

Market Surveillance & Compliance Panel Market Watch

Issue 77

Third Quarter (July to September 2025)

Executive Summary

In Q3 2025, the demand in the National Electricity Market of Singapore (“NEMS”) experienced a slight increase in contrast to a decline in temperature. Total supply also increased this quarter, despite higher planned and forced outage levels. With the supply growth outpacing the rise in demand, the supply cushion expanded this quarter. Consequently, Uniform Singapore Energy Price (“USEP”) declined on both a quarter-on-quarter (“QoQ”) and year-on-year (“YoY”) basis, in line with the lower underlying fuel cost. With the USEP remaining relatively stable, the frequency of Demand Response (“DR”) activations decreased to 21 periods, and no Temporary Price Cap (“TPC”) applications were observed this quarter.

Ancillary service prices also trended lower in tandem with energy prices on a QoQ basis.

For primary reserve, the quarterly average price fell from \$4.58/MWh in Q2 2025 to \$2.64/MWh in Q3 2025, despite a 0.70% increase in requirement and a 1.46% reduction in the offered quantity. The decline in price was mainly attributed to offers shifting towards lower price bands, which outweighed the impact of the higher requirement and lower offered quantity. With the higher primary reserve requirement, Q3 2025 recorded an increase in primary reserve shortfall occurrences, rising from one period in the previous quarter to two periods this quarter. The shortfalls occurred on 31 July 2025 when there was a forced outage of a relatively large facility, leading to tight supply conditions. On a YoY basis, with the offer quantity falling by 16.24% and the requirement rising by 4.74%, the narrower margin resulted in a higher price this quarter compared to \$1.24/MWh in Q3 2024.

For contingency reserve, the average price declined to \$10.83/MWh in Q3 2025, despite the requirement increasing by 0.60% on a QoQ basis. A 3.65% increase in offer quantity combined with a greater proportion of offers at lower price bands offset the upward pressure from the requirement. Compared to the previous quarter, the frequency of contingency reserve shortfall increased from 11 to 15 periods amid periodic tight supply conditions, driven by higher demand in the evening or forced outages of larger facilities. On a YoY basis, contingency reserve price rose by 53.95%, alongside a 2.59% increase in requirement and a 9.80% decrease in offer quantity, while the frequency of contingency reserve shortfall increased from two to 15 periods.

For regulation, the average requirement remained the same at 108MW from Q2 2025 to Q3 2025, but was 4.73% lower on a YoY basis. Although the requirement remained unchanged, the regulation price decreased 12.13% QoQ to \$17.01/MWh, driven by a 9.54% increase in the offer quantity and a shift in the offers to relatively cheaper price ranges. On a YoY basis, the price rose 8.63% as the offers became relatively more expensive. Regulation shortfalls were recorded in seven periods in Q3 2025, coinciding with most of the instances when the energy supply cushion dipped below 7.50% and the USEP exceeded \$400/MWh, with the USEP reaching above \$1,000/MWh in four periods. This compares with four periods of shortfalls in Q2 2025 and none in Q3 2024.

Table 1: Energy and Ancillary Services Prices by Quarter

Quarter	Q3 2024	Q2 2025	Q3 2025
Energy (\$/MWh)			
USEP	114.07	137.67	110.56
WEP	113.88	137.84	112.51
Ancillary Services (\$/MWh)			
Primary Reserve	1.24	4.58	2.64
Contingency Reserve	7.03	17.36	10.83
Regulation	15.66	19.36	17.01

Prices in Q3 2025

In Q3 2025, the vesting contract price declined by 13.99% QoQ and 18.62% YoY to \$169.51/MWh, in line with the fuel oil price falling 5.19% QoQ and 11.47% YoY to US\$411.59/MT (Chart 1). This signifies fuel price as a strong driver of vesting contract price movements this quarter.

The Wholesale Electricity Price (“WEP”) continued to clear below the vesting contract price (Chart 2), marking the fifth consecutive quarter in which the WEP cleared below the vesting contract price. The difference between the two prices narrowed slightly to \$57.00/MWh in Q3 2025, compared with \$59.24/MWh in the Q2 2025. The narrowing gap between the two prices suggests that market outcomes are becoming more aligned with the Energy Market Authority’s objectives under the current five-year vesting regime, which was implemented on 1 July 2023 to curb market power and enhance price stability.

The relationship between the WEP and the metered energy quantity weakened during the quarter on both QoQ and YoY comparisons (Chart 3). The correlation fell to 0.23 in Q3 2025, from 0.30 in Q2 2025 and 0.36 in Q3 2024. There were only six out of 92 days in Q3 2025 when the correlation exceeded 0.5, a notable decrease from 23 days in the previous quarter and 26 days in the same quarter last year. The weaker correlation was primarily driven by the lower positive correlation of 0.15 in August, with only one out of 31 days when the correlation was greater than 0.5.

The distribution of the WEP by hours shifted toward lower price ranges during the quarter (Chart 4). The distribution of WEP was concentrated in the range between \$50/MWh and \$100/MWh in Q3 2025, in contrast to the range between \$100/MWh and \$150/MWh in Q2 2025 and Q3 2024. The distribution of WEP in the range between \$50/MWh and \$100/MWh accounted for 47.26% of the time in Q3 2025, which was followed closely by the distribution of WEP in the range between \$100/MWh and \$150/MWh at 46.49% of the time. The frequency of WEP exceeding \$200/MWh declined to 3.40% in Q3 2025 from 12.68% in Q2 2025, but increased from 1.90% in Q3 2024. The distribution of the WEP weighted by metered energy quantity trended in a similar manner on a QoQ and YoY basis (Chart 5).

Chart 1. WEP Versus Fuel Oil Price

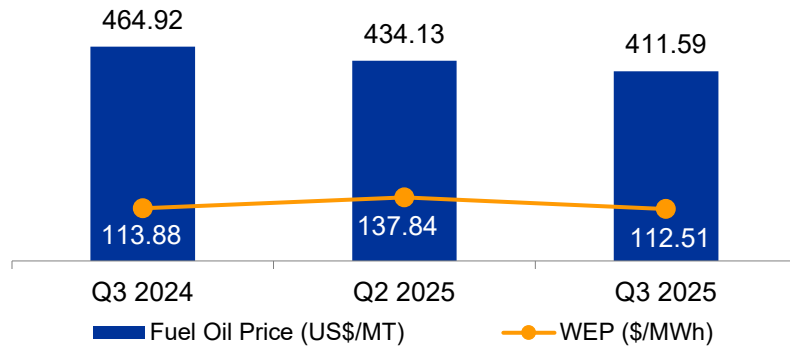


Chart 2. Vesting Contract Price Versus WEP by Quarter

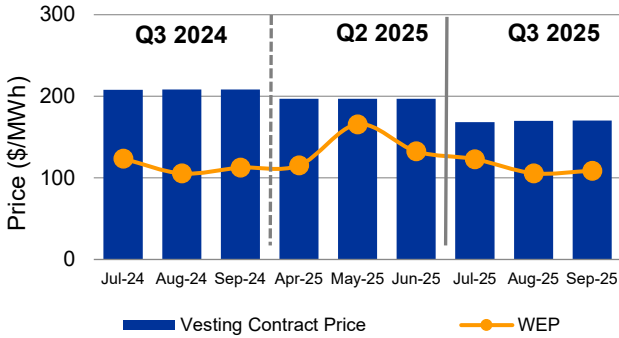


Chart 3. Correlation Between WEP and Metered Energy Quantity

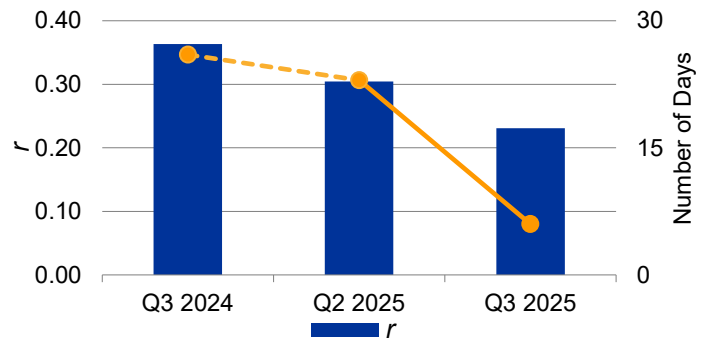


Chart 4. Distribution of WEP over Time

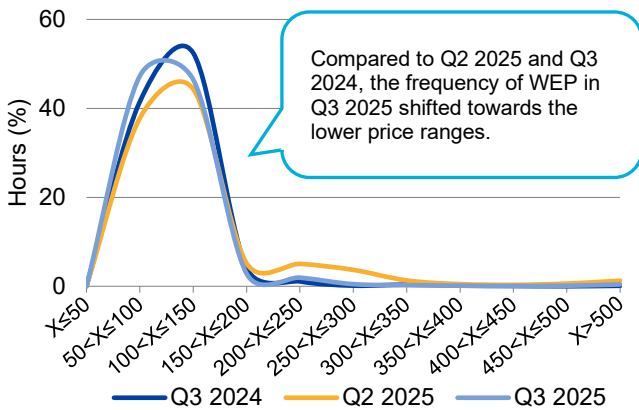
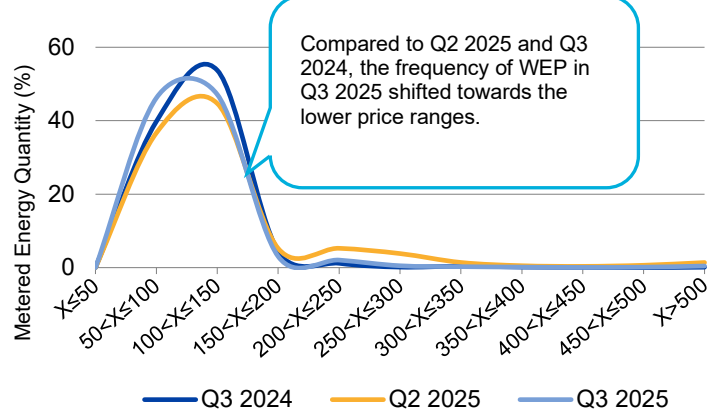


Chart 5. Distribution of WEP over Total Metered Energy Quantity



Demand in Q3 2025

On a QoQ basis, the average forecast demand strengthened slightly by 0.04% to 6,663MW, while the actual demand declined in line with the decrease in average temperature (Chart 6). Compared to Q2 2025, the average temperature fell by 0.54°C, contributing to a 0.25% reduction in average actual demand to 6,763MW. Peak forecast demand rose 0.39% to 7,805MW, whereas peak actual demand fell by 1.42% to 7,937MW (Chart 7).

On a YoY comparison, Q3 2025 experienced a decrease in average temperature of 0.41°C. Despite the decline, the forecast and actual demand strengthened by 1.03% and 1.83% respectively. Peak forecast and actual demand also increased, by 2.55% and 1.86% respectively.

For the forecast demand and solar generation forecast profiles, the highest average forecast demand in Q3 2025 occurred in Period 41 at 7,309MW, shifting from Period 40 in Q2 2025 and maintaining at Period 41 in Q3 2024 (Chart 8). The peak average solar generation forecast also shifted slightly, from Period 27 in Q3 2024 (567MW), to Period 26 in Q2 2025 (658MW), and to Period 28 in Q3 2025 (699MW). The solar generation profile illustrates the growing contribution of solar generation during daytime hours, with the solar generation forecast consistently peaking during mid-day, typically the hottest part of the day.

Chart 6. Average Forecast and Actual Demand Versus Average Temperature

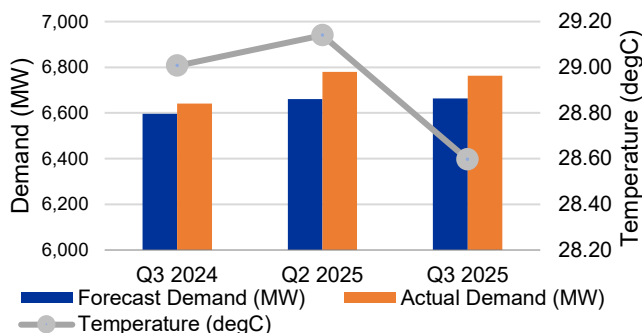


Chart 7. Peak Forecast and Actual Demand

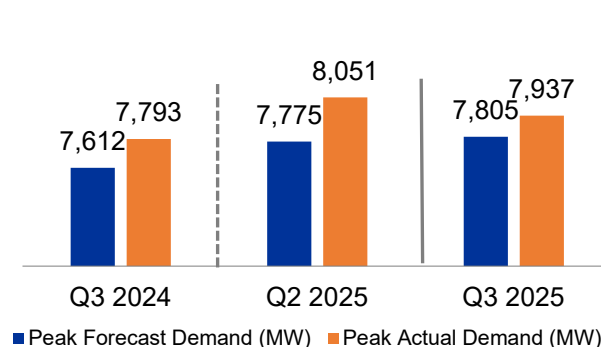


Chart 8. Average Forecast Demand and Average Solar Generation Forecast Periodic Profiles

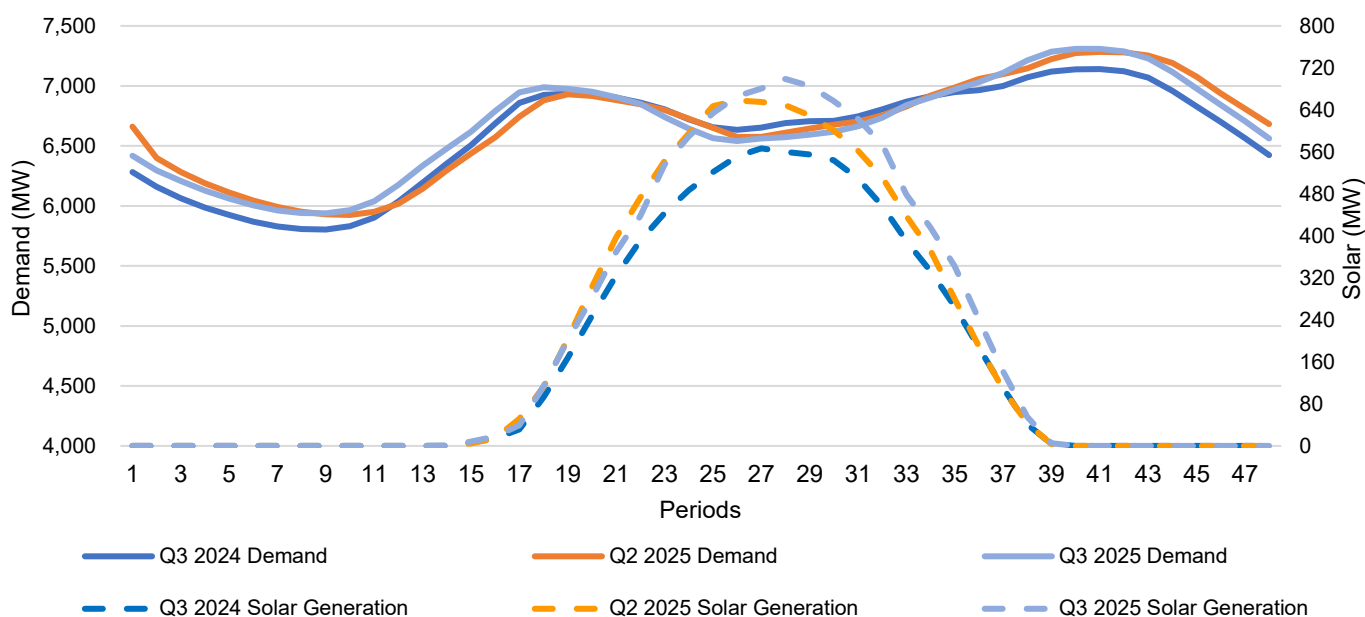


Chart 9 illustrates the variations in the load forecast used in the Pre-dispatch Schedule (PDS) and Short-term Schedule (STS) against the Real-time Schedule (RTS), as provided by the Power System Operator. As the STS is updated more frequently and closer to the real-time dispatch period, it typically exhibits smaller load variations from the real-time dispatch schedule than the PDS.

On a QoQ basis, the average load variation between the RTS and the STS, in absolute terms, increased slightly by 0.03 percentage point in Q3 2025. At the monthly level, the load forecasted for STS was, on average, higher than the RTS for all the months, with the variation ranging from -0.06% to -0.25%.

The average load variation between the RTS and the PDS, in absolute terms, declined from 0.49% in Q2 2025 to 0.31% in Q3 2025. At the monthly level, the load forecasts for PDS were generally lower than RTS in most months for both quarters, except for August 2025. The variation between RTS and PDS ranged from 0.04% to 0.77% in Q2 2025, and slightly widened in Q3 2025, ranging from -0.51% to 0.27%.

Chart 10 shows the variation between the load forecast in the RTS and the metered energy quantity, in absolute terms. The quarterly variation decreased to 0.90% in Q3 2025 from 1.02% in Q2 2025, but was significantly higher than Q3 2024 at 0.14%. However, on a monthly basis, Q3 2025 experienced greater fluctuations compared with both the previous quarter and the same quarter last year. The monthly variations in Q3 2025 ranged between 0.62% and 1.14%, compared to a narrower spread of 0.94% to 1.11% in Q2 2025, and 0.11% to 0.16% in Q3 2024.

Chart 9. Monthly Average Variation in Load Forecast

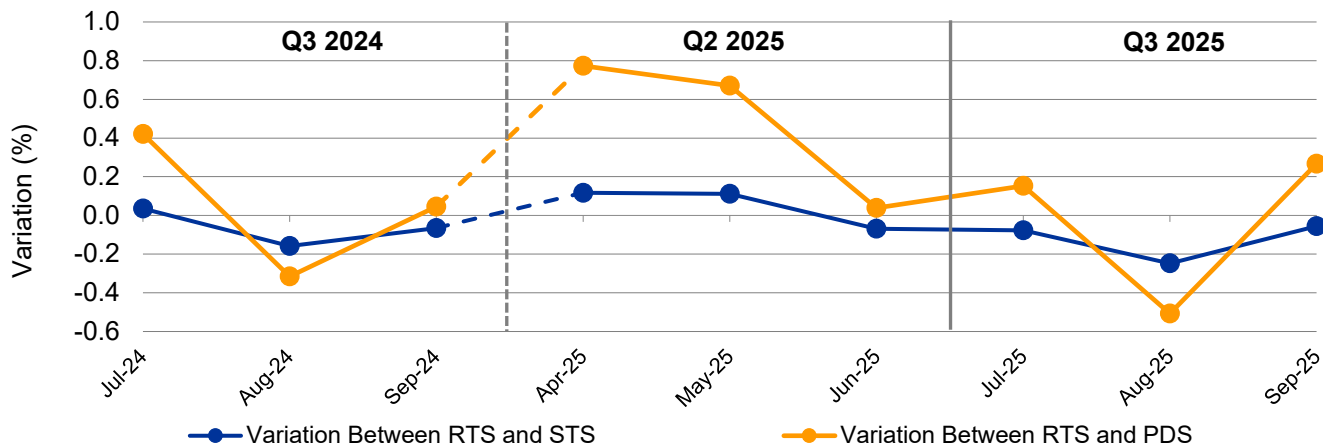
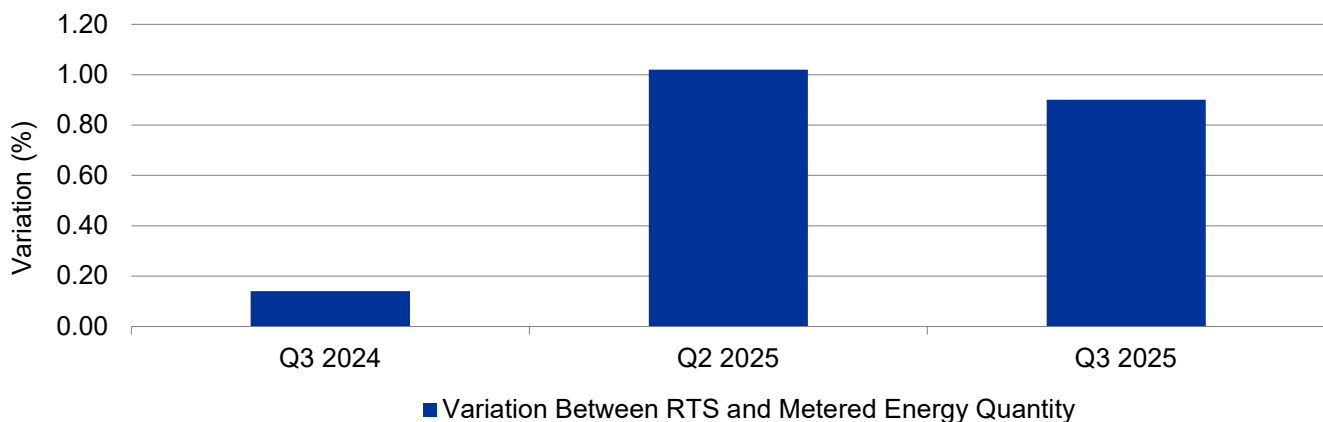


Chart 10. Quarterly Average Variation¹ Between Real-Time Dispatch Schedule and Metered Energy Quantity



¹ The metered energy quantity reflects the actual demand, while the load forecast in the RTS reflects the system demand including the station and auxiliary loads. This difference in methodology creates a variation between the RTS and the metered energy quantity, with the former being higher than the latter for the same trading period.

Supply and Supply Cushion in Q3 2025

In Q3 2025, the total supply² rose 3.13% despite higher outages levels (Table 2). It was observed that there was a minimal adjustment to the capacity of a facility this quarter.

Compared to the previous quarter, the proportion of energy offers priced at and above \$500/MWh increased by 2.48 percentage points, reaching 8.45% in Q3 2025 (Chart 11). On the other hand, the proportion of energy offers priced below \$200/MWh decreased by 1.25 percentage points to 89.28% this quarter.

The supply cushion strengthened by 2.57 percentage points to 16.94%, as the 3.13% growth in supply outpaced demand growth. Despite the lower proportion of cheaper energy offers, the higher supply cushion coupled with the lower fuel cost, led to a 19.69% reduction in the quarterly average USEP to \$110.56/MWh (Chart 12). At the periodic level, the USEP exceeded \$1,000/MWh for seven periods, including three periods above \$4,000/MWh, compared to eight such periods in Q2 2025. The price spikes occurred during tight supply conditions arising from forced outage of a larger facility and higher evening demand, which in turn led to reserves and regulation shortfalls with supply cushion falling below 7.00%. In particular, forced outage of a larger facility on 31 July 2025, as well as demand spike on 29 July and 24 September 2025.

The relative stability of the USEP in Q3 2025 was reflected in the lower frequency of DR activations and the absence of TPC applications. DR activations occurred in all three months of Q3 2025, with the monthly average USEP of \$1,576.41/MWh, \$319.10/MWh and \$497.43/MWh, and the spread between the average counterfactual USEP (“CUSEP”)³ and the USEP (or reference USEP, “RUSEP”⁴, for the periods when TPC was applied) of \$76.66/MWh, \$41.89/MWh and \$37.80/MWh for July, August and September 2025 respectively. The highest number of DR activations occurred in July with nine instances. During these activations, USEP exceeded \$1,000/MWh for five periods, including two periods above \$4,000/MWh due to a similar event as described in the previous paragraph. Overall, DR activations fell from 96 periods in Q2 2025 to 21 periods in Q3 2025 (Chart 13), while TPC activations dropped to zero compared with 48 periods in the previous quarter and none recorded in Q3 2024.

On a YoY basis, total supply grew by 5.86% in Q3 2025, outpacing a 1.03% increase in demand, leading to an expansion of the supply cushion by 3.95 percentage points. Although fuel oil price declined significantly by 11.47%, in line with the proportion of lower priced offers, this resulted in a reduction in the quarterly USEP by 3.08% to \$114.07/MWh in Q3 2024.

Table 2. Total Outage, Quarterly Average Supply and Supply Cushion

Quarter	Q3 2024	Q2 2025	Q3 2025
Outage (MW)			
Average Planned Outage	1,107.39	1098.88	1,045.65
Average Forced Outage	39.88	61.08	147.86
Supply (MW)			
Average Supply	7,574	7,774	8,018
Supply Cushion (%)	12.98	14.37	16.94

² With effect from 19 September 2025, the modelling of Energy Storage Systems (ESS) facilities has been enhanced to better reflect their physical capabilities, such that their energy offers can be positive and negative to indicate their willingness to discharge and charge respectively, and that ESS facilities can be scheduled to either charge or discharge. Due to this bi-directional characteristic, the definition of total supply in the NEMS has been revised to exclude ESS supply.

³ The counterfactual USEP (“CUSEP”) is calculated by the market clearing engine (“MCE”) with the assumption that there are no dispatchable energy bids.

⁴ The Reference USEP (“RUSEP”) is the uncapped counterfactual USEP when the Temporary Price Cap (“TPC”) is in effect.

Chart 11. Trend Of Energy Offer Price Proportion

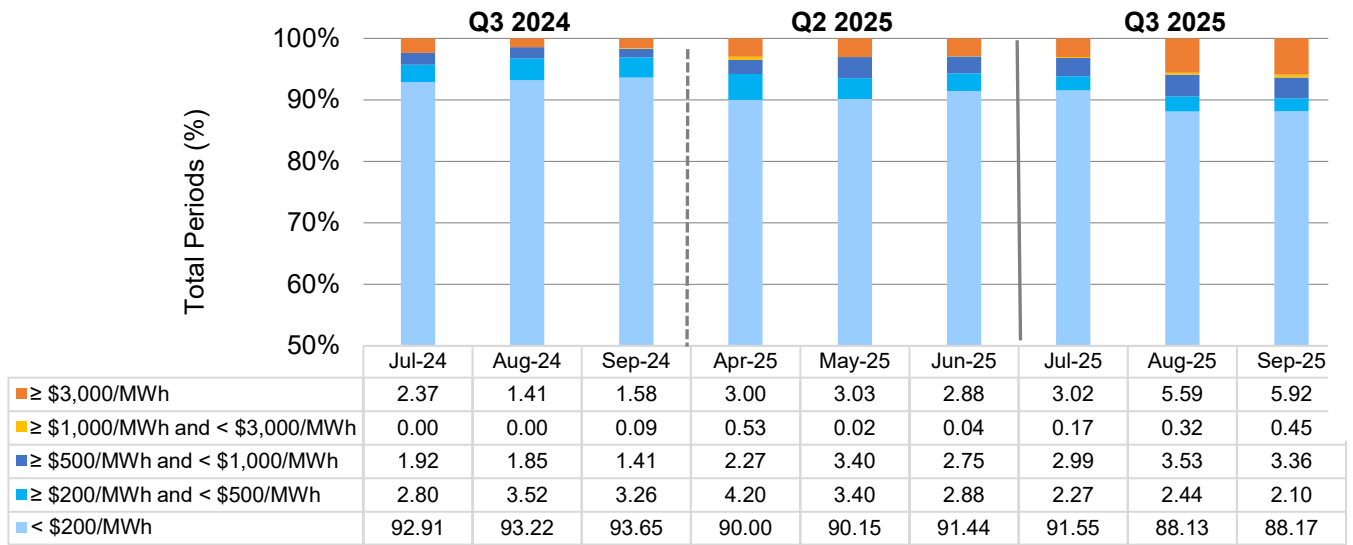


Chart 12. USEP and Supply Cushion

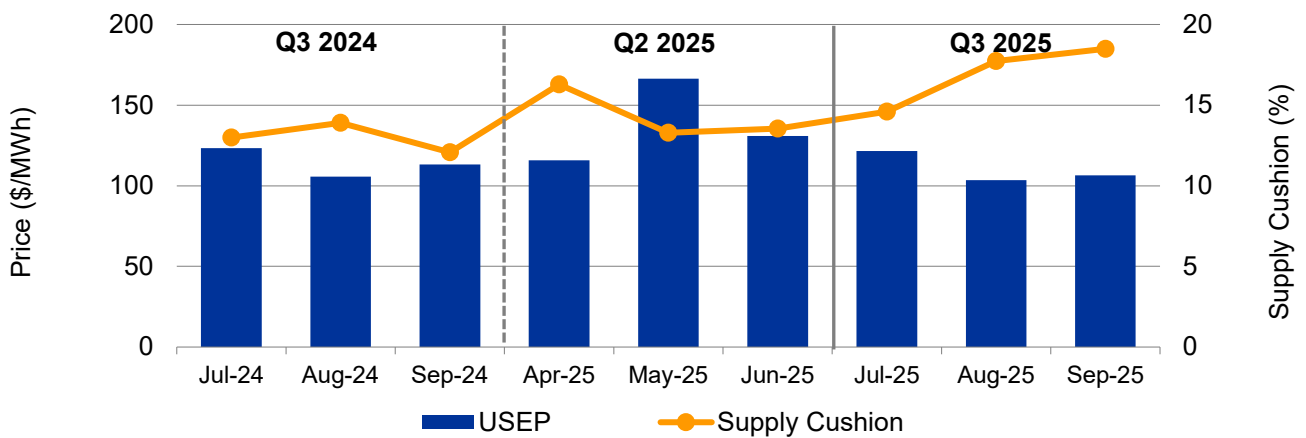
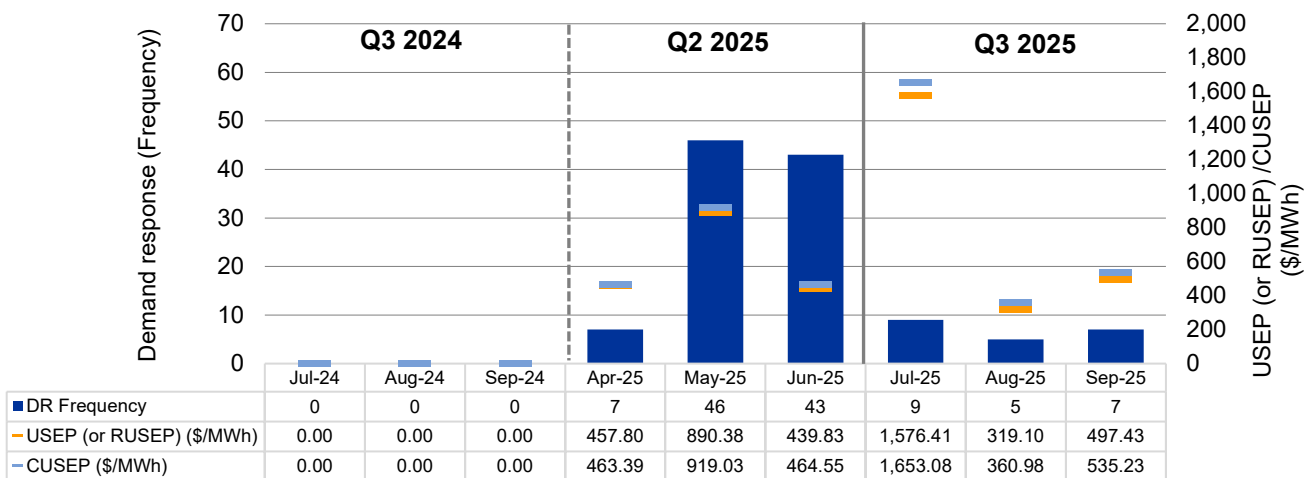


Chart 13. Demand Response Activations⁵



⁵ The frequency of Demand Response ("DR") activations and the associated average USEP (or RUSEP) and CUSEP during those periods with DR activations.

Compared to Q2 2025, the capacity ratios declined across all generation types with the exception of Combined-Cycle Gas Turbine (“CCGT”) and Energy Storage System (“ESS”) (Chart 14). Among all generation types, Open-Cycle Gas Turbine (“OCGT”) saw the largest decline in the capacity ratio, driven by a reduction in scheduled generation which aligned with a 6.10% decrease in its offer availability this quarter. Conversely, the capacity ratio for Combined-Cycle Gas Turbine (“CCGT”) recorded the highest growth of 1.23 percentage points, supported by a 3.71% rise in its offer availability.

On a YoY basis, changes in the capacity ratios were mixed across generation types. The largest increase in the capacity ratio was observed for Electricity Imports (“Import”) at 9.28% due to the entry of a new facility, while the largest decrease was recorded for Steam Turbine (“ST”) at 4.53%.

Chart 14. Capacity Ratio by Generation Type⁶

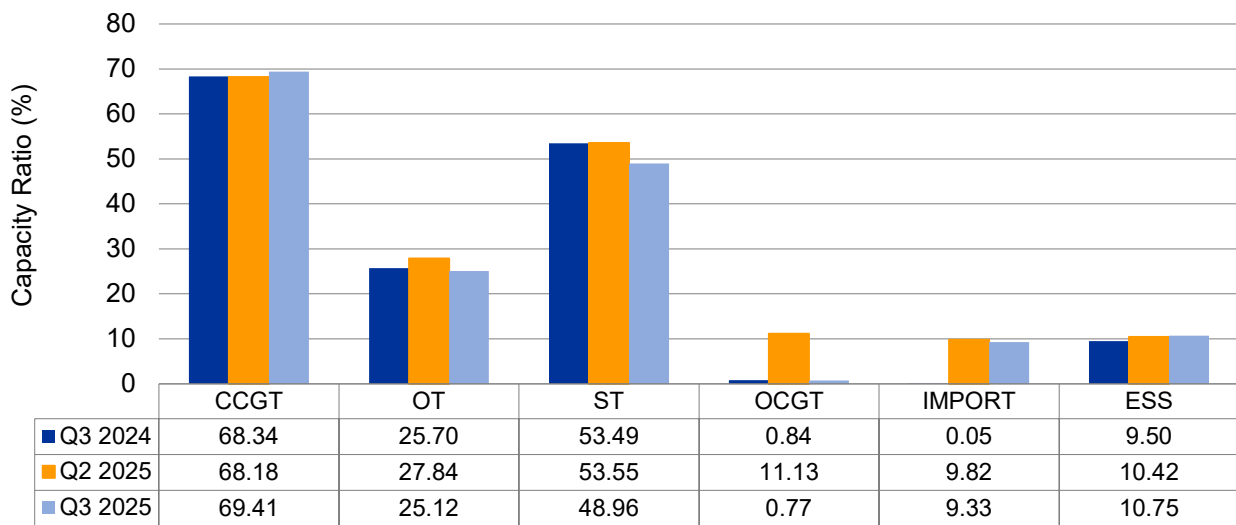
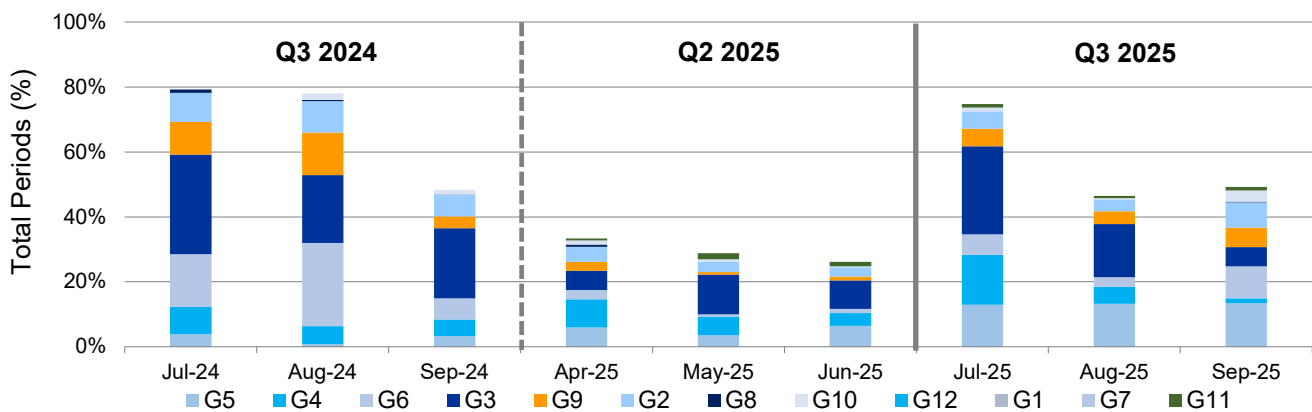


Chart 15 shows the monthly breakdown of price-setting generation companies. G3 was the most frequent price setter across all three quarters. Compared with Q2 2025, G5 overtook G4 as the second most frequent price setter, accounting for 23.17% of periods with a price setter, while G4 dropped to third position at 13.14%. In the same quarter last year, G6 was the second most frequent price setter, followed by G9, accounting for 23.56% and 13.03% of periods with a price setter respectively.

The top three generation companies identified as price setters in Q3 2025 were G3, G4 and G5, making up a combined 65.41% of periods with a price setter. While the top three generation companies remained the same as the previous quarter, the total share was lower than 69.36% in Q2 2025. In Q3 2024, the top three generation companies were G3, G6 and G9, with a higher total share of 72.06% of periods with a price setter.

Chart 15. Trend of Price Setting Generation Companies



⁶ The capacity ratio of a generation facility measures its scheduled generation output relative to its maximum generation capacity. The generation types are: Combined-Cycle Gas Turbine (“CCGT”), Other Turbines (“OT”), Steam Turbine (“ST”), Open-Cycle Gas Turbine (“OCGT”), Electricity Imports (“Import”), and Energy Storage System (“ESS”).

Market Concentration in Q3 2025

Based on metered energy quantity (Chart 16), G6 replaced G2 to join G4 and G5 as the generation companies with the largest market share in Q3 2025. Collectively, these three generation companies accounted for 52.18% of the total metered energy quantity, making up an increase of 2.63 percentage points QoQ and 0.09 percentage point YoY.

Based on maximum generation capacity (Chart 17), the identities of the three generation companies with the largest market share remained unchanged across all three quarters. These three generation companies made up 49.43% of the total generation capacity in Q3 2025, down by 0.02 percentage point QoQ and 4.38 percentage points YoY. On a QoQ basis, the market share of most generation companies maintained a same level as the previous quarter, except for one generation company with a minor revision to a facility’s capacity in September.

On a YoY basis, an expansion of market share was observed for G9, G11, and G12. This growth was driven by capacity additions, including three OCGT facilities totalling 782MW registered under G9 and G12, and one Import facility of 50MW under G11. Conversely, G2 recorded the highest reduction in its total generation capacity due to the decommissioning of two OCGT facilities.

On QoQ and YoY comparisons based on generation types (Chart 18 and 19), the CCGT facilities continued to dominate the market share based on metered energy quantity, reflecting the efficiency of CCGT as the primary generation technology in the NEMS. CCGT facilities also recorded the highest growth in its market share based on maximum generation capacity, increasing by 0.01% on a QoQ basis.

Chart 16. Market Share of Generation Companies Based on Metered Energy Quantity⁷

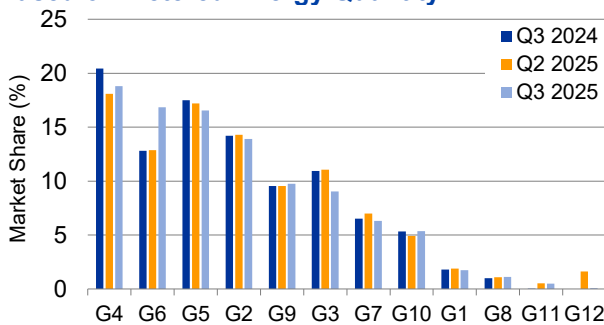


Chart 17. Market Share of Generation Companies Based on Maximum Generation Capacity⁸

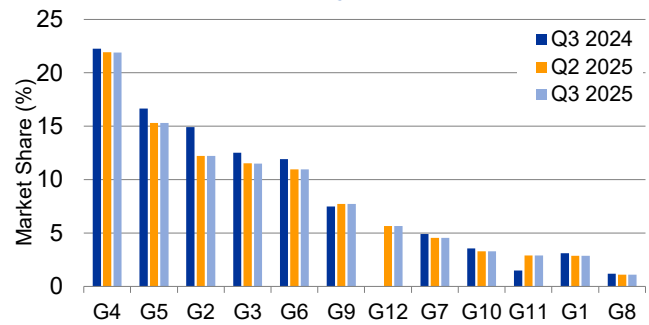


Chart 18. Market Share by Generation Types Based on Metered Energy Quantity⁹

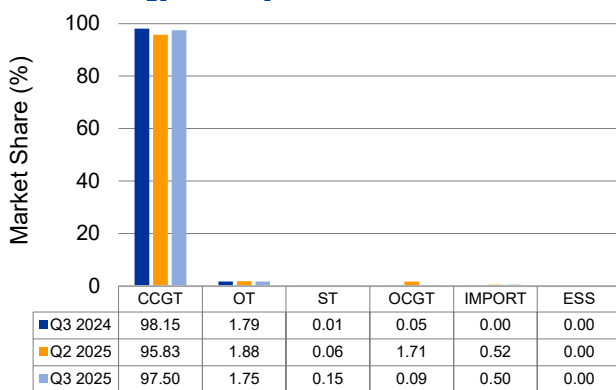
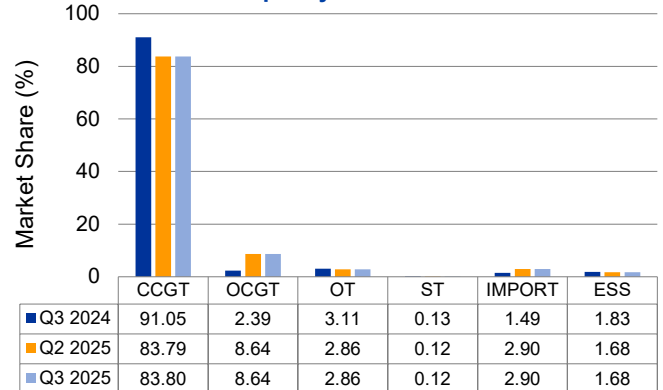


Chart 19. Market Share by Generation Types Based on Maximum Generation Capacity¹⁰



⁷ Excludes intermittent generation facilities and Market Participants with net negative quarterly metered energy quantity.

⁸ Excludes intermittent generation facilities and Market Participants with less than 10MW maximum generation capacity. The actual capacities of the ESS facilities are used for the computation.

⁹ Excludes intermittent generation facilities and technology type with net negative quarterly metered energy quantity.

¹⁰ Excludes intermittent generation facilities and Market Participants with less than 10MW maximum generation capacity. The actual capacities of the ESS facilities are used for the computation.

Compliance Statistics for Q3 2025



Potential Breaches of the Market Rules



Determinations*



Enforcement

100 cases in total

0 non-gate closure
100 gate closure

146 determinations in total

3 cases determined to be in breach
5 cases determined to take no further action
138 cases determined not to be in breach

2 determinations in total

1 financial penalty
1 non-compliance letter
0 suspension order
0 termination order
0 other MSCP order
\$5,000 of financial penalty imposed
\$4,400 of costs awarded

*This section includes determinations of cases referred to the MSCP in previous quarters.

The MSCP issued two rule breach determinations this quarter:

- i. 1 case from Tuas Power Generation Pte. Ltd. regarding its [failure to comply with gate closure rules on 21 April 2025](#) (Financial penalty of \$5,000, and costs of \$2,200)
- ii. 6 cases from Aster Chemicals and Energy Pte. Ltd. regarding its [failure to comply with gate closure rules and submit offer variations to reflect generating capability on 4 May 2025](#) (Letter of non-compliance, and costs of \$2,200)

MSCP Market Watch

The [MSCP Market Watch](#) is a quarterly report prepared by the Market Assessment Unit (“MAU”) of EMC and submitted to the MSCP. The report summarises the MAU’s day-to-day monitoring, evaluation activities and analyses, and compares the market performance for the current quarter with the quarter a year ago and the previous quarter.

All prices and percentages in this report are rounded off to two decimal places.

The [User Guide to MSCP Market Watch](#) provides a glossary of the terms used in the MSCP Market Watch among other information to facilitate readers’ understanding.

Market Surveillance and Compliance Panel

The MSCP is established by the EMC Board in accordance with section 2.6 of Chapter 3 of the Singapore Electricity Market Rules.

The MSCP, with the assistance of the MAU, monitors and investigates the conduct of market participants, the market support services licensee, EMC and the Power System Operator and the structure and performance of the wholesale electricity markets.

The MSCP comprises the following members:

- Professor Walter Woon, Chairman
- Philip Chua
- Professor Euston Quah
- Dr Stanley Lai
- Yeo Yek Seng

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