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CEO's Message



Recent global events have more than ever highlighted the urgency for Singapore to transition to a more resilient, greener and more inclusive energy future. Over the past few years, the adoption of solar energy and low-carbon alternatives have helped Singapore in our energy transition journey.

At the recently concluded Singapore International Energy Week, Deputy Prime Minister and Minister for Finance Lawrence Wong shared how Singapore is fully committed to achieving net zero emissions by 2050. The push for low-carbon hydrogen to supply half of Singapore's power needs by 2050 is an exciting one as we look to reduce our emissions and support Singapore's decarbonisation efforts.

At the same event, Minister for Trade and Industry Gan Kim Yong also introduced "guardrails" in the areas of power generation capacity, gas supply and retail markets. These guardrails will strengthen the energy market and go some way in stabilising the market in times of sustained price spikes.

EMC will continue to partner with the Energy Market Authority and the industry to integrate the policies to ensure that the market continues to be robust, competitive and resilient.

In September and October, the wholesale electricity market saw a tightening of the supply cushion coupled with a fall of fuel oil prices. The monthly average Uniform Singapore Energy Price (USEP) increased 1.2 percent to \$230.61/MWh in September and further increased 9.8 percent to \$253.20/MWh in October.

We also welcomed to the National Electricity Market of Singapore two new market participants, Crystal Clear Environmental Pte Ltd and Terrenus Energy SL1X Pte Ltd, and two new facilities by PSA Corporation Limited and SolarLand Alpha Assets Pte Ltd. These developments give us confidence that the market is functioning well.

We can agree that a sustainable and resilient energy future is crucial, not just for ourselves, but for future generations. I believe that with our collective efforts, Singapore will be able to achieve its net zero ambition in 2050 and create an energy future that we can be proud of.

Toh Seong Wah
Chief Executive Officer

APSN Chaoyang School 40th Anniversary

A long-term partner of EMC, APSN Chaoyang School celebrated its 40th Anniversary this year with the theme, “Celebrating with the Community”. EMC joined the Guest-of-Honour at the celebrations, Minister of State for Social and Family Development and for Home Affairs, Ms Sun Xueling, together with the staff, teachers, beneficiaries and their families/caregivers in a fun-filled day of activities on 3 October.

From helping with the make-up for the adorable student performers to manning the carnival games for everyone to enjoy, our staff volunteers were on hand to ensure that the day was enjoyable and memorable for all.

The school’s values of integrity, respect, commitment and resilience resonates with EMC’s own values of people, positive attitude, integrity, customer service and excellence.

That is why EMC continues to partner with the school and we look forward to working with the school for many more years to come, helping beneficiaries become independent and lead fulfilling lives in the future!



Everyone enjoying the wonderful performances put up by the students



EMC volunteers at APSN Chaoyang School’s 40th Anniversary celebrations



Students playing robot soccer at one of the carnival games manned by EMC volunteers

Rule Change Updates

Exemption from the Automatic Financial Penalty Scheme during fuel changeover as directed by the PSO



The Automatic Financial Penalty Scheme (AFPS) was established to incentivise compliance from Generation Registered Facilities (GRFs) with their dispatch schedules, with several permitted exemptions.

A recent EMA-directed rule change established that the Power System Operator (PSO) may direct GRPs to use a specified fuel (natural gas or diesel) for its generation. Compliance with such directions may require a fuel changeover. While undergoing a fuel changeover, a GRF’s ability to meet its dispatch instruction can be out of a generator’s control.

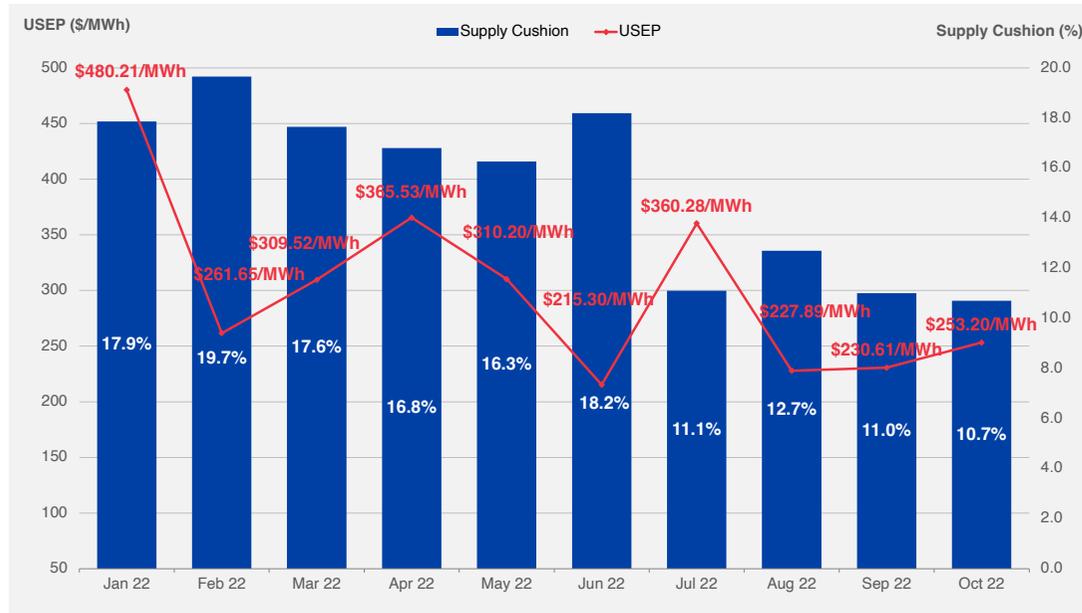
This proposal allows GRPs undergoing such fuel changeovers to be exempted from the AFPS.

The rule change proposal was supported by the Rules Change Panel, approved by EMA on 9 September and took effect on 14 September.

For future updates and more details on the rule change mentioned, please visit our [website](#).

Market Update

Overview of USEP and supply cushion – Jan to Oct 2022



The daily average Uniform Singapore Energy Price (USEP) ranged between \$144.32/MWh and \$447.22/MWh in September, and between \$147.92/MWh and \$627.96/MWh in October. The monthly average USEP increased 1.2 percent to \$230.61/MWh in September and further increased 9.8 percent in October to \$253.20/MWh.

In September, demand marginally decreased 0.3 percent to 6,356MW while supply dipped 2.1 percent to 7,145MW as compared to the previous month. The reduction in supply led to the tightening of the supply cushion by 1.6 percentage points to 11.0 percent. Against the backdrop of fuel oil price falling by 14.1 percent, the USEP increased slightly by 1.2 percent. Despite the increase, the monthly average USEP price was the third lowest for the year to date.

In October, demand decreased 1.5 percent to 6,259MW while supply weakened 1.9 percent to 7,010MW. This led to the supply cushion dropping 0.3 percentage point to 10.7 percent. In addition, the fuel oil price fell by 7.8 percent. Despite this, the monthly USEP surged 9.8 percent primarily due to the number of periods in which USEP climbed above \$500.00/MWh, increasing from 21 periods in September to 40 periods in October, as a result of tight supply conditions.

New Entrants to the NEMS



During September and October, there were two new market participants and two new facilities registered in the National Electricity Market of Singapore (NEMS):

Two new market participants registered in the NEMS

Market Participant	License Type	Date Registered
Crystal Clear Environmental Pte Ltd	Wholesale Market Trader	5 October
Terrenus Energy SL1X Pte Ltd	Wholesale Market Trader	13 October

Two new facilities registered in the NEMS

Market Participant	Facility Type	Capacity (MW)	Date Registered
PSA Corporation Limited	Energy Storage System	1.7	9 September
SolarLand Alpha Assets Pte Ltd	Intermittent Generation Source (IGS)	1.6	5 October

In addition, there was a transfer of IGS facility in the NEMS from Terrenus Energy Pte Ltd to Terrenus Energy SL1X Pte Ltd on 28 October.

User Forums



Market Information Sharing Forum

Our Markets and Operations team hosted the 125th session of the bi-monthly Market Information Sharing Forum (MISF) on 15 September.

The following topics were shared with the attendees during the virtual session:

- market performance and key highlights in July and August;
- system enhancements and projects; and
- feature topics:
 - offer change study
 - provision of real-time estimates of the Reserve Responsibility Share (RRS) for each Generation Registered Facility (GRF)

We would like to thank participants for their continuous support and strong interest in the MISF. Market participants who are interested in presenting at future MISFs are encouraged to contact the Markets and Operations team.

Market Systems User Group Forum

The bi-monthly Market Systems User Group (MSUG) forum was held on 20 October. Our Technology team updated participants on the following topics:

- overview of the NEMS systems availability year-to-date for FY2022/2023;
- overview of the NEMS systems service desk calls received for FY2022/2023;
- overview of change releases deployed between October 2021 and September 2022;
- NEMS systems incidents;
- planned NEMS maintenance;
- Disaster Recovery Preparedness (DRP) exercise;
- statistics on report downloads (via Web Services);
- status updates on Technology (infrastructure) project:
 - Settlements Prepayment Automation Project;
 - Web Application Firewall (WAF).
- status updates on Technology (applications) projects:
 - Settlement Engine Application Upgrade Project;
 - providing real-time estimates of Reserve Responsibility Share (RRS) for each GRF;
 - Settlements Prepayment Automation Project;
 - Automation of Data Extraction of Forced Outage Information for POF Publication via Web Services;
 - Corporate Website Revamp Project;
 - SEW Server Upgrade and Webserver Migration; and
 - incorporation of solar generation forecasts.

The next MSUG forum will be held virtually via Teams based on voting results from the attendees on 20 October. It is tentatively scheduled for Thursday, 15 December. We will update participants ahead of the forum.

EMC Training Programmes

EMC conducts customised training for the industry as well as seminars at our local institutes of higher learning. In the last few months, we organised a Singapore Electricity Network and Market course for YTL PowerSeraya staff, and seminars for Electrical Engineering undergraduates at the Singapore Institute of Technology and students of the Nanyang Technological University's Nanyang Centre for Public Administration – Managerial Economics Programme. We also took part in the Energy Market Authority's annual Singapore International Energy Week and were glad by the turnout and active participation at the panel discussion organised.

Singapore Electricity Network and Market Course

The next run of the course is scheduled for March 2023, and will cover the following topics:

- Overview of Singapore's Electricity Network
- Electricity Transmission, Distribution Network Configuration and Network Equipment
- Market Reform Milestones and Demand Characteristics
- Market Structure
- Market Operations
- Regulatory Tools and Governance Structure

The course serves as a good primer for participants who are keen to attend the *Understanding Electricity Markets* course, our flagship course which has been conducted since 2005.

To register, please contact the Singapore Institute of Power and Gas (SIPG) at 6916 7930 or training-institute@spgroup.com.sg. More information about the course is available on the EMC website.

Market Clearing Workshop

The next public run of the *Market Clearing Workshop* will be held over two-and-a-half days in the second quarter of 2023. The workshop will be conducted through a mix of physical and virtual sessions.

The nine sessions will cover the following topics:

- Market Clearing Overview
- Market Clearing Engine Mathematical Model
- Generation Dispatch and Marginal Pricing
- Transmission Modelling and Nodal Pricing

- Ancillary Services Markets
- Co-optimisation amongst Energy and all Ancillary Products
- Constraint Violation Penalties (CVP) and Stepwise CVP
- Tie-Breaking
- Demand Response

More information about the workshop and registration details are available on our [website](#).

Understanding Electricity Markets

Our next *Understanding Electricity Markets* training programme will be held over two-and-a-half days on 16, 17 and 20 (half day) February 2023. The programme will be conducted through a mix of physical and virtual sessions.

Our trainers will be conducting four sessions covering the following topics:

- Basic Understanding of Electricity and Electricity Markets
- National Electricity Market of Singapore (NEMS) and its Unique Features
- Pricing Mechanism and Economic Dispatch
- Market Settlement and Credit Risk Management

More information about the programme and registration details are available on our [website](#).

For enquiries on private runs of the *Understanding Electricity Markets* training programme or *Market Clearing* workshop, please email us at trainingprogramme@emcsg.com or contact Jan Lee at 6779 3000.