlement adjustment for metering errors on a regular basis.

Valuable Intangibles: Debates and Discussions

On top of making modifications to the Market Rules to enhance market efficiency, the Panel has, over the course of the year, engaged in discussions and debates over various aspects of market design. While these have not all necessarily resulted in modifications to the Market Rules, the collective position arrived at on design issues and the views/arguments that were recorded are invaluable. Together, they form an important foundation for the thought process underlying the continued evolution of the wholesale electricity market.

The Rule Change Process was a success in 2004 and the significant achievements made by the Panel bode well for the continuing evolution of the wholesale electricity market.

User Forums

Several User Forums took place during the first weeks of 2005.

Market Information Sharing Forum (MISF)

EMC hosted its 19th Forum on 19 January for members of our market participants to share market information and to learn more about the developments of the new electricity market. In addition to the feature presentation on Nodal Price Difference by Transmission Loss, attendees received information on market performance and market incidents, as well as updates on the progress of system enhancements.

The next MISF is scheduled for Wednesday, 16 March 2005.

Settlement Initiatives Sharing Forum (SISF)

EMC hosted the Second Settlement Initiatives Sharing Forum on 14 January 2005 for members of our key market participants. The participants were informed of the progress updates on the system development for Settlement Re-run, followed by a briefing on the framework of Settlement Re-run. They were advised of the schedule of activities, such as the briefing on Settlement Re-run Market Trial on 1 February 2005 and the implementation of the Market Trial on 15 February 2005.

Participants also shared their comments and concerns on the proposal of shortening the current settlement cycle. Pros and cons of shortening the current settlement cycle were discussed concluding with the recommendation to forward the proposal to the Rules Change Panel for an in-depth review and recommendation.

Finally, the participants were given a preview on some of the settlement initiatives scheduled in the financial year 2005/2006.

This group will meet when and if required, and therefore no advance scheduling is possible.

Market System User Group (MSUG)

The Market System User Group (MSUG) is scheduled to assemble for the first meeting of 2005 on Thursday, 28 April.



Business Continuity Plan (BCP) Exercise Thunderbolt 2005 Successfully Completed

EMC conducted its Exercise Thunderbolt 2005 on 26 January - 28 January 2005, involving a movement of critical operations from EMC's main office in Republic Plaza to its BCP site in Ayer Rajah within the specified Recovery Time Objective (RTO) of four hours.

This year's scenario was a building evacuation due to a bomb threat followed by two bomb explosions. Staff walked down the emergency stairs from the 22nd floor of Republic Plaza and gathered at the designated assembly area before moving on to our designated holding area. There, the Emergency Business Continuity Member Team decided to activate the BCP based on the information provided during the scenario.

During this exercise, several other modular BCP tests were also tested:

- Emergency Response Plan - ensures all EMC personnel understand the emergency response procedures and protocol during a disaster
- BCP Call Activation - tests the effectiveness of the BCP call tree list and how promptly all EMC personnel can be mobilised
- BCP Communications - tests the communication processes to ensure effective management of external parties' expectations
- Moving Back Plans - ensures the back up and restoration processes of e-mails and market operations data for continuous operations from the main office to the BCP site and back to the main office
- Desktop Scenario Tests - tests the responses and decisions of the senior management and HR team in mock incidents

For the first time, EMC invited key market participants to observe this exercise. The seven observers were briefed on the



Some of the observers and EMC staff.

objectives and the scope of Exercise Thunderbolt 2005 and subsequently joined the critical team in moving to the BCP site, where they observed the recovery and continuity of market operations.

Areas of specific interest to the observers were the activities concerning managing crises during emergencies. EMC shared the details of its crisis management and crisis communication. Feedback from the observers concluded that not only was this exercise a success, but it educated everyone on the importance of working closely together in any crisis situation.

Exercise Thunderbolt is just a part of EMC's ongoing comprehensive BCP as we regularly conduct other BCP crisis exercises, thus ensuring preparedness for any crisis situation.

Settlement Re-run Enhancement – Ready for Market Trials

Following on from the article in Issue 22, EMC is pleased to announce that the development of the software enhancements to the wholesale settlement system to automate the re-run process has been completed. The software is on track to be delivered to the market on time, as per the initial delivery date of 1 April 2005, and within budget.

The EMC Settlement Team performed six weeks of user acceptance testing on the re-run enhancements before the software entered market trials on 15 February.

Development of this functionality began in August last year, after EMC's proposal to implement an Automated Partial Wholesale Settlement Re-run with Nominated Days regime was approved by the Rules Change Panel in May 2004.

With the new re-run software in place, EMC expects to provide the market with increased efficiency and effectiveness. Jennise Ting, Vice President Settlement, said of the new re-run regime, "the ability to do online Settlement Re-run will help us provide better service to the market participants in the event of metering errors."

Changes at EMC

Joining

Angela Soeteber Vice President, Communications

Angela has over 12 years of marketing and communication experience gained in the financial services, media and IT industries in Europe and Asia. Previously, she was with ABN AMRO Asia Pacific for nearly six years, most recently as VP, Wholesale Clients Communication Asia. She was responsible for a wide range of corporate communication and regional marketing activities including brand architecture, market research, events and sponsorships, as well as advertising. Originally from Germany, she holds a Masters degree from US and German universities.

Jignesh Vyas Market System Administrator, IT

Jignesh joined the IT Team as the new Market System Administrator (Unix). He is responsible for the support and maintenance of the Unix systems and related networks. Jignesh has ten years of technical experience in systems support for business critical systems environments, system administration, application development and SAP R/3 solutions. Previously, he was the Senior System Administrator with Citibank Singapore, in the systems management and administration of Tru64 and VMS systems hosting.

Leaving

EMC also had to say farewell to two of its staff. We thank Corina Tan, Market Operations, and Jamie Wu, Corporate Services, for their valuable contributions and wish them well in their future endeavours.



2005 Conferences with EMC Participation

Upcoming Conferences

The 8th Annual Asia Power Conference

Wednesday, 2 March from 3:45 PM – 5:30 PM, Singapore

EMC site tour visit for up to 40 delegates

For more information, visit www.terrapinn.com/2005/ap_SG/

7th International Power Engineering Conference IPEC 2005

29 November – 2 December, Singapore

EMC is a supporting organisation, which will be of great interest to regional and local players. For more information and details on the call for papers, visit www.ipec.sg

Past Conferences

Metering, Billing and CRM/CIS Asia-Pacific 2005

13 January, Shanghai

Yip Pak Ling, SVP Market Operations, spoke at the Metering, Billing and CRM/CIS Asia-Pacific 2005 Conference & Exhibition in Shanghai on 13 January, presenting the road to liberalisation of the National Electricity Market of Singapore (NEMS) and the successes and challenges that have been brought about by the market.

Asia Power 2005

27 January, Singapore

Allan Dawson, CEO, spoke on the Electricity Market Reform of Singapore at Asia Power 2005 in Singapore on 27 January.

EMC Hosting Delegation from the Philippines



EMC hosts the delegation from the Wholesale Electricity Spot Market from the Republic of the Philippines.

The first visiting delegation of 2005 came from the Republic of the Philippines on 14 and 15 February when EMC played host to a market monitoring and surveillance delegation from the Wholesale Electricity Spot Market (WESM). The delegation of eight included representatives from the Department of Energy, the Energy Regulatory Commission, the market operator and the system operator.

The delegation was here to gain an understanding of the Singapore market, with particular interest in our approach to market monitoring and surveillance. The Republic of the Philippines is currently in the process of implementing a wholesale electricity spot market. This visit provided EMC with the opportunity to build valuable relationships with what will be its closest wholesale electricity market in the region in terms of location and market design. Our objective is to further grow these ties to facilitate the ongoing exchange of ideas, approaches and lessons learned.

During the two-day visit, we covered a broad range of topics ranging from Singapore's market implementation and market operations

to market evolution. Of special interest to the delegation were topics presented by the Market Assessment Unit covering dispute resolution, investigation and surveillance.

The delegation provided EMC with an overview of the latest developments in the Philippine Wholesale Electricity Spot Market through a presentation given by Ms de Guzman from the Electric Power Industry Management Bureau of the Department of Energy.

Lively discussions and exchanges of ideas took place not only during the regular sessions but also with all EMC employees during our Chinese New Year lunch. The delegation enjoyed the special Chinese New Year celebration and especially the lion dance and Lo Hei.

Director Samonte of the Energy Regulatory Commission remarked, "We learnt valuable lessons and insights from a successful market operator in Asia for establishing our own wholesale electricity spot market and hope to strengthen this exchange of information with EMC in the future."

Send us Comments, Feedback or Questions

The EMC Bulletin is written by EMC for you and we are always striving to improve our service. Therefore we are interested in any feedback you might have about specific articles and topics covered or comments and suggestions about other areas you would like to see included.

Please send your comments, feedback or any questions either via e-mail to info@emcsg.com or via fax to +65 6779 3030.

Thank you in advance for your time and effort.