Energy Market Company

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CEO's Message

The Singapore Electricity Roundtable 2008 in early November definitely marked a highlight of this year. EMC is especially pleased to have hosted this year's event during the inaugural International Energy Week (IEW). The event brought together a broad range of perspectives from market players, consultants and experts covering developments in the electricity and LNG markets in the US, Asia and Singapore. I also thoroughly enjoyed hosting the panel discussion, which covered topics from the Asian powergrid to fuel diversification, renewables and energy sustainability. Our speakers, panelists and participants agree the Roundtable was another big success and I would like to thank everyone again for their support. See the article below for highlights from the event.

In October, I attended APEx, the annual conference for power exchanges worldwide, which always provides valuable insights in recent electricity market developments in countries across the globe. It also offers another opportunity for EMC to showcase Singapore as the region's leading electricity market, to share our experiences and to form closer ties with other markets.

Looking at the market, the third quarter saw a further surge in the 180-CST HSFO fuel oil price, lifting both the Wholesale Electricity Price (WEP) and the vesting contract hedge price (VCHP) significantly. Full details of Q3 activity are on page 4, but it should also be noted that since October, the fuel oil price, and consequently the WEP, have dropped.

Updates from EMC: I am very pleased to welcome Poa Tiong Siaw as our new Senior Vice President, Market Assessment Unit. Many of you have already worked with him, as he has been with EMC for over five years, having joined the Market Administration Team as a Senior Economist in early 2003. His in-depth experience and understanding of the market will be invaluable in leading the Market Assessment Unit.

This is the last EMC Bulletin in 2008 and I would like to take this opportunity to thank all market players for their on-going support of EMC. We look forward to working together successfully with you next year to evolve the NEMS even further.

Dave Carlson
Chief Executive Officer

Singapore Electricity Roundtable 2008 Sparks Great Interest

Keynote speaker Richard P O'Neill addressing the audience

The fourth Singapore Electricity Roundtable was a great success. This year was special: The Roundtable was scheduled as part of the inaugural International Energy Week, organised by the Energy Market Authority and the Energy Studies Institute.

Close to 200 participants attended the Roundtable, including representatives of our market participants, the electricity and energy industries, financial institutions, consultancies and government agencies. Journalists were also invited to attend the Roundtable, and the event was widely covered in the Singapore and regional media.

Participants hailed not only from a diverse spectrum of industries but also from various countries around the globe, including Hong Kong, Malaysia,

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Roundtable speakers Michael Thomas, Dan Werner and Richard P O'Neill with EMC Chairman Tan Soo Kiang (center) and EMC CEO Dave Carlson (on right).

India, Indonesia and the US. For such a strong show of interest from both new and returning participants, EMC would like to thank everyone. Your firm support of the Roundtable is inspiring.

On 5 November, participants listened to various perspectives on the changing paradigms in the electricity market, developments in the LNG market, and developments in the electricity and gas markets in Singapore and across Asia.

Question from the audience

Richard P O'Neill, Chief Economic Advisor to the Federal Energy Regulatory Commission (FERC), USA, presented the keynote address, with a focus on the changing electricity paradigms—climate change, demand response and smarter independent system operators (ISOs) in the US market. Mr O'Neill covered market developments and what has worked in the US and what has not over the years. More and more markets have seen the value of ISOs. Since in the US the system operator is also the market operator, ISOs promote competition since they do not own any electricity assets. Further, ISOs increasingly are interested in innovative technology such as Mixed Integer Programming for better reactive power modelling, allowing for much more efficient dispatch and cost savings. One challenge remaining in the US is to stimulate demand-side participation. Mr O'Neill concluded by saying that today, markets around the world face many similar issues.

Daniel Werner, General Manager, Singapore LNG, BG Asia Pacific, provided his perspectives on the development of the LNG market and BG Group's LNG strategy as Singapore's LNG aggregator. BG's goal for Singapore is to provide Singapore's generators and other users of natural gas with a competitively priced supply of fuel. Mr Werner also indicated that Australia would be the most likely key source of LNG for Singapore in the near future, in view of its geographic proximity. His perspectives and the goals of the BG Group for the Singapore market received a great deal of media coverage.

Michael Thomas, Vice President Energy Practice Head, CRA International, shared his insights on the development of the electricity and gas markets in Singapore and Asia. The media reported Mr Thomas' views that with the entry of LNG and increased competition in the electricity markets, energy prices will drop "significantly". Mr Thomas observed that the challenge rests in setting the LNG price, especially in view of developments in the global oil markets. He reinforced the view that competition brought about by a liberalised wholesale electricity market brings down prices. However, given that Singapore is reliant on oil and natural gas for its energy needs, electricity prices would reflect these costs even in a competitive market.

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The panel discussion, "How can electricity generation remain competitive with high international oil prices?," featured Dave Carlson as the moderator, joined by panellists Tang Kin Fei, Group President and CEO of Sembcorp Industries; Roy Adair, President and CEO of Senoko Power; Lim Kong Puay, President and CEO of Tuas Power; and Edwin Khew, CEO and Managing Director of IUT Global. As the price of oil has halved since the panel topic was confirmed, discussion focused instead on how to stay competitive in view of international challenges. The panellists agreed that sustainability, more efficient generation and environmental factors are the top challenges for the industry. The panel also discussed ways in which renewable energy sources could contribute to Singapore's total energy needs in the future. The consensus was that renewable energy sources are important for diversifying future energy sources, and their development should be supported. However, realistically, they will contribute at most around 20 percent of electricity generation. The lively discussion also touched on the idea of an Asean-wide electricity grid, a concept raised by Minister Mentor Lee Kuan Yew at the Singapore Energy Lecture on Tuesday, 4 November. Other topics included customer choice, current reserve arrangements in the market, and the impact of the slowing economy.

In his closing remarks for day one, Mr Carlson thanked attendees for their support and positive response to this Roundtable. With close to 200 local, regional and global attendees, the value of such a forum is clear, for the opportunity to connect practitioners, experts, potential investors and decision makers, and discuss timely topics. EMC is privileged to be organising and hosting the event, providing a platform for discussion of major developments in the industry, and further showcasing Singapore as a leading regional market.

The panel discussion

Our first day ended with a cocktail and dinner reception in the private dining rooms at the Equinox, Swissotel The Stamford. Guests had the opportunity to network with their counterparts while enjoying a panoramic skyline view of Singapore from 226 metres above sea level.

Our second day began with a sumptuous breakfast for those who signed up for the NEMS workshop. Henry Gan, Vice President, Pricing & Information, spoke to a fully-subscribed audience of close to 100 people. He presented an overview and update on the NEMS, with an emphasis on the market's evolution and performance over the past six years. Mr Gan's update was followed by a lively discussion on questions and issues pertaining to the workings of the NEMS and the potential effect of external economic conditions, such as high oil prices or the sale of the generation companies, on the wholesale electricity market.

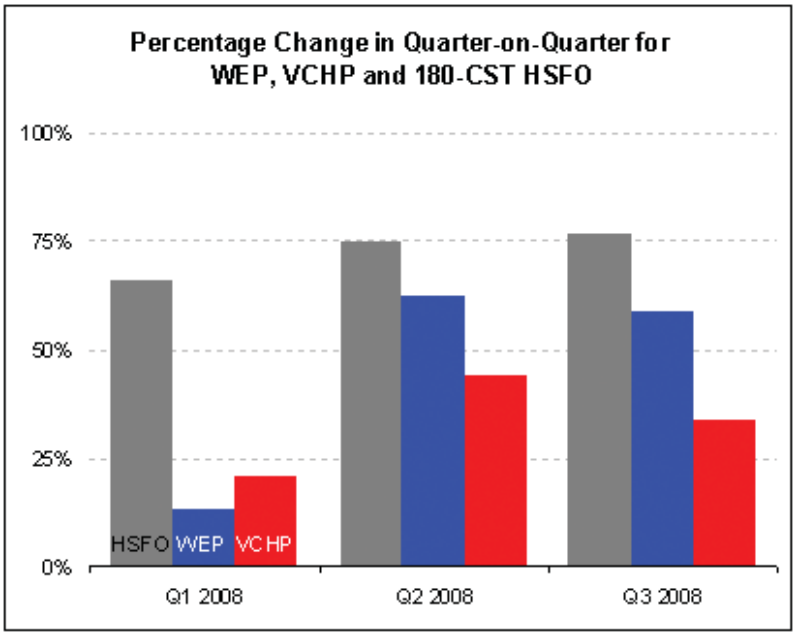
We thank all participants for their active engagement in this year's event and we hope to see you again at next year's Singapore Electricity Roundtable 2009. Some of the press coverage and more pictures are available at www.emcsg.com/roundtable2008highlights .

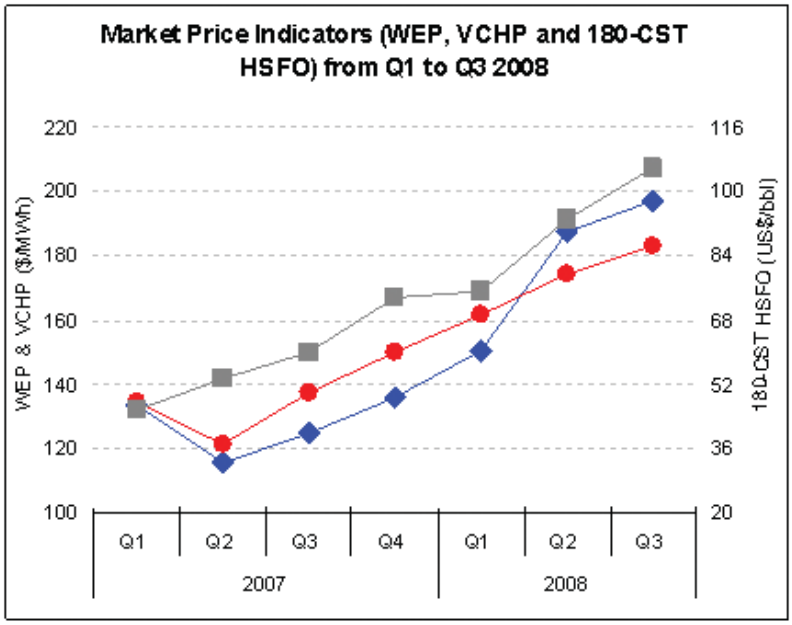
Cocktail and dinner reception

Participants enjoying the reception and view over Singapore

Market Update

Surge in 180-CST HSFO lifts both WEP and VCHP significantly





***Note: The Wholesale Electricity Price (WEP) is the net purchase price paid by retailers. It includes the USEP, regulation charges, administrative charges and other components.**

The Wholesale Electricity Price (WEP)* continued its rising streak in 2008 and rose for the fifth quarter in a row. From Q2 2007 at $115/MWh it reached $197/MWh in Q3 2008. As compared quarter-on-quarter (qoq), the WEP recorded a jump of over 55 percent in both Q2 and Q3 2008. A similar increase was also observed for the vesting contract hedge price (VCHP), which ascended for five consecutive quarters, climbing from $121/MWh in Q2 2007 to $183/MWh in Q3 2008. In addition for qoq, the VCHP experienced a smaller increase during Q2 and Q3 2008 as compared to the WEP and this in turn allowed the WEP to end higher than the VCHP in both quarters. These rises in the WEP and the VCHP were supported by the strong uptrend in the 180-CST HSFO price, skyrocketing in Q3 2008 to cross the US$100/bbl mark for the first time since the start of the National Electricity Market of Singapore (NEMS).

238A Thomson Road, #11-01 Novena Square Tower A, Singapore 307684,
Tel: +65 6779 3000, Fax: +65 6779 3030, www.emcsg.com

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Data Subscription Service Update

EMC is pleased to announce that we have published a case study on how one of our subscribers, Singapore District Cooling, benefits from real-time electricity price information. Singapore District Cooling has realized significant electricity cost savings by deploying demand shifts on their daily operations—savings made possible as a subscriber to EMC's Data Subscription Service.

The Data Subscription Service is available to market and non-market participants wanting to learn more about the National Electricity Market of Singapore (NEMS). Various subscription packages are available, offering access to real-time and forecast information for prices and demand, historical online market data, market trading reports with commentaries and Data Sets for the years 2003–H1 2008.

The case study and information on our subscription packages are available on our website at www.emcsg.com/subscriptions.

New Members of the Rules Change Panel (2009–2011)

31 December 2008 marks the end of the three-year term for current Rules Change Panel (RCP) members. The EMC Board is pleased to announce the appointment of new RCP members, whose terms will run 1 January 2009 to 31 December 2011. EMC thanks all out-going members for their valuable contributions to the evolution of the wholesale electricity market, and welcomes the new RCP members.

New Members of the RCP Panel (2009–2011)

Member category	Member
Chair of the Rules Change Panel (Chief Executive Officer of EMC)	Mr Dave Carlson
Employee of EMC in addition to Chief Executive Officer	Mr Kenneth Lim Khoon Seng
Representative of the PSO	Mr Yeo Lai Hin
Representatives of the generation licensee class of market participant	Mr Sim Meng Khuan
	Mr Yu Tat Ming
	Mr Philip Tan Pei Lip
Representative of the transmission licensee class of market participant	Mr Chan Hung Kwan
Representatives of the retail electricity licensee class of market participant	Ms Annie Tan
	Mr Ng Meng Poh
Representative of the wholesale electricity trader class of market participant	Mr Dallon Kay
Representative of the market support services licensees	Mr Lawrence Lee Siew Ming
Person experienced in financial matters in Singapore	Mr Robin Langdale
Persons representing the interests of consumers of electricity in Singapore	Dr Goh Bee Hua
	Mr Michael Lim Kwee Thye

User Forum

Market Information Sharing Forum (MISF)

We hosted our bimonthly MISF on 17 September and were pleased that so many industry players attended. The forum covered the regular updates as well as the bi-monthly market performance updates, major generation and retail market share movements, and market outlooks of key market indicators. In addition, this forum featured a discussion of the planned gas pipe maintenance, and engaging feedback from the audience.

Our next MISF will be held on Wednesday, 19 November 2008.

Market Systems User Group (MSUG) Update

The bi-monthly MSUG forum was held on Wednesday, 22 October. In addition to the regular NEMS systems availability and incident updates, EMC IT briefed attendees on the upcoming rollout of the NEMS Offer Management System. EMC also updated attendees on the EMC digital certificate renewal exercise for access to the NEMS trading systems. This exercise is scheduled for January 2009.

The next MSUG meeting is scheduled for Thursday, 11 December.

EMC Training Programme – Next Course on 19 to 20 February 2009

EMC will be holding its two-day training course, *Understanding Electricity Markets,* on 19 to 20 February 2009 . Our staff will be conducting six sessions covering the following topics:

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

The next courses are scheduled for:
21–22 May 2009
20–21 August 2009
19–20 November 2009

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

Further details on the programme and registration are available 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

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.