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CEO's Message

It has been a busy past two months for EMC and the NEMS, and the second half of 2006 looks to be even busier.

The market performed well but experienced high demand. July saw the strongest annual change in demand for this year so far, with an increase of over 6% compared to July 2005. For more details see the article on page 5.

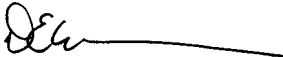
The Market Surveillance and Compliance Panel (MSCP) and the Dispute Resolution Counsellor (DRC) both published their annual reports in July; full details are on page 6. I was pleased to read that the MSCP is generally satisfied with the market outcomes of the NEMS and that there are healthy signs that the NEMS is slowly

evolving into a more efficient market. Despite having a robust market, we all realise that we need to continuously strive to further evolve the market on all fronts. On the governance front, new rules have further evolved how disputes are resolved, and the result is a fair, efficient and cost-effective dispute resolution process, as explained in the DRC's annual report.

Away from the business side, the story on pages 2 and 3 is about the fourth EMC Golf Day, which we hosted in July for invited guests from Singapore's electricity industry. The event was again very well received and I would like to thank all of our guests and our sponsors for making it a successful event. Several market participants got together in August and jointly supported *A Very Special*

Walk 2006 raising over \$23,000 for the Pathlight School.

The next event and probably the highlight for our year is the Singapore Electricity Roundtable on 20 and 21 November at the Grand Hyatt. We have already secured a great line-up of speakers and panellists from Europe, the US, Asia and Singapore. I am personally very excited that Mr Khoo Chin Hean, Chief Executive of the Energy Market Authority, has accepted our invitation to participate in the panel discussion. I look forward to welcoming you all to this thought provoking event.


Dave Carlson
Chief Executive Officer

Save the Date — Singapore Electricity Roundtable 2006



The Singapore Electricity Roundtable on 20 and 21 November promises to be a great gathering of the industry's leading practitioners and thinkers.

We have already confirmed the following panellists for the discussion, 'Five years down the road – How will the Singapore market have changed?':

- Khoo Chin Hean, Chief Executive, Energy Market Authority
- Neil McGregor, Managing Director, PowerSeraya Ltd
- Roy Adair, President & CEO, Senoko Power Ltd
- Lim Kong Puay, President & CEO, Tuas Power Ltd
- David Wong, Market Surveillance and Compliance Panel member (MD and Chief Executive, ABN AMRO Bank NV)
- Winston Koh, Associate Dean & Associate Professor of Economics, Singapore Management University

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The winners of the EMC Challenge trophy: (L to R) Larry Tee, Sim Kwong Mian, Sean Chung and Dennis Lim



The four junior lady golfers with EMC's Chairman, Tan Soo Kiang

The Fourth EMC Golf Day

On 12 July, we hosted our fourth EMC Golf Day for invited guests from Singapore's electricity industry. We welcomed about 60 golfers and nearly 100 dinner guests – including chairmen, board members, CEOs and other senior management from our market participants and other key industry players – to the tournament held at the Raffles Country Club.

The golfers enjoyed playing the Lake Course, competing in teams for the EMC Challenge Trophy and individually trying to hit a hole-in-one. As in past years, no one was able to ride home on the Harley-Davidson sponsored prize, a Harley-Davidson VRSCD Night Rod. However, the Harley on display during the cocktail reception was popular for photo opportunities and a talking point throughout the evening.

Besides the friendly golf competition, the other talking point was the presence of four of Singapore's leading junior lady golfers, whom we had invited to participate in the tournament again. Our guests were delighted to play with some of Singapore's greatest golfing talents and to learn a few new tips, and in return the young ladies had the chance to network with corporate leaders.

This interaction not only adds an unusual element to the EMC Golf Day but is also part

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Our sponsors



(L to R) Janice Khoo, Koh Sock Hwee, Ji Ji Li, Low Si Xuan and Tabitha Tan receive the EMC donation from Dave Carlson





Tan Soo Kiang with Ng Meng Poh, the winner of the top lucky draw prize

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of our ongoing effort to support the future of junior ladies golf. EMC's CEO Dave Carlson presented a cheque for \$2,000 from EMC to Dr Janice Khoo and the young ladies for the development of junior ladies golf in Singapore.

The prize presentations for the winning golf teams and the lucky draw are always eagerly awaited and this year's top lucky draw prize winner walked away with a golfing trip to The Empire Hotel and Country Club in Brunei.

This event would not have been possible without the generous support of our sponsors and our guests and we greatly appreciate their contributions. Hewlett Packard was the official silver sponsor (supporter for four consecutive years) and the other sponsors were: Power System Consultants, The Empire Hotel and Country Club, Synergy, DBS Bank, Mercer Human Resource Consulting, Silicomp Asia, The Fullerton Hotel, Raffles The Plaza, City Developments, Ernst & Young, Asian Senior Masters, SingTel, Grand Hyatt, Gaelic Inns and Flutes at the Fort.

We would also like to specially thank our industry sponsors — PowerSeraya, SembCorp Utilities, Senoko, Tuas Power and Diamond Energy — for contributing to the goody bags, lucky draw and novelty holes. We thank everyone for making this an enjoyable day and we look forward to hosting the event next year.

NEMS Charity Initiative Exceeds Target



Leading the group through Pasir Ris Park

Early Saturday morning on 5 August, we saw almost 100 participants representing the NEMS with staff from Diamond Energy, PowerSeraya, Senoko and EMC and their families venturing to the Pasir Ris Park. We were all eager to participate as one group representing the NEMS in this year's *A Very Special Walk 2006* in support of the Pathlight School.

Early in the year, we had agreed to jointly support this charity with the goal of raising more money than last year. The impressive \$23,436 we raised was beyond any of our expectations.

It is another testament to the concept that joining together as an industry not only greatly contributes to worthy causes but also provides all of us with a fun opportunity to get together. Once again we stood out from the crowd as an industry group, an effort that was especially noted. We were awarded a memento by Minister Tharman Shanmugaratnam, Minister for

Education & Second Minister for Finance, for our exceptional support.

A special thanks goes to all of our employees and our management for generously supporting and believing in this NEMS charity initiative in addition to each company's own programmes of giving back to society.

(See EMC Bulletin 32 for more details on the NEMS charity initiative and the other charity, Child at Street 11, we are supporting. Please contact us if you would like to join our initiative.)



Receiving a memento from the Minister



Some of the NEMS participants



2006 Conferences with EMC Participation

- **The 11th Annual Association of Power Exchanges Conference (APEX 2006)**

29 October–1 November, Seoul, South Korea

EMC's CEO Dave Carlson will provide an update on the National Electricity Market of Singapore.

- **The 16th Conference of the Electricity Power Supply Industry (CEPSI 2006)**

6–10 November, Mumbai, India

EMC's Senior Economist Poa Tiong Siaw will present 'Electricity Market Deregulation in Singapore — Challenges & Achievements'.

- **Singapore Electricity Roundtable**

20–21 November, Grand Hyatt Singapore

Organised by EMC, the Roundtable draws leading practitioners and thinkers from the electricity industry in Asia Pacific and globally. For more information see the article on pages 1 and 5 or visit www.emcsg.com.

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.

User Forums

July saw market participants coming together for two information sharing sessions.

Market Information Sharing Forum (MISF)

The MISF was held on 19 July with an exceptionally good attendance of almost 40 people. Participants were given insights into the market performance, demand and supply conditions, market share and pricing re-runs for May and June. A progress update on the market clearing enhancements and a general outlook for the market for July and August followed. EMC also announced that it would conduct a survey of the daily, weekly and monthly market reports in early August with feedback to be incorporated in EMC's upcoming market trading report review.

The feature topic presented by EMC covered the modelling of the phase shift transformer in the market clearing engine.

The next MISF is scheduled for Wednesday, 13 September 2006.

Market System User Group Forum (MSUG)

The MSUG took place on 20 July and EMC shared the NEMS system availability and provided updates on the status of the IT projects (Server Re-Platform, Data Delivery Phase-1), key incidents and the next Disaster Recovery Procedure (DRP) exercise scheduled for Friday, 20 October.

A constructive discussion on the current SonicMQ upgrade exercise and its key milestones for EMC, SP Services and the market participants took place. EMC shared its plans to migrate to SonicMQ version 7.0 by the end of this year, thus ensuring its continued support of integration with the PowerBid and SMART systems.

EMC updated market participants on its progress in providing the market with new web service interfaces for submitting and retrieving offer information, which remain on target for release to the market in October.

EMC also introduced the new IT organisational structure and new staff members.

The next MSUG is scheduled for Thursday, 21 September 2006.

EMC Training Programme — Next Course on 22 and 23 November

EMC will be holding its regular two-day training course, Understanding Electricity Markets, on 22 and 23 November in conjunction with the Singapore Electricity Roundtable on 20 and 21 November (see details on pages 1 and 5). 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

Further courses are scheduled for:

- 8–9 February 2007
- 17–18 May 2007
- 16–17 August 2007

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 on how to register are on our website, www.emcsg.com. For enquiries please e-mail trainingprogramme@emcsg.com or contact Ong Pui Sze at +65 6779 3000.



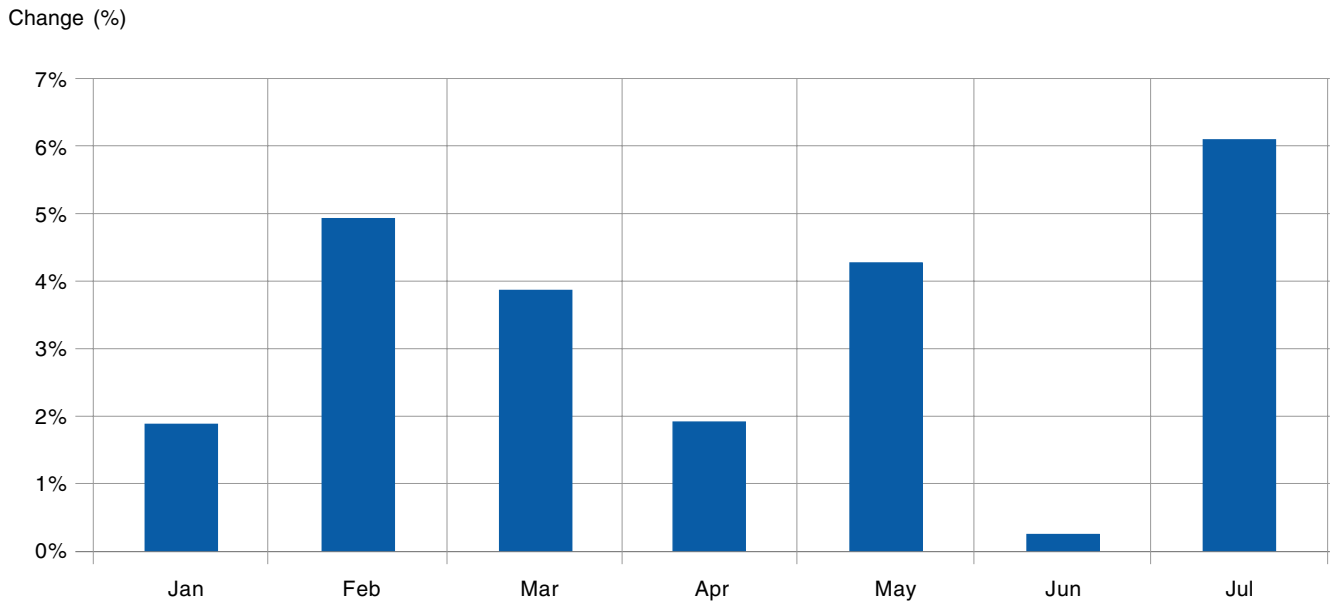
Demand and USEP Show Strong Increases

Demand in July grew by 1.5% compared to June, averaging 4,458MW. As shown in Chart 1, July demand represented a more than 6% increase compared to July in the previous year, while June showed a very slight year-on-year increase.

The new vesting contract for Q3 2006 went up to \$147.90/MWh, an increase of 6.1% compared to Q2 when, prompted by the violence in the Middle East, world oil prices hit a record high of US\$78/barrel in mid-July.

July's USEP jumped 13% compared to the previous month, with a monthly average USEP of \$154/MWh. One key contributor was weekend price spikes, driven by weekend demand, which were on average 118MW higher than in June. Excluding these weekend price spikes, the USEP would have only registered an increase of 3.6% over that of June. (Details can be found in our July monthly market report on the EMC website).

Chart 1: Annual Change in Demand by Month 2005/06



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Save the Date — Singapore Electricity Roundtable 2006

Other confirmed speakers:

- Bill Schjelderup, Managing Director, Bergen Energi, will provide insights on how end-users utilise energy markets and energy exchanges in Europe.
- Michael Nikkel, Chief Executive Officer, OneEnergy Limited, will give an overview of the market and regulatory developments in Southeast Asia and Taiwan.
- Becky Kilbourne, Marketing and Business Development, North American Energy Credit and Clearing Corp., will cover restructured US energy markets.
- Lasse Holopainen, President, Philippine Electricity Market Corporation, will provide an update on the developments in the Philippines.
- Prof. Winston Koh will discuss if Singapore should focus on its own energy market or on a greater SEA marketplace.

- Bruce Turner, SVP Trading and Portfolio Management, Suez Energy International, will provide an asset owner's perspective of risk and portfolio management in an integrated gas and electricity market.

Last year's inaugural event was very well received, with over 120 participants from Singapore, other countries in Asia Pacific, Europe and the US. Participants included presidents, CEOs, managing directors and others from governments, the electricity and energy industries, financial institutions, law firms and consultancies as well as from our NEMS.

Don't miss this year's highlight of the electricity industry. The brochure and registration form will soon be available on our website www.emcsg.com and sent to all *EMC Bulletin* recipients.



MSCP and DRC Annual Reports

In July 2006, the Market Surveillance and Compliance Panel (MSCP) and the Dispute Resolution Counsellor (DRC) issued their annual reports for the period of 1 April 2005 to 31 March 2006. The annual reports of the MSCP and DRC are available on the EMC website at www.emcsg.com.

MSCP Annual Report

The MSCP is chaired by Joseph Grimberg SC. Its members are Lim Chin, Lee Keh Sai, TPB Menon and David Wong.

The MSCP observed that during the year, the average USEP price increased by 34.5% and the average household tariff rose by 14.5%. The year also saw rising reserve and regulation prices, as the total reserve payment and average regulation price rose nearly 85% and 104% respectively, with the average regulation price reaching a historical high of \$72.43/MWh. The rising USEP prices were mainly due to rising fuel oil prices, which increased by more than 50% compared to the previous year. Other contributing factors were a tighter supply cushion arising due to higher demand and more withdrawals of ST generators, coupled with a decline of offers lower than \$100/MWh.

Besides higher average prices, the MSCP commented that the frequency of high price periods that exceeded a benchmark price also rose from 1.7% to 3.2%. This was despite an upward revision of the benchmark price from \$150/MWh to \$180/MWh. Most of the high prices occurred in the months of September and October.

During the year, the MSCP carried out an investigation into an issue of market efficiency and fairness and conducted its first

hearing into a case of market rule breach, based on market participant requests.

The MSCP Annual Report concluded with the following comments from the panel, "While we look forward to mechanisms to effect more demand responsiveness to price, the MSCP is generally satisfied with the market outcomes of the NEMS in the year under review.

The higher prices observed were the result of tighter supply cushions due to both higher demand and lower steam turbine (ST) availability as a consequence of the transition from ST to combined-cycle gas turbine technology. Higher market prices were also attributable to higher offer prices brought about by increased fuel costs. There were occasional price spikes, due to the inelastic nature of the demand for electricity.

The market monitoring indices continue to signal the existence of competitive pressure and the price responsiveness of the supply in the NEMS. Vesting contracts have helped to mitigate market power risk. Financial hedging instruments and credit support have also been important in managing price volatility and ensuring market stability during periods of high prices. The continued structural shift towards more combined-cycle gas turbine plants is a healthy sign that the NEMS is slowly evolving into a more efficient market."

DRC Annual Report

In the DRC Annual Report, George Lim, DRC, reported that the NEMS now has a fair, efficient and cost-effective dispute resolution process based on the new rules, which took effect in February 2006. The new dispute resolution process involves the following stages: negotiation, mediation and arbitration. It is a comprehensive approach to dispute resolution that enables disputes to be resolved outside of the courts.

Mr Lim reported that significant progress had taken place over the past year in implementing the new dispute resolution rules. The new rules require each market player to have a dispute management system (DMS). To assist market players in setting up their own DMS, Mr Lim had issued a DMS guidance note and also a model DMS for the NEMS. These guidance notes ensure a measure of consistency in the DMS that each market player develops so as to avoid unnecessary conflicts between them when used in practice.

Each market player has to nominate a DMS contact to be the first point of contact for the notification of disputes. Mr Lim expressed that it is important that DMS contacts should not only be equipped with the necessary skills for responding to a dispute, but also be provided with opportunities to interact with each other. Should any market dispute arise, there will be a better chance of resolution between colleagues who have already built a relationship in a non-contentious setting.

Pursuant to the new rules, Mr Lim has also established a new Dispute Resolution and Compensation Panel comprising a Mediation Panel and an Arbitration Panel. The appointments made to these panels provide assurance to the industry that should a dispute arise, they will have access to quality dispute resolution services provided by capable and independent individuals.

