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### CEO's Message

October's highlight for many of us in the electricity and energy industries was the Singapore Electricity Roundtable 2012, which EMC hosted on 23 October as part of the Singapore International Energy Week (SIEW).

This year, the Roundtable brought together industry experts, who covered timely topics like Liquefied Natural Gas (LNG), demand response and electricity futures market, insights on interconnectivity for the ASEAN countries and updates to the electricity markets in the United States. I am also heartened by the increase in the number of participants who attended the Roundtable this year – more than 240 participants. I would like to thank all the speakers and participants for your support of the event. More highlights of the Roundtable can be found below and on pages 2 and 3.

In September and October, EMC welcomed delegates from the Center for the Advancement

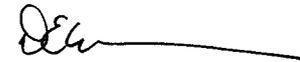
of Trade Integration and Facilitation (CATIF), Philippines and the Vietnam Ministry of Trade and Industry and Electricity Regulatory Authority of Vietnam (ERAV). They were here to learn more about the National Electricity Market of Singapore (NEMS), with a focus on the market governance aspect of the market. We value such visits, as they are good opportunities for us to exchange best practices and experiences with our regional counterparts. See the article on page 5 for more details.

October has been an eventful month. Besides hosting the Roundtable and overseas delegates, our colleagues brought the children from Chao Yang School to the Maritime Experiential Museum and Aquarium, as part of their Children's Day celebration. Read more about this excursion on page 3.

Looking at the market, the Uniform Singapore Energy Price reached a new low for this year

in October while the Combined Cycle Gas Turbine supply recorded an all-time high in October. We also saw the entry of a new market participant, TP Utilities with their 101MW generation facility. This latest addition brings the total generation capacity registered in the NEMS to 10,701MW. For full details see the articles on pages 4 and 5.

The NEMS turns 10 in January 2013. The success of the NEMS as a transparent, competitive and efficient market would not have been possible without the support of all our market participants. I look forward to your continued support of the NEMS as it embarks on another new chapter.



Dave Carlson  
Chief Executive Officer

### Singapore Electricity Roundtable 2012



Roundtable speakers together with Dave Carlson, CEO EMC (extreme left) during the Q&A session

The eighth Singapore Electricity Roundtable, held on 23 October at the Sands Expo and Convention Center, Marina Bay Sands, welcomed over 240 participants this year. The majority of the participants were representatives from the National Electricity Market of Singapore (NEMS) as well as related industries like oil and gas. The event also attracted participants from supporting industries including financial institutions and consultancies, and representatives from local government agencies.

This is the fifth year that EMC has partnered with the Energy Market Authority (EMA), in hosting the Roundtable as part of the Singapore International Energy Week (SIEW).

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**Roundtable participants at the conference**

Participants of the Roundtable this year came from different parts of the world, including Indonesia, Malaysia, Philippines, Australia, New Zealand, Japan, United States, Nigeria, France and the United Kingdom.

EMC Chairman Wong Meng Meng opened the event with a welcome address, noting that since their inception, both the Roundtable and SIEW are now recognised as the leading platforms for industry experts and practitioners to discuss and exchange ideas on energy and electricity issues. He also acknowledged the success of NEMS as it turns 10 in January 2013 and looks forward to the continued support from the market participants for the NEMS as it embarks on a new chapter.

Sarah Fairhurst, Partner of The Lantau Group, Hong Kong, gave the first presentation for the event. Sarah provided an update to the regional electricity landscape and touched on the challenges and potential for greater connectivity between Singapore and the region. The presentation provided much food for thought for the participants, as they pondered over the complex energy issues pertaining to each ASEAN country and what it meant to be inter-connected in terms of fuel sources.

Neil McGregor, Chief Executive Officer of Singapore LNG Corporation (SLNG), was also one of the distinguished speakers at the Roundtable this year. He spoke on the

developments of Liquefied Natural Gas (LNG) in Singapore, the upcoming LNG terminal scheduled to start operations in 2013 and also on the challenges ahead for SLNG.

Two other experts spoke about demand response and the electricity futures market at the Roundtable this year. Michael Zammit, Principal, Market Development at EnerNOC Inc, spoke about demand response applications and opportunities for Singapore. Julie Heng, Head of Commodities at the Singapore Exchange, touched on the potential framework for electricity futures trading in Singapore. The presentations by Michael and Julie were timely as the EMA is presently exploring the feasibility of incorporating demand response



**Neil McGregor, SLNG presenting at the Roundtable**



**Toh Seong Wah, EMC speaking at the Roundtable**

and implementing an electricity futures market in Singapore's wholesale electricity market.

Even as the NEMS matures, we are always looking to the developments at the other electricity markets in the world. We had the pleasure of having Ronald Coutu, Manager, Business and Technology Solutions at ISO New England to share with the participants some updates to the electricity markets in the United States. Ronald's presentation tied in with the presentation by Michael on demand response,



**(L to R), Sarah Fairhurst, The Lantau Group, Julie Heng, Singapore Exchange and Ronald Coutu, ISO New England, taking on questions during the Q&A session**



(continued from page 2)



**Roundtable attendees enjoying cocktails at Alkaff Mansion**



**Roundtable sit-down dinner at Alkaff Mansion**

as ISO New England has also incorporated demand response into their market. This provided the Roundtable participants with added insights on how demand response works in other markets.

Finally, our own in-house expert, Toh Seong Wah, Senior Vice President, Market Operations and Information Technology, also provided an overview and updates on the NEMS.

The panel discussion this year was replaced by a question-and-answer session during which

all the Roundtable speakers took questions from the floor, with Dave Carlson, Chief Executive Officer of EMC as the moderator. We had a lively discussion, as the speakers answered questions that were sent via SMS (short message service) during the event and also some from the floor.

The one-day Roundtable ended with a networking cocktail session and a sit-down dinner at Alkaff Mansion Ristorante. Guests were treated to an evening of authentic fine

Italian cuisine in a heritage venue, located on top of the Telok Blangah Hill Park.

We would like to thank all participants for their continued support of the Roundtable. The interest shown by both returning and new participants serves as a motivation to us each year. We look forward to hosting everyone again at the Singapore Electricity Roundtable 2013. More photos of the Roundtable are available at [www.emcsg.com/roundtable2012highlights](http://www.emcsg.com/roundtable2012highlights).

## Chao Yang School Outing to the Maritime Experiential Museum & Aquarium



**EMC volunteers at Chao Yang School**

On 4 October, 11 volunteers from EMC, together with 85 children and eight teachers from Chao Yang School, went to the Maritime

Experiential Museum & Aquarium (MEMA) at Resorts World Sentosa. This is the third consecutive year that EMC has organised an

outing for the children from Chao Yang School as part of their Children's Day celebration.

Chao Yang School, under the auspices of the Association for Persons with Special Needs (ASPN), caters to the needs of children with learning disabilities. EMC has supported the school in various activities for the last seven years.

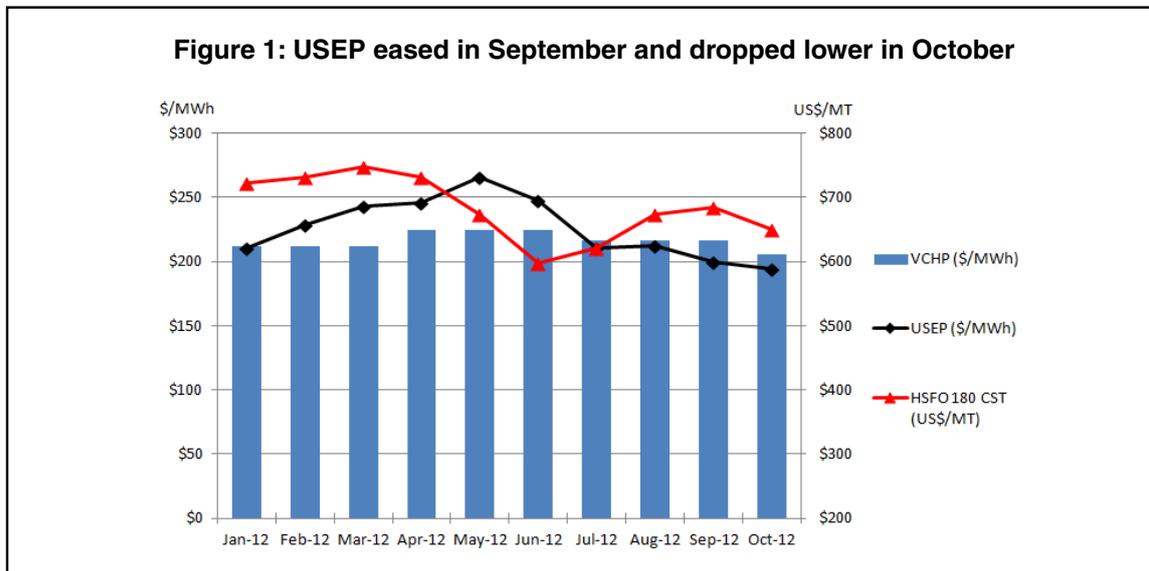
The students had their McDonalds' breakfast in school before we proceeded to MEMA. Five guides from MEMA gave the children and teachers a guided tour of the museum, where they learned more about Southeast Asia's historic maritime trade. The tour ended with an experiential Typhoon Show featuring a thrilling 360-degree immersive shipwreck experience.

As always, we enjoyed the interaction with the children from Chao Yang School during the outing and look forward to our future activities with them.

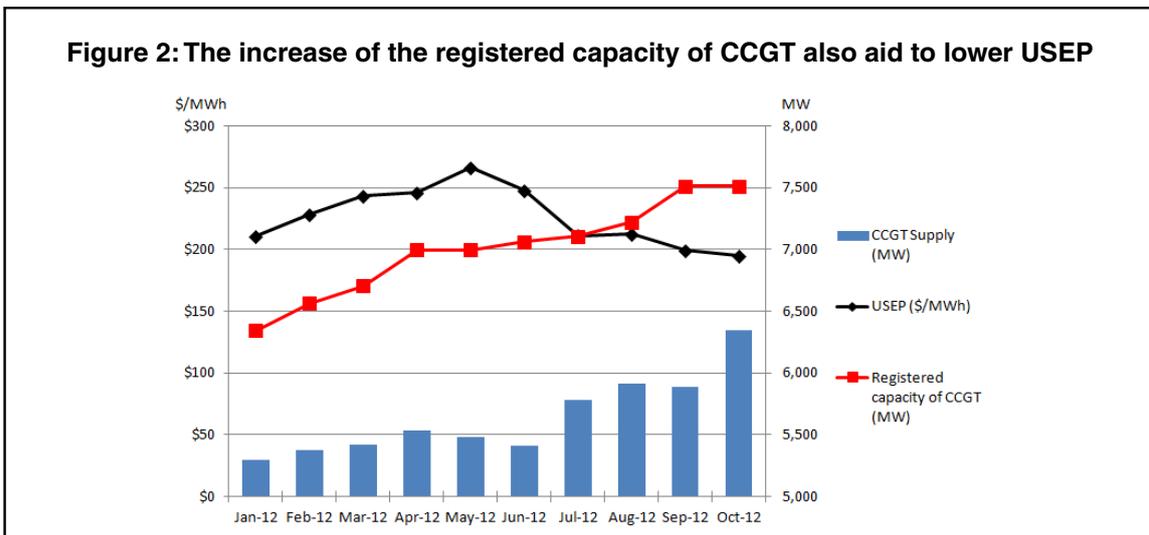


## Market Update

After staying slightly above \$200/MWh in August, the Uniform Singapore Energy Price (USEP) eased below this mark in September and October and settled at a low for the year in October at \$194/MWh, as shown in Figure 1 below. The drop in USEP was in tandem with a decline in the quarterly Vesting Contract Hedge Price (VCHP). From \$216.79/MWh in the third quarter (July to September), VCHP declined to \$205.52/MWh for the fourth quarter (October to December); see Figure 1 below. This decline in VCHP during the fourth quarter was also in line with the lower fuel oil index, HSFO 180CST<sup>1</sup>.



On top of the lower fuel oil price, the steady increase in the Combined Cycle Gas Turbine's (CCGT) registered capacity over the year thus far also contributed to the lower USEP in October. The CCGT, which generally serves the base load of electricity consumption, reached 7,510MW in registered capacity in October, as shown in Figure 2 below. With the increase in registered capacity, CCGT supply recorded a boost during the year and reached an all-time high in October.



<sup>1</sup> Fuel Oil Index is one of the key determinants for calculating the quarterly VCHP. Source: Energy Market Authority.



## Newcomer TP Utilities

TP Utilities joined the National Electricity Market of Singapore (NEMS), as its latest Market Participant on 12 September. TP Utilities' new generation facility, a multi-utilities complex with a generation capacity of 101MW started trading in the NEMS from 4 October. With this latest addition the total generation capacity registered in the NEMS is 10,701MW.

## Visitors to Energy Market Company



**CATIF delegates and EMC representatives**

In September and October, EMC hosted two groups of visitors from the Philippines and Vietnam respectively.

Representatives from the Center for the Advancement of Trade Integration and Facilitation (CATIF), a non-profit research group based in the Philippines, visited EMC in September as part of their study on the challenges of pricing electricity services in selected ASEAN economies. The group wanted to learn more about the features of the National Electricity Market of Singapore (NEMS), and in particular the governance structure of the NEMS and the market mechanisms in place to mitigate market power.



**Vietnam Ministry of Trade & Industry and ERAV delegates with EMC representatives**

In October, we hosted delegates from the Ministry of Trade and Industry and the Electricity Regulatory Authority of Vietnam (ERAV). They wanted to gain more insights to the features and operations of the NEMS and were particularly interested in the governance structure of the wholesale electricity market in Singapore.

These overseas visits attest to the success of the NEMS as an efficient and effective market. We appreciate such visits as they are an excellent platform for the exchange of ideas and experiences with our regional counterparts.

## 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.



## User Forum

### Market Information Sharing Forum (MISF)

The 65th session of MISF, held on 14 September, covered the market performance for the National Electricity Market of Singapore (NEMS) in July and August and the progress update of on-going system enhancements.

Tan Choon Kiat, Senior Market Analyst from the Market Operations Team also took the opportunity to share the following topics during the forum:

- methodology used by Power System Operator on forecasted demand;
- details of the price separation on 14 August;
- three system enhancements made on the Market Clearing Engine (MCE); and
- generator type tagging in the MCE and its impact on reports.

Market participants who are interested to present relevant topics relating to the NEMS at future MISFs are encouraged to come forward.

The MISF on 14 November was presented by Debbie Tse, Senior Market Analyst from the Market Operations Team. The forum touched on market performance for the NEMS in September and October, along with a progress update on the current system enhancements and feature topics.

### Market Systems User Group (MSUG) Update

The bi-monthly MSUG forum was held on 18 October. Market Participants (MPs) were updated on the one-hour maintenance downtime taken in September to carry out application and system enhancements to the NEMS Systems. EMC IT also shared with MPs the progress status of the Server Re-platform Project (SRP). Parallel run testing has started at the production site and testing with MPs is scheduled for October to December.

MPs were also given an overview of the latest project status for on-going projects, including the Recovery and Refund of Reserve and Regulation Payments, the Publication of Registered Capacity by Facility and the schedule for phasing out older NEMS applications. The next MSUG is tentatively scheduled for Thursday, 20 December.

## EMC Training Programme – Next Course on 21 and 22 February 2013

EMC will be holding the next run of its two-day course *Understanding Electricity Markets* on 21 and 22 February 2013. 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

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

