

# Bulletin 125

November–December 2021

[CEO's Message](#)

[NEMS Virtual Update and Engagement Event](#)

[Celebrating our 20<sup>th</sup> Anniversary](#)

[Joyous Christmas Celebration](#)

[Changes to the MSCP](#)

[Rule Change Update](#)

[Market Update](#)

[New Entrants to the NEMS](#)

[User Forums](#)

[EMC Industrial Training](#)

Copyright © 2021 Energy Market Company Pte Ltd. All rights reserved.  
Co. Reg. No. 200101336E.

## CEO's Message



2021 marks a significant milestone for EMC – it is the 20<sup>th</sup> anniversary of EMC's incorporation.

In 2001, we made the transition from the Singapore Electricity Pool to the National Electricity Market of Singapore (NEMS). We had just 14 staff serving ten market participants (MPs) when the NEMS wholesale market started trading in 2003. Today, EMC, along with the wholesale market, has grown to more than 70 staff serving 49 MPs, with 114 generation facilities and five load facilities registered in the NEMS at the end of 2021.

EMC's success over the last 20 years was made possible only with the hard work and commitment of our colleagues, and the strong support from the MPs and stakeholders. We commemorated this significant milestone with a virtual celebration in November with our colleagues.

Over the years, we have conducted numerous engagement events and courses for our MPs and other stakeholders. Such engagements served as a vital platform for the discussion on pertinent industry developments. In November, we held our second, industry-wide, virtual engagement event, with close to 80 participants in attendance. The event included a presentation on the NEMS' journey towards Singapore's 2035 low carbon targets, followed by a Question-and-Answer session.

On 1 January 2022, the Market Surveillance and Compliance Panel (MSCP) welcomes a new Chair. Professor Walter Woon, who has been a member of the MSCP since 2016, will take over the helm from the current Chair, Mr T P B Menon, who has been a member of the panel since 2003. On behalf of EMC, I would like to express my sincere appreciation to Mr Menon for his commitment and invaluable contributions to the NEMS. Mr Menon will continue to serve as a member of the MSCP for the next two years.

Finally, on the NEMS, the November monthly average Uniform Singapore Energy Price (USEP) retreated to \$344.80/MWh before rising to \$475.06/MWh in December. The December monthly average USEP is the second highest monthly level since the market started. This spike in the USEP in December was caused by several days of high prices early in the month due to tight supply conditions.

2021 was an unprecedented year for the NEMS. The sustained price spikes in the Singapore Wholesale Electricity Market (SWEM) during the second half of the year as a result of the tight global gas market and the disruption of piped natural gas supply from Indonesia had caused several record highs in the NEMS. On 1 December 2021, the daily USEP hit a record high of \$2,058.85/MWh, and the highest monthly average USEP since the market started was recorded in October 2021 at \$491.24/MWh. The price spikes and the increase in demand in turn caused the annual value of products traded in the wholesale market to hit a record high of more than \$11 billion in 2021.

As we marked the end of the 2021 and welcome 2022, I wish you good health and success in the new year.

**Toh Seong Wah**  
Chief Executive Officer

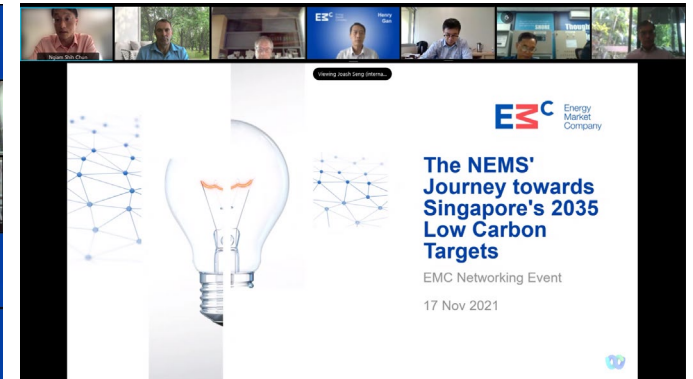
# NEMS Virtual Update and Engagement Event



Welcoming market participants of the NEMS to the virtual event



Participants at the virtual cocktail/mocktail workshop



Presentation on the NEMS' Journey towards Singapore's 2035 Low Carbon Targets

On 17 November, EMC hosted the second virtual update and engagement event for the National Electricity Market of Singapore (NEMS). We are heartened by the strong support from our market participants as we welcomed close to 80 attendees at the virtual event.

As evident from the positive feedback received, the participants enjoyed both the presentation on the NEMS' journey towards Singapore's 2035 low carbon targets and the hands-on cocktail/mocktail workshop that followed. In particular, the Question-and-Answer session after the presentation stimulated very interesting discussions among the participants.

As the NEMS' independent market operator, EMC will continue to connect the industry and provide platforms for the discussion of critical industry issues. We look forward to hosting the next event for the industry.

# Celebrating our 20<sup>th</sup> Anniversary

EMC celebrated its 20<sup>th</sup> anniversary of incorporation with a virtual staff event on 26 November.

From just 14 staff in 2001 serving ten market participants when the National Electricity Market of Singapore's (NEMS) wholesale market started trading on 1 January 2003, we have grown to more than 70 staff serving 49 market participants today.

At the event, our CEO conveyed his appreciation to all current and past EMC colleagues for contributing to the success of the company. We also recognised and celebrated the 20 years of service of two of our colleagues who have been with EMC since our first year of operations.

We would like to take this opportunity to thank all our market participants and other NEMS stakeholders, for your continuous support over the years. We look forward to your partnership to achieve our common goals of energy security and sustainability for the next 20 years and beyond!

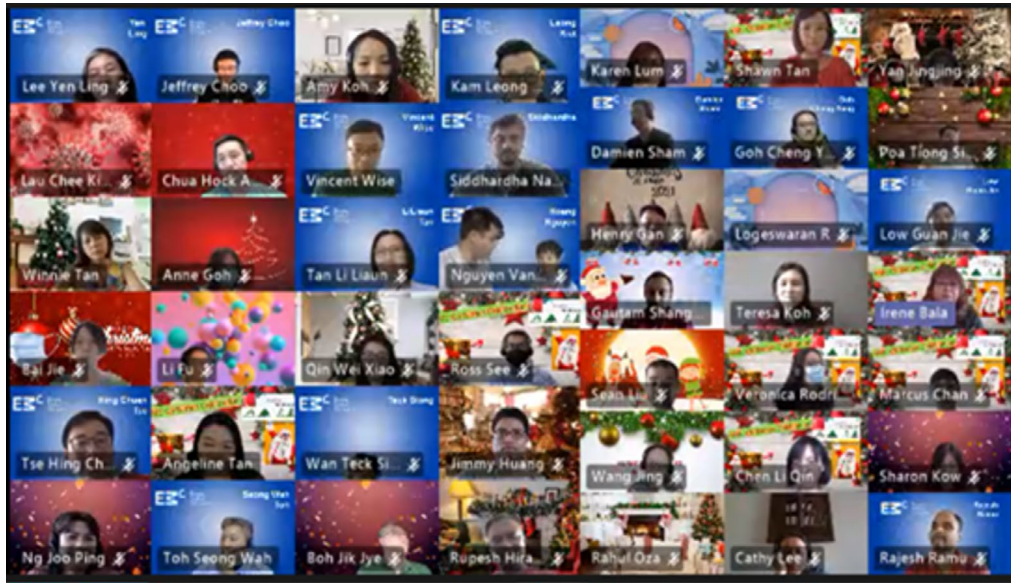


EMC staff at the virtual event



Presentation of 20 years long service award

# Joyous Christmas Celebrations



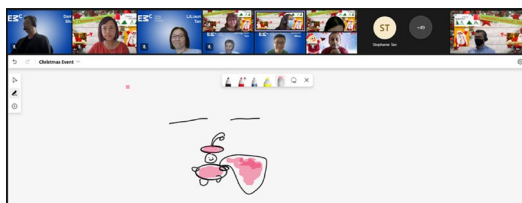
EMC staff participating in the Christmas celebrations

On 13 December, we held our last virtual event for the year, as an advanced Christmas celebration.

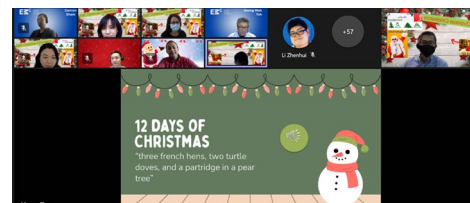
All of us enjoyed ourselves throughout the event, from the Christmas goodies to playing various games. As a warm-up, we had to guess the title of Christmas songs played and also sing the next line. This was followed by a virtual Pictionary game during which we had to put our creativity and drawing skills to the test. Congratulations to all the winners!

The event ended with our bi-monthly birthday celebrations – this time, to celebrate the birthdays of colleagues born in the months of November and December.

We are all looking forward to the next event in the new year! Happy New Year to all!



Time to play Pictionary!



Do you know your Christmas song?

# Changes to the Market Surveillance and Compliance Panel

With effect from 1 January 2022, the Market Surveillance and Compliance Panel (MSCP) will have a new Chairman – the EMC Board has appointed Professor Walter Woon to take over the reins from Mr T P B Menon, who has led the MSCP since 2016.

Mr Menon is a founding member of the MSCP, and his wealth of experience and expertise has been invaluable to the work of the Panel since 2003. For the next two years, until 31 December 2023, he will continue to serve as a member of the MSCP. We would like to express our deepest appreciation to Mr Menon for the many contributions he has made to the MSCP and to the National Electricity Market of Singapore as a whole.

Professor Woon has been a member of the MSCP since 1 January 2016, contributing to its work in significant ways. His vast expertise and knowledge have enriched and nurtured the decision-making process of the MSCP, in particular to determine enforcement actions arising from breaches of the Singapore Electricity Market Rules. He has also supported and clarified several legal matters related to the application of the Market Rules.

We are indeed honoured that Professor Woon has accepted the chairmanship and look forward to him continuing the excellent work of the MSCP in the future.

The EMC Board has also appointed Dr Stanley Lai as a new member of the MSCP from 1 January 2022 to 31 December 2023. Dr Lai, a Senior Counsel, is the Head of the Intellectual Property Practice and Co-Head of the Cybersecurity and Data Protection Practice at Allen and Gledhill LLP. He is an experienced lawyer specialising in intellectual property litigation and information technology disputes. His familiarity with Singapore Laws and Regulations, particularly with laws pertaining to fair competition within the dynamics of a market structure, will prove to be useful to the work done by the MSCP.

Dr Lai is also a commercial/chancery litigator maintaining a strong advisory practice, serving a broad spectrum of clients from different industry sectors. With his extensive business experience, Dr Lai will be an invaluable addition to the MSCP.

The other panel members are Er Lee Keh Sai, a Chartered Electrical Engineer and a registered Professional Engineer, Mr Philip Chua, a Consultant in the finance and banking industry, and Professor Euston Quah, Head of the Division of Economics at the Nanyang Technological University, Singapore and President of the Economic Society of Singapore.



# Rule Change Update

## Review of Allowable Remedies for Event of Default

Currently, EMC issues a default notice to the market participant (MP) when an event of default occurs. This notice specifies the alleged event of default and the MP is given one business day (BD) to rectify the default event.

In practice, however, certain types of default make it challenging for the MP to remedy within one BD, and/or for EMC to take the actions required under the Market Rules. EMC thus undertook a review to ensure that the remedies and actions are appropriate for each type of default.

The following rule changes were proposed following the review:

- 1) To distinguish events of default that are related to credit support providers of MPs from the list of events of default in the Market Rules.

For defaults related to the credit support providers, it was proposed that they be aligned with the current Market Rules for the handling of invalid credit support, where the MP will be given two BDs to replace its credit support when it becomes invalid.

If the MP fails to comply with it, it would have incurred an event of default. EMC will then refer the case to the Market Surveillance and Compliance Panel (MSCP) for appropriate action, which includes the possibility of issuing a suspension order on the MP.

- 2) For an event of default arising from the failure to meet material registration requirements (e.g. bank account and IT system requirements), it is not practical to expect the MP to remedy within one BD. Given that such defaults do not compromise the financial integrity of the wholesale market, it was proposed for EMC to have the discretion to determine the time to be given to the MP to remedy the default (up to a maximum of five BDs).

- 3) To clarify actions that EMC may take in response to different defaults.

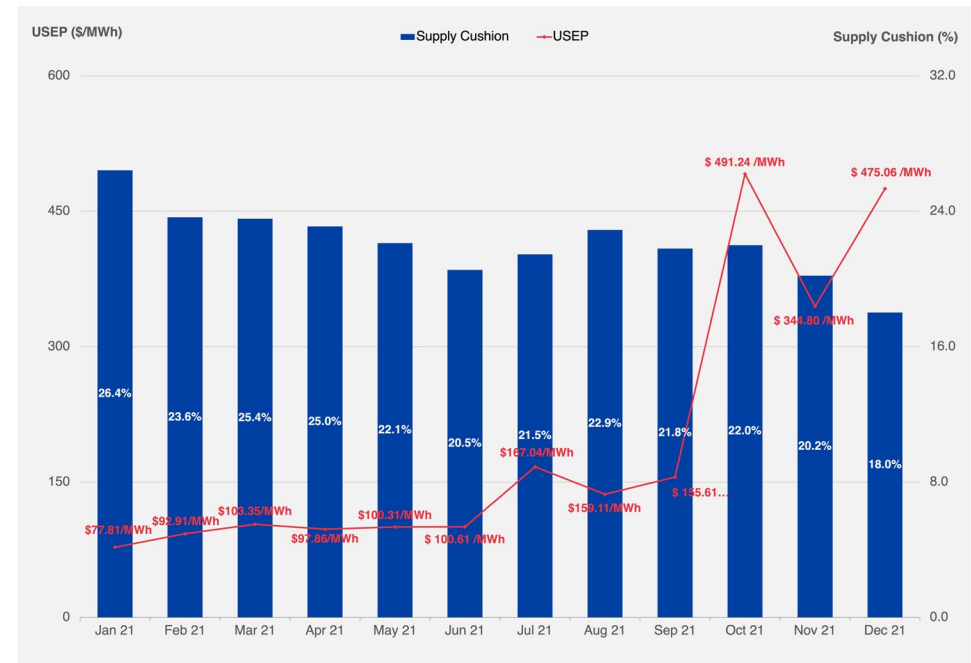
- For defaults that are (a) not practical for the MP to remedy within a short period of time (e.g. if it becomes unlawful for the MP to comply with any of its obligations under the Market Rules), or (b) not appropriate for EMC to specify the remedy (e.g. defaults due to non-compliance with the MSCP's order), it was proposed for EMC to issue a default notice to the MP and refer the case to the MSCP directly for appropriate action (which includes the possibility of issuing a suspension order); and
- For defaults that do not affect the financial integrity of the market, it was proposed to provide EMC with the flexibility to not claim on the MP's credit support.

The Rules Change Panel (RCP) supported the proposed rule changes by majority vote. The rule changes were approved by the EMA on 2 December 2021 and took effect on 7 December 2021.

For more details on the above rule changes, please visit [EMC's website](#).

# Market Update

## Overview of USEP and supply cushion – Jan to Dec 2021



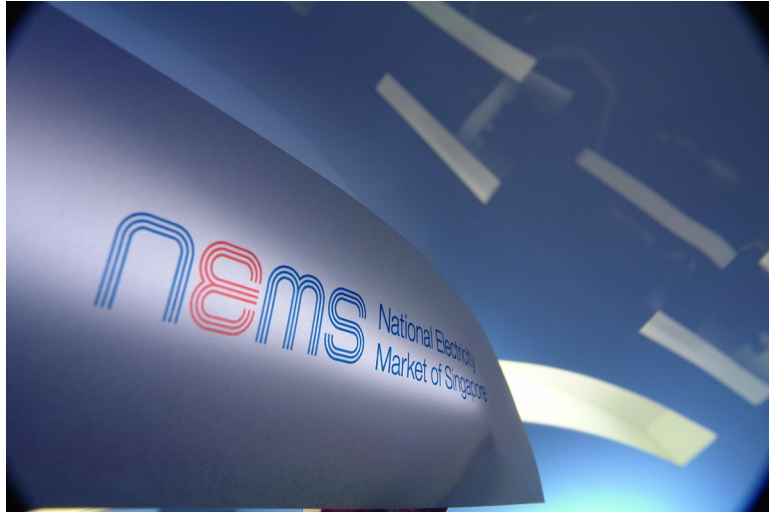
The daily average Uniform Singapore Energy Price (USEP) ranged between \$121.21/MWh and \$1,586.44/MWh in November, and between \$125.08/MWh and \$2,058.85/MWh in December. The monthly average USEP decreased 29.8 percent from the highest monthly level in October to \$344.80/MWh in November before rising 37.8 percent to \$475.06/MWh in December, setting the second highest monthly level since the market started.

In November, demand decreased 0.3 percent to 6,276MW and supply decreased 2.6 percent as compared to the previous month. This resulted in a 1.8 percentage points drop in the monthly supply cushion to 20.2 percent. Despite the drop, the monthly USEP decreased as a result of lower fuel oil prices in November compared to October.

In December, demand remained stable with a slight decrease of 0.04 percent to 6,273MW and supply decreased 2.7 percent. This led to a drop in supply cushion by 2.2 percentage points. Consequentially, the monthly average USEP rose to \$475.06/MWh.

# New Entrants to the NEMS

Four new facilities were registered in the NEMS



Three market participants registered four new facilities in the National Electricity Market of Singapore (NEMS) in November:

Market Participant	Facility Type	Capacity (MW)	Date Registered
Public Utilities Board	Others	3.9	3 November
Sembcorp Solar Singapore Pte Ltd	Intermittent Generation Source (IGS)	13.3	16 November
Terrenus Energy SL2 Pte Ltd	IGS	8.5	16 November
		8.2	17 November

With the addition of the IGS facilities, the total registered capacity of IGS facilities stands at 292.01MW.

# User Forums



## Market Information Sharing Forum (MISF)

EMC's Markets and Operations team hosted the 120<sup>th</sup> session of the bi-monthly MISF on 11 November virtually.

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

- market performance and key highlights in September and October;
- system enhancements and projects; and
- feature topics:
  - demand response simulation; and
  - survey results on corrected meter file email notification.

We would like to thank all 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 (MSUG)

The bi-monthly MSUG forum was held virtually on 16 December. EMC's Technology team updated attendees on the following topics:

- overview of NEMS systems availability year-to-date for FY2020/2021;
- overview of NEMS systems availability year-to-date for FY2021/2022;
- overview of NEMS systems service desk calls received between December 2020 and November 2021;
- overview of change releases deployed between December 2020 and November 2021;
- NEMS systems incidents;
- planned NEMS maintenance;
- Disaster Recovery Preparedness (DRP) Exercise;
- status updates on Technology (infrastructure) project:
  - NEMSCAP Refresh Project (NRP).
- statistics on report downloads (via Web Services);
- status updates on Technology (applications) projects:
  - NEMSCAP Refresh Project (NRP);
  - Settlement Engine Application Upgrade Project;
  - Electricity Import Project;
  - Settlements Prepayment Automation Project; and
  - NEMS Applications on Chromium Edge Project.

The next MSUG forum is tentatively scheduled for Thursday, 17 February 2022. We will update all participants via email ahead of the forum.

# EMC Industrial Training

## Market Clearing Workshop

Over four half-days in November, we conducted our first and only physical face-to-face training for the year. The *Market Clearing Workshop* was run at the corporate office of one of our market participants.

Participants were clearly excited about the training, given that it was a refreshing departure from the usual virtual training sessions conducted since the beginning of the pandemic in 2020. They actively engaged with our market-clearing specialists on topics such as the co-optimisation of energy, reserve and regulation, and the pricing and scheduling of Demand Response. Through demonstrations with EMC's proprietary market clearing software, participants were left with a better understanding of the knowledge and concepts, and how these could be applied to their daily work.

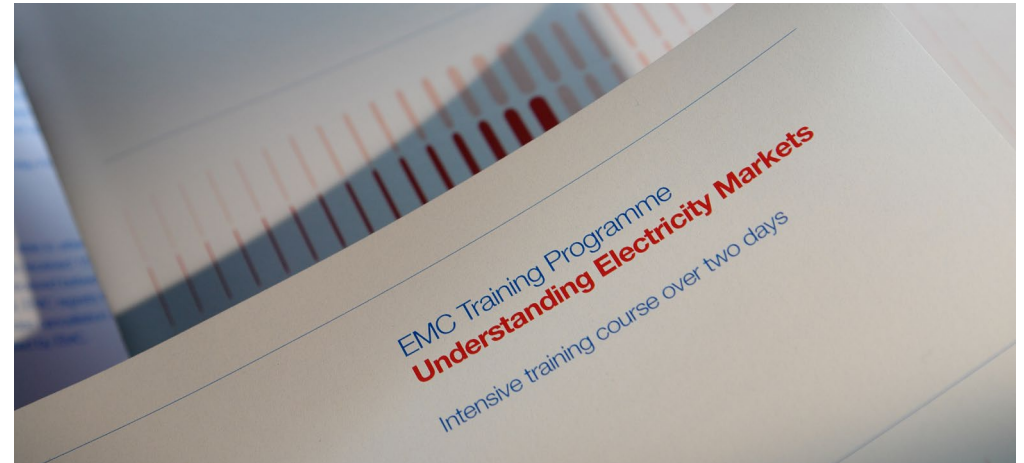
The next public run of the *Market Clearing Workshop* is set for April 2022. For more details, please refer to our [website](#). For enquiries on private runs of the *Market Clearing Workshop*, please e-mail [trainingprogramme@emcsg.com](mailto:trainingprogramme@emcsg.com) or contact Jan Lee at +65 6779 3000.

## Singapore Wholesale Electricity Market

On 17 December, we conducted a half-day virtual introductory seminar on the Singapore Wholesale Electricity Market for Electrical Power Engineering undergraduates from the Singapore Institute of Technology (SIT).

The undergraduates learned about the evolution of Singapore's wholesale electricity market and how the overall market-clearing process ensures an efficient, reliable and secure power system for the country. It was clear that the seminar enabled the undergraduates to get a better understanding and appreciation of how an electricity market works, as evidenced by the feedback from the undergraduates.

For enquiries on introductory seminars on the Singapore Wholesale Electricity Market, please e-mail [trainingprogramme@emcsg.com](mailto:trainingprogramme@emcsg.com) or contact Jan Lee at +65 6779 3000.



## Understanding Electricity Markets

The next public run of the *Understanding Electricity Markets* training session will be held on 17 and 18 February 2022. Our trainers will be conducting six sessions covering the following topics:

- Understanding Electricity
- Why Reform and Regulation is Essential in the Electricity Industry
- The National Electricity Market of Singapore and its Unique Features
- Pricing Mechanism and Economic Dispatch
- Market Settlement and Credit Risk Management
- How Consumers can Influence Electricity Markets

For registration details, please refer to our [website](#). For enquiries on private runs of the *Understanding Electricity Markets* training session, please e-mail [trainingprogramme@emcsg.com](mailto:trainingprogramme@emcsg.com) or contact Jan Lee at +65 6779 3000.