

professional transparent cost-effective people ideas integrity commitment teamwork

CEO's Message

After a slow first quarter 2009, second quarter demand showed a strong upward trend in April and May, but since mid-June has shown indications of slowing down again. This is normal as we move out of the warmest months of the year. For more details on the market performance, please read the article on page 5.

Over the past two months, EMC has been busy hosting several visitors from other markets in the region, including the Energy Regulatory Authority of Vietnam (ERAV) and the Korean Power Exchange (KPX). EMC also conducted a customized training program for Malakoff in Malaysia. Lastly, EMC attended the second Asia-Pacific meeting for members of the Association of Power Exchanges (APEX) in Manila. At the meeting, hosted by the Philippine Electricity Market Corporation,

I had the opportunity to meet and share ideas with counterparts from eight other electricity markets in the region. All these interactions provide great opportunities to build closer ties between the markets in Asia Pacific but also underscore the position of the National Electricity Market of Singapore (NEMS) as a leading electricity market in Asia and one from which others are eager to learn. Please see the articles on page 3 and 4 for more details.

Mark your calendar for the Singapore Electricity Roundtable on 17-18 November, again part of Singapore's International Energy Week (SIEW) taking place 16-20 November. First details are available in the article on page 6.

Finally, I am very pleased to draw your attention to the good performance results that EMC achieved for FY2008-2009, including

exceeding the targets of the Performance Incentive Management System (PIMS) in all but one area, as outlined in the article below. I would like to especially thank my EMC staff for their hard work and commitment, and our market participants (MP) for their continued support of EMC.

We at EMC look forward to continuing our close partnership with all market players and are committed to keeping pace with the growing demands of our maturing market—while ensuring that EMC is run efficiently and effectively.

Dave Carlson Chief Executive Officer

Solid Performance Results for FY2008-2009

EMC has continued to perform well against the targets of the Performance Incentive Management System (PIMS). For the financial year 1 April 2008 to 31 March 2009 (FY2008-2009), EMC exceeded targets in all areas but one.

Dave Carlson, CEO of EMC, commented that EMC will continue to strive to provide a high standard of service to the market. EMC is committed to further improving performance, especially in the areas highlighted in the recent industry survey.

EMC's auditors, Ernst & Young, surveyed market participants in March 2009 on three

qualitative measures and collated the results of their responses. The PIMS bonus for the year totalled \$360.3K compared to \$381.3K for the previous year.

EMC maintained its perfect score for Market Assessment (as assessed by panel members) and improved in Customer Responsiveness. Rule Change ratings, however, remained below target.

EMC also exceeded the targets for all three quantitative measures. Settlement accuracy scored a perfect rating, as it had in past years, while Pricing accuracy improved its rating over

the previous year. The improved ratings were a result of several initiatives put in place to raise the standard of service. System availability, however, had dipped slightly against last year, caused by two hardware failure incidents in February and March 2009. EMC has already acted to rectify the problem and put in the necessary preventive measures.

As the NEMS is increasing its number of market participants and becoming more challenging in its requirements and expectations, EMC's role evolves to serve the changing market. EMC is committed to improving our performance in all areas to keep pace with our maturing market.

(continued on page 2)



(continued from page 1)

## EMC's Performance Against Targets

Targets and Performance (%)	FY2007-2008			FY2008-2009		
	Approved target	Actual performance	Score (Points)	Approved target	Actual performance	Score (Points)
<b>Quantitative Measure:</b>						
System availability	99.90%	<b>99.98%</b>	<b>20.00</b>	99.90%	<b>99.95%</b>	<b>12.50</b>
Pricing accuracy	99.70%	<b>99.97%</b>	<b>22.50</b>	99.70%	<b>99.99%</b>	<b>24.17</b>
Settlement accuracy	99.90%	<b>100.00%</b>	<b>25.00</b>	99.90%	<b>100.00%</b>	<b>25.00</b>
<b>Qualitative Measure (satisfaction rating):</b>						
Customer responsiveness	85.00%	<b>85.71%</b>	<b>0.71</b>	85.00 %	<b>88.46%</b>	<b>3.46</b>
Market assessment	85.00%	<b>100.00%</b>	<b>5.00</b>	85.00 %	<b>100.00%</b>	<b>5.00</b>
Rule changes	85.00%	<b>69.57%</b>	<b>(5.00)</b>	85.00 %	<b>63.77%</b>	<b>(5.00)</b>
<b>Total points</b>			<b>68.21</b>			<b>65.13</b>

## EMC's Financial Performance

	FY2007-2008		FY2008-2009	
	Actual (\$m)	Budget (\$m)	Budget (\$m)	Actual (\$m)
Administration fees	27.61	28.45	27.66	
PIMS bonus	0.38	0.44	0.36	
<b>Revenue from rendering services</b>	<b>27.99</b>	<b>28.89</b>	<b>28.02</b>	
Manpower costs	7.66	7.92	6.92	
Amortisation and depreciation	5.10	6.64	6.01	
Market operator licence	2.26	2.26	2.26	
IT services	3.30	3.62	3.35	
Operating leases & utilities	1.82	2.08	1.81	
Audit, legal and professional fees	0.78	0.83	0.91	
Others	2.30	2.74	2.10	
<b>Total costs</b>	<b>23.22</b>	<b>26.08</b>	<b>23.36</b>	
Profit before tax	4.93	2.97	4.81	
Net EMC fee (\$ per MWh)	0.362	0.366	0.360	

EMC's expenses were below the FY2008-2009 budget by \$2.72M and were overall similar to those of FY2007-2008. The two largest contributors to this reduction were a high level of staff vacancies, which has since been restored, and lower depreciation than planned, which is being refunded to the market. EMC continued to exercise fiscal responsibility and concluded the financial year under budget. We will continually look for ways to become even more efficient and cost effective in our operations—without compromising the high service standards and world-class market operation we strive to provide to our stakeholders.

## Revenue Adjustments

Following the audited financial results for FY2008-2009 approved by the Board, EMC is effecting a refund in fees totalling \$435,243.28, to be divided equally from September 2009 to March 2010. The revenue adjustments are comprised of the following:

FY2008-2009 Audited Refund/(Recovery)	S\$
Depreciation adjustment	\$ 631,997.50
Exogenous items	\$ 156,135.00
NEMS accounts interest	\$ 7,416.26
Less: PIMS bonus	\$ (360,305.48)
	\$ 435,243.28

## KPX Customized Training

For the week of 18-22 May 2009, the Market Administration team organized a five-day customized training session for two members of the Korea Power Exchange (KPX). These delegates are from KPX's market operations team, which manages the pricing and resource scheduling in Korea's day-ahead, cost-based pool market.

The Korean electricity market boasts an installed capacity of 73,697MW and peak demand of 54,583MW (as of 16 Jun 09). Of its total installed capacity, about 8 percent comes from hydro units, 37 percent from steam units, 26 percent from combined cycle units and 26 percent from its nuclear units. Its growth in demand for the past seven years, to 2007, stands at an average 6.4 percent per annum.

The delegates were here to learn more about the NEMS. Their enthusiasm for learning was evident in their active participation during the training sessions.

The EMC Market Operations team brought the delegates through topics in market operations and pricing and settlements in the NEMS, while the Market Administration team covered the intricacies of the vesting contract regime in Singapore—a topic of particular interest to the delegates. In addition to the in-depth lectures, PowerSeraya Ltd kindly hosted the delegates and a few EMC staff for an on-site plant tour.



**Korean delegates take an on-site plant tour at PowerSeraya.**

In an effort to create networking opportunities for the delegates, this course was arranged to fit into the schedule of the regular EMC training course, "Understanding Electricity", where the delegates had the opportunity to network with participants from Malaysia, Indonesia, Hong Kong, and Singapore.

## Dispute Management Workshop



**Professor Joel Lee conducting the workshop**

On 15 May 2009, EMC held a workshop on "Managing Difficult Conversations" for the dispute management system contact persons (DMS contacts) of all the market players in the NEMS.

The trainers for this negotiation workshop were Mr George Lim, Dispute Resolution Counsellor, and Associate Professor Joel Lee from the National University of Singapore. The one-day event took place at EMC and was organized and supported by EMC's Market Assessment Unit.

The workshop focused on the structure of a difficult conversation, conflict resolution modes, and elements of communication. The trainers aimed to build rapport amongst the DMS contacts and shed light on improving individual negotiation and communication skills.

Feedback from participants in this workshop was very positive and many have indicated

that they would be interested to attend more workshops like this. The workshop was also a great opportunity for DMS contacts to network and build good working relationships with their industry counterparts.



**DMS contacts attending the workshop**

## Malakoff Training

From 5-7 May 2009, EMC conducted tailor-made training courses on power sector reform and trading strategies for Malakoff Berhad in Kuala Lumpur.

The training topics included discussion of the policy drivers of electricity market reforms, market design and pricing options, market power, international experiences, price volatility and risk management, and spot market trading strategies.

Senior managers from Malakoff Berhad and The Energy Commission of Malaysia attended the courses. Participants energetically debated the implications of international power market developments for Malaysia, and found the courses useful.

EMC is pleased to offer customised training courses to interested parties. Please contact Dr Chiao Yen-Shong on [yenshong.chiao@emcsg.com](mailto:yenshong.chiao@emcsg.com) or +65 6571 9810 to discuss.



## ERAV Visit



Delegation from ERAV (Vietnam) with EMC staff

A delegation from the Electricity Regulatory Authority of Vietnam (ERAV) visited Singapore for a week in May to exchange ideas on market design and operational issues and to learn from Singapore's experience in market operation, system operation, metering and reconciliation, generator trading, new investment, tariff and fee determination, and regulatory oversight.

ERAV is responsible for the establishment of the Competitive Generation Market in Vietnam, scheduled for commercial operations in 2010. EMC was pleased to facilitate their visit and hosted the group on 25 May. The group also visited the Energy Market Authority (EMA), Singapore Power Services and two generation companies.

## User Forum

### Market Information Sharing Forum (MISF)

The MISF on 20 May 2009 examine the market movements for March and April and evaluated upward trending of the Uniform Singapore Energy Price (USEP) in late April. Our next MISF will be held on Wednesday, 15 July 2009.

### Market Systems User Group (MSUG) Update

The bi-monthly MSUG forum was held on 18 June. In addition to the regular NEMS systems incidents and availability update, attendees were briefed on the details of the OMS (Offer Management System) enhancements and the "sunset plan" for the EMC SonicMQ and PowerBid.

EMC also shared progress on our current major projects, the Settlement System Enhancement and the Single Electronic Window (SEW). We also discussed the tender for the Managed Secured Services (MSS) and the Data Centre Facilities Upgrade project.

Finally, the audience was briefed on the scheduled Disaster Recovery (DRP) exercise to be held from 25 August to 3 September, planned in conjunction with a series of system maintenance and upgrade tasks.

The next MSUG is tentatively scheduled for Thursday, 13 August.

## EMC Training Programme – Next Course on 20 and 21 August 2009

EMC will be holding its two-day training course *Understanding Electricity Markets* on 20 and 21 August 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 course is scheduled for:

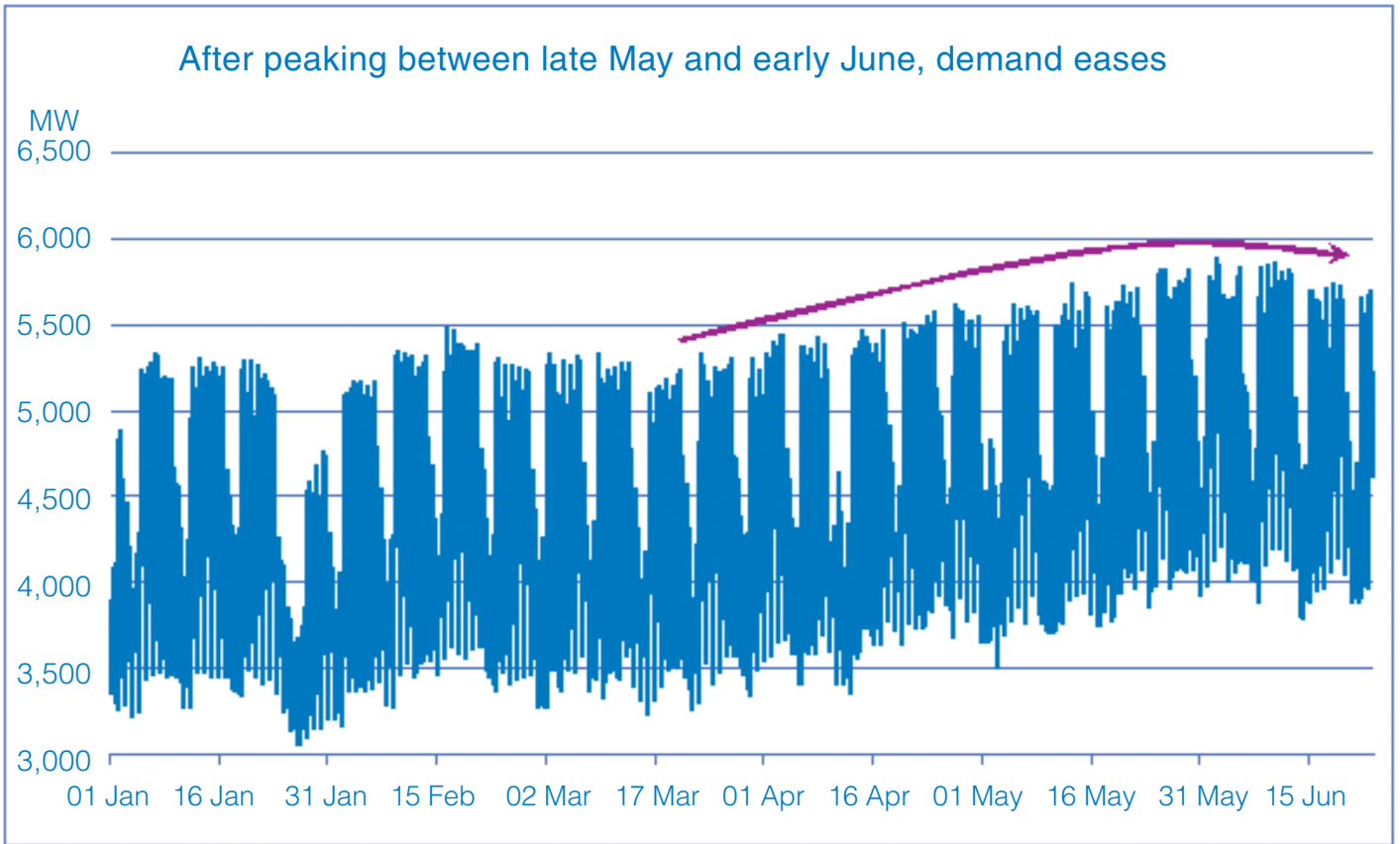
**19 - 20 November 2009**

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 on how to register are on our website, [www.emcsg.com](http://www.emcsg.com). For enquiries, please e-mail [trainingprogramme@emcsg.com](mailto:trainingprogramme@emcsg.com) or contact Jan Lee at +65 6779 3000.

## Market Update

### June demand displays signs of weakening



After a lackluster first quarter, demand exhibited a strong upward trend during the second quarter of 2009, but revealed indications of slowing down from mid-June onwards. During the second quarter, demand crossed the 5,500MW mark in mid-April, a high last observed in

December 2008. Demand peaked between late May and early June, with levels hovering above 5,800MW (a level previously only recorded in April and May 2008), and eased from mid-June onwards. This demand pattern was in line with the warm weather recorded during April and May.

**Table 1: Vesting Contract Hedge Price (VCHP) from first quarter 2008 to third quarter 2009**

	Q1 08	Q2 08	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09
VCHP	\$161.80	\$174.44	\$183.25	\$238.64	\$167.14	\$115.26	\$138.92

As released by the Market Support Services Licensee (MSSL), the third quarter VCHP of 2009 will be \$139/MWh.



## Save the Date – Singapore Electricity Roundtable 2009



**Tuesday, 17 November 2009**  
**Wednesday morning, 18 November 2009**  
**St. Regis Hotel, Singapore**

EMC is pleased to host the fifth Singapore Electricity Roundtable on 17 and 18 November 2009. The year's event will be a highlight of Singapore's International Energy Week (SIEW), organized by the Energy Market Authority (EMA) and the Energy Studies Institute (ESI).

The Roundtable is dedicated to connecting influencers, decision makers, potential investors and experts in the electricity, energy and related industries. Senior executives and leaders from Singapore and across the globe look forward to this valuable opportunity to meet and discuss regional and global challenges and issues of importance to the energy and electricity industries.

As in past years, we have invited distinguished speakers covering topics from perspectives on the Asian and global electricity landscape to developments and trends in LNG, technologies

affecting the electricity industry, and updates on the NEMS. Our much-anticipated panel discussion will cover benefits and opportunities in attracting global players to Singapore's energy and electricity markets.

Last year we welcomed almost 200 participants from Singapore and other countries in Asia Pacific, Europe and the US. Participants included company presidents, CEOs, managing directors, and others from the electricity and energy industries, financial institutions, law firms, consultancies, and our National Electricity Market of Singapore (NEMS).

Mark your calendar so that you don't miss this high-profile event dedicated to the electricity industry. More information on the Roundtable are available on our website: [www.emcsg.com](http://www.emcsg.com), and all EMC Bulletin recipients will receive full details shortly.

For more information on the Singapore International Energy Week, please visit [www.singapore.iew.com.sg](http://www.singapore.iew.com.sg).

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## New Entries to the NEMS

Two new market participants, Banyan Utilities Pte Ltd and ISK Singapore Pte Ltd, joined the NEMS on 16 March 2009 and 2 June 2009, respectively. Banyan Utilities registered a 5MW facility, and ISK Singapore registered a 9.6MW facility. ISK Singapore has been granted net settlement and price neutralisation by the Energy Market Authority (EMA), the third participant in the market treated as a non-injecting generation facility.

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## 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 questions via e-mail to [info@emcsg.com](mailto:info@emcsg.com) or via fax to +65 6779 3030.

Thank you in advance for your time and effort.

