CEO’s Message

Towards the end of the year, Singapore typically sees cooler weather, brought about by the Northeast monsoon. In line with this, forecasted demand dropped and the Uniform Singapore Energy Price (USEP) in the wholesale electricity market reached a new monthly low for the year of $147/MWh in December 2013.

As the year drew to a close, we welcomed the re-appointment of Professor Lim Chin and Lee Keh Sai to the Market Surveillance and Compliance Panel (MSCP). I am very glad that both gentlemen, who have been on the MSCP since the National Electricity Market of Singapore (NEMS) started in 2003, have agreed to a new three-year term from 1 January 2014. I am sure the market will continue to benefit greatly from their insights and experience.

In November, the Rules Change Panel supported a proposal to apply Mixed Integer Program (MIP)-based regulation constraints to all dispatch periods. This will enable the production of more efficient schedules for generators which have offered to provide regulation. Details of this rule change, which will come into effect in June 2014, can be found on page 2.

EMC also hosted a delegation from the Energy Regulatory Commission (ERC) of Thailand in November. The ERC team's last visit to our office was in 2009. We are always happy to welcome our friends from neighbouring countries as this promotes the exchange and sharing of ideas and experiences among different markets, and provides us the opportunity to showcase the NEMS. Find out more about the visit in the article below.

I would like to convey my appreciation to our market participants and other stakeholders for their continued support of the NEMS and the EMC team in 2013. Many new and exciting developments await us in the coming year, and we look forward to working with all of you on these new initiatives.

I wish everyone a prosperous year ahead.

Dave Carlson
Chief Executive Officer

Visitors to Energy Market Company

EMC had the pleasure of hosting 11 delegates from the Energy Regulatory Commission (ERC) of Thailand on 25 November.

The delegation, led by the Commission’s Deputy Secretary General, Ms Narupat Amornkosit, was in Singapore to get an overview and update of the National Electricity Market of Singapore and its developments over the last few years.

The Thai ERC last visited EMC in March 2009. EMC values such visits as they provide us with opportunities to share experiences, exchange ideas and discuss developments with other countries and markets.

ERC Thailand delegates with EMC representatives
Re-appointment of MSCP Members

EMC is pleased to announce that the EMC Board has re-appointed Professor Lim Chin and Lee Keh Sai to the Market Surveillance and Compliance Panel (MSCP). Both new terms will be for three years beginning 1 January 2014.

EMC would like to express its appreciation to Professor Lim and Mr Lee for continuing to devote their time and effort to support the functioning of the National Electricity Market of Singapore.

The MSCP is an independent body comprising five experts from the legal, economics, engineering and finance professions. It is supported by EMC’s Market Assessment Unit.

Rule Change Updates - Remodelling of Mixed Integer Program (MIP)-Based Regulation Constraints

For a generator to be able to provide regulation, its energy output must fall within a certain range (“regulation range”). Therefore, for any generator who has offered to provide regulation, the market clearing engine (MCE) will constrain its energy output to within this regulation range.

Sometimes, such a constraint is too restrictive and not necessary, especially for those generators that offered but were not scheduled to provide regulation. Mixed Integer Program (MIP)-based regulation constraints were thus introduced in 2007 to address this issue. They provide the MCE with the flexibility to schedule a generator outside its regulation range, when any generator is found to be unnecessarily constrained within this range.

A proposal was received to extend the application of these constraints to all dispatch periods, since MIP-based regulation constraints allow for a wider solution space for generators. This would enable the MCE to produce more efficient schedules, as confirmed by the simulation study conducted by EMC.

At its meeting in November, the Rules Change Panel supported this proposal. It will come into effect on 26 June 2014.

EMC Training Programme – Next Course on 20 and 21 February 2014

EMC will be holding the next run of its two-day training course, Understanding Electricity Markets, on 20 and 21 February 2014. Our staff will be conducting six sessions covering the following topics:

- Understanding Electricity
- Overview of the Electricity Sector
- The National Electricity Market of Singapore and its Unique Features
- Pricing in Detail
- Settlement
- The Demand Side

The course dates for 2014 are as follows:

- 20 – 21 February
- 15 – 16 May
- 14 – 15 August
- 13 – 14 November

We advise you to book early to secure your place in the course dates 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.
Market Update

With the seasonally wetter and cooler weather towards the end of the year, forecasted demand dropped and this brought the Uniform Singapore Energy Price (USEP) to the lowest monthly level for the year at $147/MWh in December.

The USEP has been below the benchmark Vesting Contract Hedge Price (VCHP), Balance Vesting Price* (BVP) and LNG Vesting Price* (LVP) for most of the year. The gap, however, became even more pronounced towards the end of the year. The deviations between the USEP and the vesting prices, which increased to over 20 percent in October, widened further to more than 30 percent in December.

*With the introduction of liquefied natural gas (LNG) into the generation mix in July 2013, a certain percentage of the total allocated vesting quantity is now set aside for generation using LNG, i.e. Total Allocated Vesting Quantity = LNG Vesting Quantity (amount of generation using LNG) + Balance Vesting Quantity (remaining generation using piped gas).

Correspondingly, the LNG Vesting Price (LVP) is the price for the LNG Vesting Quantity allocated, while the Balance Vesting Price (BVP) is the price for the Balance Vesting Quantity allocated.

Send us Comments, Feedback or Questions

The EMC Bulletin is written by EMC for you and we are always striving to improve our service. 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.
User Forum

Market Information Sharing Forum (MISF)

The 72nd session of MISF was held on 14 November.

Debbie Tse from EMC’s Market Operations team touched on the wholesale electricity market’s performance for September and October, and provided an overview of the market outlook as well as upcoming system enhancements. Tan Choon Kiat, also from EMC’s Market Operations team, touched on the following feature topics during the forum - migration plans for OCBC to its new Velocity platform; changes to EMC’s administrative fees arising from its new regulatory revenue regime; and updates to EMC’s price finalisation procedures in view of the security constraints applied on the transmission system imposed in 2013.

The next MISF will be presented by Dr Bai Jie, Senior Market Analyst from the Market Operations team on Thursday, 16 January 2014. EMC would like to invite market participants who are interested to come forward to present at future MISF sessions.

Market Systems User Group (MSUG)

The bi-monthly MSUG forum was held on 19 December. EMC IT updated the attendees on the following topics:

- IT incidents that occurred in November and December, and actions taken to resolve them;
- Status updates on key on-going IT Infrastructure and Application projects:
  - Network Upgrade Project (NUP);
  - Revenue regime changes to EMC Admin Fee;
  - Tender Vesting Contract; and
  - Sunset plan for MP-API (Market Participant-Application Programming Interface) in September 2014.

On the NUP, the network upgrades at Novena Square and our other two data centres were successfully completed by December. The upcoming NUP activity scheduled in January 2014 will upgrade EMC’s present Internet Protocol version 4 (IPv4) to IPv6, which has an extended IP addressing capability. This is in anticipation that our market participants will move to IPv6 in the coming years. With this upgrade, EMC’s network will be able to support both IPv4 and IPv6 communications.

In addition to the above, EMC IT held its third knowledge sharing session at the forum, providing attendees with insights into the Settlement System Architecture (Oracle Business Process Management and Oracle Rule Engine integration with the Market Rules).

The next MSUG forum is tentatively scheduled for Thursday, 19 February 2014. For the fourth knowledge sharing session, the team will provide insights into the Shareplex and Oracle database tools in the Business Continuity Architecture.