National Electricity Market of Singapore

Market Surveillance & Compliance Panel Market Watch

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Market Assessment Unit

National Electricity Market of Singapore

Executive Summary

Energy prices in the National Electricity Market of Singapore (“NEMS”) declined in Q3 2024 after a growth recorded in the previous quarter. The lower energy prices could be attributed to the cheaper energy offers and were reflective of the weaker demand and higher supply observed on a quarter-to-quarter (“QoQ”) comparison, which, in turn, strengthened the supply cushion. There was a marginal 0.04% dip in demand from 6,598 MW in Q2 2024 to 6,596 MW this quarter, which was consistent with the cooler weather in Singapore compared to the previous quarter. Supply, on the other hand, expanded 0.95% from 7,503 MW to 7,574 MW in Q3 2024, mainly due to a reduction in the planned outage volume. All in all, this resulted in a 0.87 percentage point increase in the supply cushion from 12.12% in Q2 2024 to 12.98% this quarter.

Given the lower energy prices this quarter, there was, notably, no Temporary Price Cap (“TPC”) application. This quarter recorded only 8 periods where Uniform Singapore Energy Price (“USEP”) exceeded $400/MWh, in comparison to 378 periods and 137 periods in Q2 2024 and Q3 2023 respectively. There were only 2 periods where USEP crossed $1,000/MWh in Q3 2024, with the highest periodic USEP of $4,263.11/MWh recorded at period 8 on 22 July 2024, which was caused by a high demand coupled with tight supply conditions that day.

This quarter also recorded zero demand response (“DR”) activation. A load registered facility will only be scheduled and activated for DR if the energy clearing price (i.e. the USEP) is equal to or greater than the minimum bid price. In Q3 2024, despite the provision of demand bids in the market, the opportunity of DR activation was limited as there were only 19 periods where the USEP was above the minimum bid price.

Chart 1. USEP and WEP by Quarter

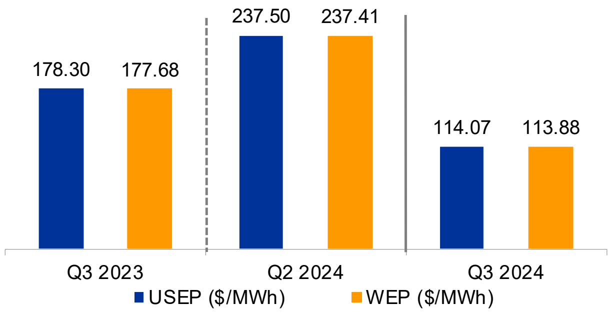


Table 1. Quarterly Outage Volume and Ancillary Service Prices

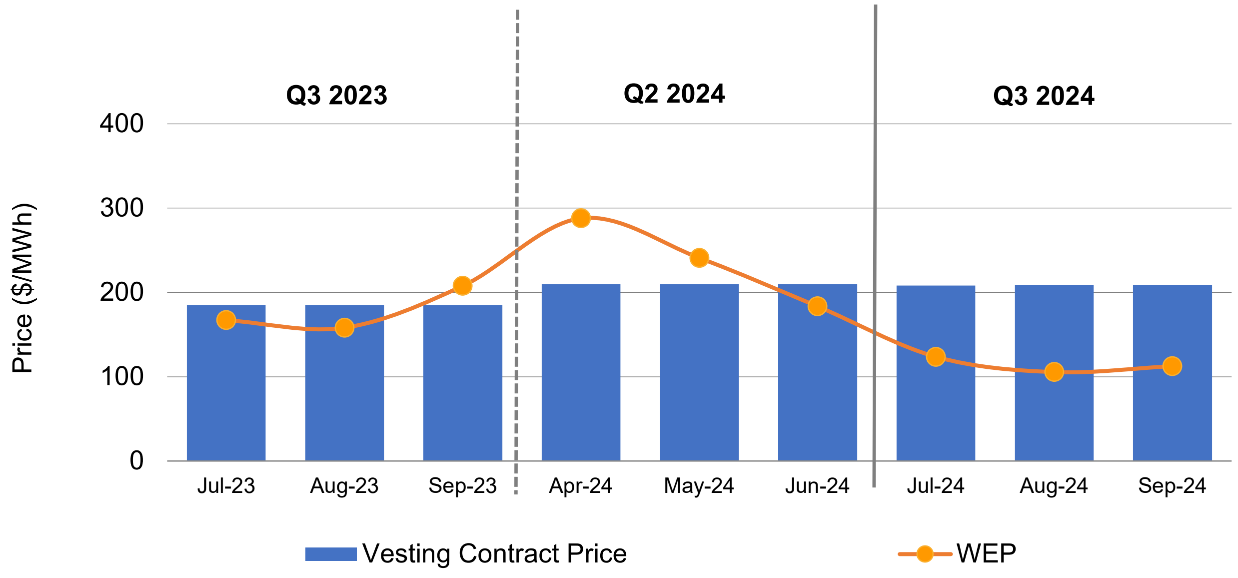
Quarter	Q3 2023	Q2 2024	Q3 2024
Total Outage Volume (MWh Cumulative)			
Planned Outage	5,238,376	3,150,199	2,445,118
Forced Outage	66,530	41,009	88,061
Ancillary Services ($/MWh)			
Primary Reserve	1.00	4.17	1.24
Contingency Reserve	15.74	33.73	7.03
Regulation	34.47	38.82	15.66

On a QoQ comparison, the USEP and the Wholesale Electricity Price (“WEP”) tumbled 51.97% and 52.03% to $114.07/MWh and $113.88/MWh respectively in Q3 2024. Both demand and supply-side influences supported the reduction in energy prices observed this quarter. Specifically, cooler weather was observed this quarter as the average monthly temperature dropped to 29.01°C, from 29.19°C in Q2 2024. The higher supply level was also largely attributed to the 52.25% reduction in planned outage volume this quarter. The reduction in energy prices were also in line with the cheaper fuel oil price in Q3 2024, which dropped 7.99% from US$505.29/MT in Q2 2024 to US$464.92/MT this quarter. Consistent with the drop in energy prices, the prices of ancillary services decreased in tandem, which was also reflective of the lower primary reserve and contingency reserve requirement while the regulation requirement remained unchanged. The reduction in the regulation price this quarter could be attributed to the 4.05% increase in total regulation offers on a QoQ comparison amidst cheaper regulation offer prices.

Similarly, on a year-on-year (“YoY”) comparison, USEP and WEP reduced considerably by 36.02% and 35.91% respectively this quarter. This was supported by a lower fuel oil price compared to the same quarter last year, which was also reflected in the energy offers as they were more concentrated in the lower offer price ranges in Q3 2024. As for ancillary services, only primary reserve price rose 23.87%, while contingency reserve and regulation prices dropped 55.33% and 54.57% respectively.

Prices in Q3 2024

Chart 2. Vesting Contract Price Versus WEP by Quarter



Vesting contracts[1] were introduced by the Energy Market Authority ("EMA") with the objective of curbing the market power of generation companies and providing a cushion to consumers in the event of higher prices. Since 1 July 2023, the EMA launched the new Vesting Regime Framework for non-contestable consumer load where vesting contracts under the Base Vesting Scheme and Tender Vesting Scheme were issued, in replacement of the previous framework for Balance Vesting Scheme and the Liquified Natural Gas Vesting Scheme. Chart 2 shows the comparison of the vesting contract prices in all quarters under this new Vesting Regime Framework.

The vesting contract price is set based on the long run marginal cost of the combined cycle gas turbine ("CCGT"), taking into consideration fuel cost and non-fuel cost components. In Q3 2024, there was a 0.65% dip in the vesting contract price from $209.66/MWh to $208.30/MWh this quarter, which was in tandem with the 7.99% QoQ decrease in fuel oil price. On a YoY comparison, vesting contract price rose 12.66% from $184.90/MWh in Q3 2023, which was inconsistent with the cheaper fuel oil price, implying that the other non-fuel components of the vesting contract price had a greater impact on the vesting contract price.

Since the introduction of the new Vesting Regime Framework, the WEP has been largely lower than the respective vesting contract price for the quarter. This observation was noted in all quarters, including Q3 2024, with an exception in Q2 2024 which was the first time that the WEP cleared above the vesting contract price. In Q3 2024, the WEP was $113.88/MWh, which was below the vesting contract price of $208.30/MWh. The narrowing difference between the vesting contract price and the WEP implies that energy prices are gradually stabilising and are in line with the EMA's objective for the vesting regime.

[1] EMA | Vesting Contracts

Chart 3. Distribution of WEP Over Time

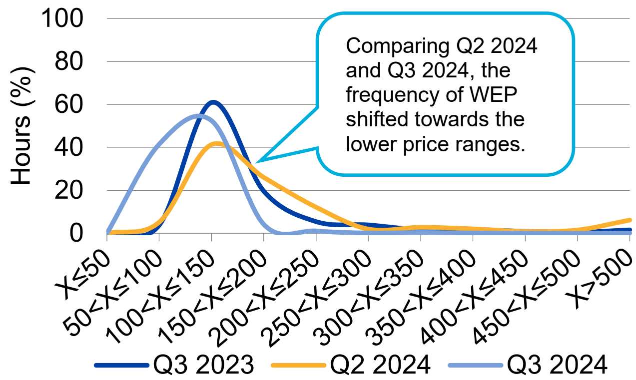
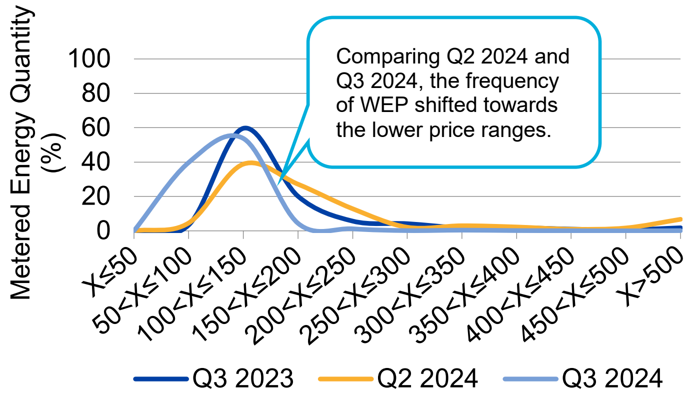


Chart 4. Distribution of WEP Over Total Metered Energy Quantity



Charts 3 and 4 show the frequency of the WEP across different price ranges, measured as a percentage of the total number of hours and a percentage of the total metered energy quantity for Q3 2024, compared to the previous quarter and the same quarter in the preceding year.

In terms of the distribution weighted by hours, the peak of WEP distribution, i.e., the frequency of WEP ranging between \$100/MWh and \$150/MWh, was 52.47% in Q3 2024. This was higher QoQ (from 41.28% in Q2 2024) and lower YoY (from 60.89% in Q3 2023). The frequency of WEP less than \$150/MWh rose from 64.67% in Q3 2023 and 46.45% in Q2 2024 to 93.95% this quarter.

As shown in Chart 4, the distribution pattern of the WEP weighted by metered energy quantity was not only similar to its distribution weighted by hours, but also trended in a similar manner on a QoQ and YoY basis. The frequency of WEP peaked in the range between \$100/MWh and \$150/MWh at 53.77% this quarter, a shift from the 38.81% recorded for the same WEP range in Q2 2024.

The shifts in the distribution of WEP over time and metered energy quantity mirrored the 52.03% QoQ decrease and the 35.91% YoY decline in the WEP.

Chart 5. Correlation Between WEP and Metered Energy Quantity

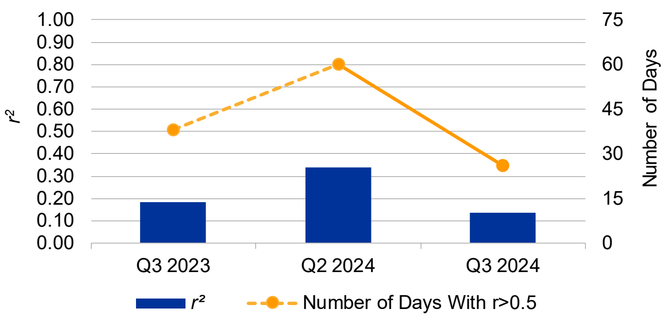


Chart 6. WEP Versus Fuel Oil Price

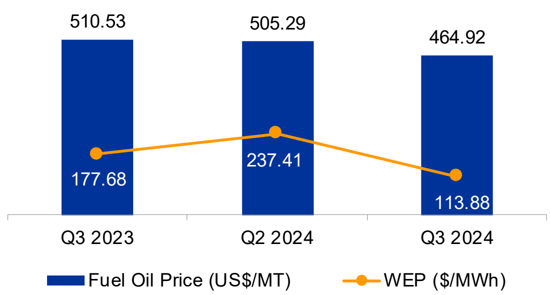


Chart 5 shows the proportion of variance in the WEP which could be explained by changes in the metered energy quantity, as measured by r^2. The correlation between the metered energy quantity and the WEP weakened with a lower r^2 of 0.14 in Q3 2024, compared to 0.34 in Q2 2024. Correspondingly, there were 26 out of 92 days in Q3 2024 when r was greater than 0.5, compared to 60 out of 91 days in Q2 2024. This implies that the metered energy quantity and the WEP had a stronger positive correlation in Q2 2024 than in Q3 2024.

Chart 6 shows the WEP decreasing 52.03% QoQ and 35.91% YoY, in tandem with the drop in the fuel oil price by 7.99% QoQ and 8.93% YoY. This signified the influence of the fuel oil price on the offer pricing of generators in lowering the energy prices this quarter.

Table 2. Variation Between Real-Time Dispatch Price and Forecast Price

Month/Quarter	Variation Between RTS and STS ($/MWh)	Maximum Periodic Variation ($/MWh)
Jul-23	-0.86	3,269.05
Aug-23	0.56	4,067.58
Sep-23	-9.50	3,915.99
Apr-24	19.22	2,874.61
May-24	0.61	3,501.13
Jun-24	9.50	4,014.13
Jul-24	6.01	3,782.03
Aug-24	-0.64	182.08
Sep-24	2.17	271.49
Q3 2023	**3.65**	**4,067.58**
Q2 2024	**9.78**	**4,014.13**
Q3 2024	**2.94**	**3,782.03**

Table 2 shows the monthly and quarterly average variation in the USEP produced in the real-time dispatch schedule (“RTS”) and the short-term schedule (“STS”), along with the largest variation observed in a single dispatch period during each month and quarter. A positive variation means the RTS produced a higher USEP than the STS, while a negative variation means the RTS produced a lower USEP than the STS.

The average variation between the real-time USEP and the forecast USEP in the STS dipped from $9.78/MWh in Q2 2024 to $2.94/MWh in Q3 2024, which was close to the $3.65/MWh level in Q3 2023. The trading periods with the maximum price variations were usually observed when the market experienced tight supply cushion. The maximum price variation in Q3 2024 was $3,782.03/MWh, which occurred in period 18 on 22 July 2024, which was also the highest periodic USEP recorded in the quarter at $4,263.11/MWh. There was no change in the supply condition between the STS and RTS, as supply remained at 7,507 MW in both schedules. However, the 50 MW increase in the demand forecast from 7,295 MW in the STS to 7,345 MW in the RTS caused the USEP to spike from $481.08/MWh in the STS to $4,263.11/MWh in the RTS.

It is also noteworthy from Table 2 that the maximum periodic variations in the RTS and STS were significantly lower in August and September 2024 as compared to the months in the other quarters. This was consistent with the stable energy prices this quarter with minimal price spikes arising from any abrupt disruption to the demand and supply conditions in the market.

Demand and Supply in Q3 2024

Chart 7. Average Forecast and Actual Demand Versus Average Temperature

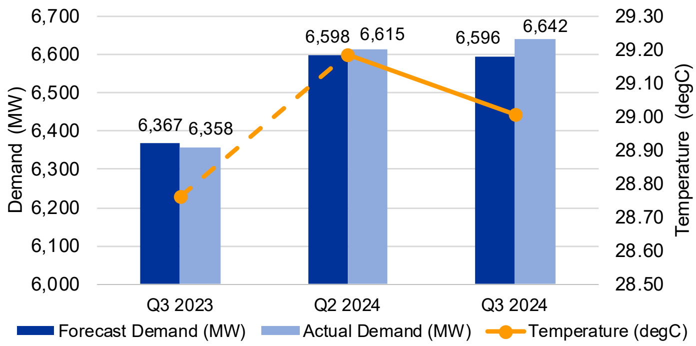


Chart 8. Peak Forecast and Actual Demand

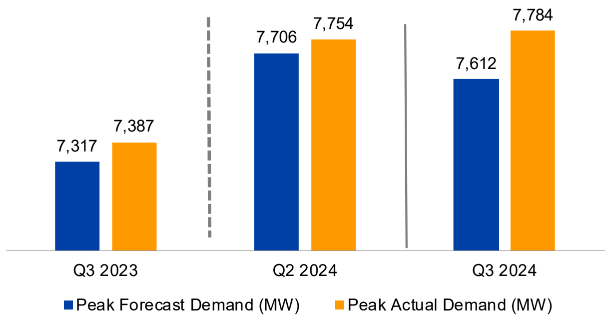


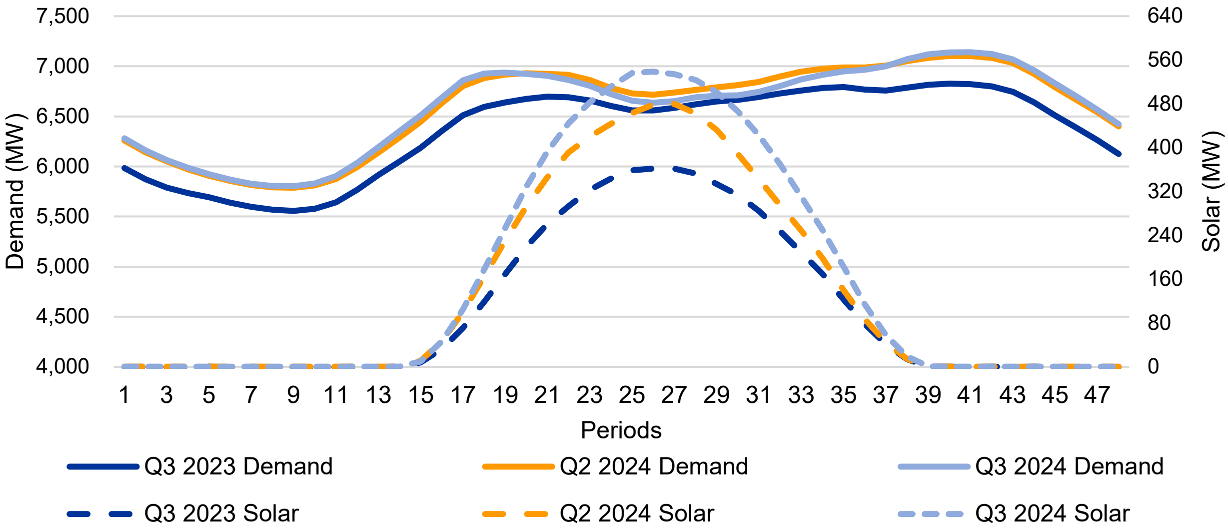
Chart 7 shows a QoQ decrease in the quarterly average temperature, which was likely to have been attributed to the widespread thundery showers and gusty winds caused by a Sumatra Squall in September 2024.

On both QoQ and YoY comparison, the average forecast demand moving in tandem with the average temperature. When the average temperature dropped 0.18°C from Q2 2024, the average forecast demand dropped 0.04% from 6,598 MW to 6,596 MW this quarter. Similarly, compared to the average forecast demand at 6,367 MW in Q3 2023, the average forecast demand was 3.59% higher this quarter, alongside a 0.24°C rise in the average temperature.

The trend of the actual demand was consistent with the weather on a YoY comparison, where actual demand rose 4.47% from 6,358 MW in Q3 2023 to 6,642 MW in Q3 2024, aligned with the 0.85°C rise in the average temperature. However, on a QoQ comparison, the actual demand rose 0.41% from 6,615 MW in Q2 2024 to 6,642 MW this quarter despite a 0.18°C drop in the average temperature from the previous quarter.

In line with the quarterly average QoQ and YoY trends in Chart 7, Chart 8 shows the peak forecast demand dipped 1.23% QoQ and rose 4.03% YoY, while the peak actual demand rose 0.39% QoQ and 5.38% YoY.

Chart 9. Average Forecast Demand and Average Solar Generation Periodic Profiles



In Q3 2023, the highest average forecast demand was in period 40 at 6,826 MW while the highest average solar generation was in period 26 at 362 MW. In Q2 2024, the highest average forecast demand was in period 41 at 7,102 MW while the highest average solar generation was in period 27 at 479 MW. Then, in Q3 2024, the average forecast demand peaked in period 41 at 7,140 MW while the average solar generation peaked in period 26 at 539 MW.

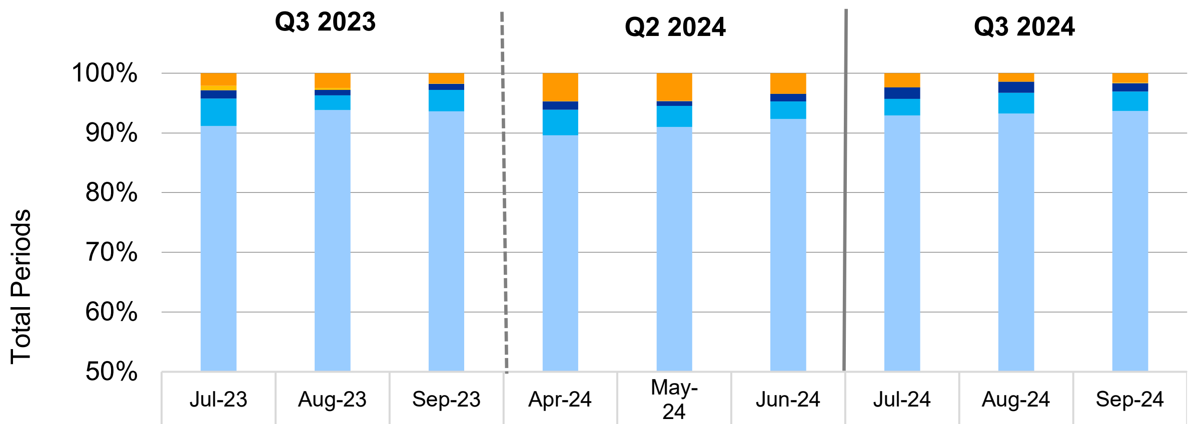
The highest average forecast demand remained the same in period 41 in Q2 2024 and Q3 2024, and marginally shifted leftward in Q2 2024 at period 40, amid an increasing contribution of solar generation during the day. Solar generation continues to be at its peak at around midday, in periods 26 and 27, for all three quarters as shown in Chart 9. Given that the Singapore demand profile has incorporated the contribution of solar generation, the dip in the demand, particularly between the abovementioned periods, was in line with the peak in the solar generation profiles.

Table 3. Quarterly Average Supply and Supply Cushion

Quarter	Q3 2023	Q2 2024	Q3 2024
Average Supply (MW)	7,151	7,503	7,574
Supply Cushion (%)	11.02	12.12	12.98

Table 3 shows a 0.95% increase in the quarterly average supply in Q3 2024 to 7,574 MW, from 7,503 MW in Q2 2024, and a 5.91% increase from 7,151 MW a year ago. The improved supply availability trended together with the higher demand forecast on a YoY comparison and a lower planned outage volume on both QoQ and YoY comparison. As observed in Table 1, the planned outage volume in Q3 2024 decreased 22.38% and 53.32% from Q2 2024 and Q3 2023 respectively. With the decrease in demand and an increase in supply, the corresponding supply cushion rose 0.87 percentage point from 12.12% in Q2 2024 to 12.98% in Q3 2024.

Chart 10. Trend Of Energy Offer Price Proportion



	Jul-23	Aug-23	Sep-23	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
≥ $3,000/MWh	2.12	2.46	1.73	4.70	4.63	3.43	2.37	1.41	1.58
≥ $1,000/MWh and < $3,000/MWh	0.75	0.36	0.06	0.03	0.02	0.00	0.00	0.00	0.09
≥ $500/MWh and < $1,000/MWh	1.38	0.89	1.00	1.42	0.81	1.27	1.92	1.85	1.41
≥ $200/MWh and < $500/MWh	4.59	2.46	3.58	4.25	3.52	2.97	2.80	3.52	3.26
< $200/MWh	91.17	93.83	93.62	89.61	91.02	92.33	92.91	93.22	93.65

The proportion of energy offers priced below $200/MWh averaged 93.26% in Q3 2024, which was higher QoQ (from 90.98% in Q2 2024) but lower YoY (from 93.73 in Q3 2023). On the contrary, the proportion of energy offers priced greater than $3,000/MWh reduced to 1.79% in Q3 2024, down from 4.25% in Q2 2024 and from 2.10% in Q3 2023.

On the whole, amid the fuel oil price decreasing QoQ and YoY, the energy offers were cheaper this quarter and have accordingly resulted in lower energy prices.

Chart 11. Monthly Average Variation Between Real-Time Dispatch Schedule and Forecast Load

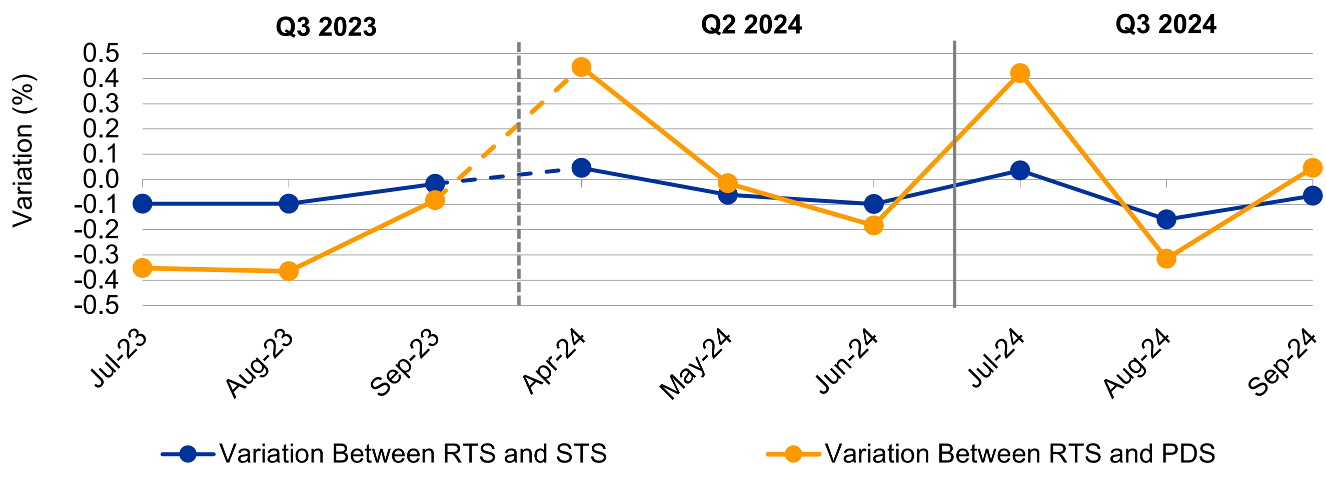
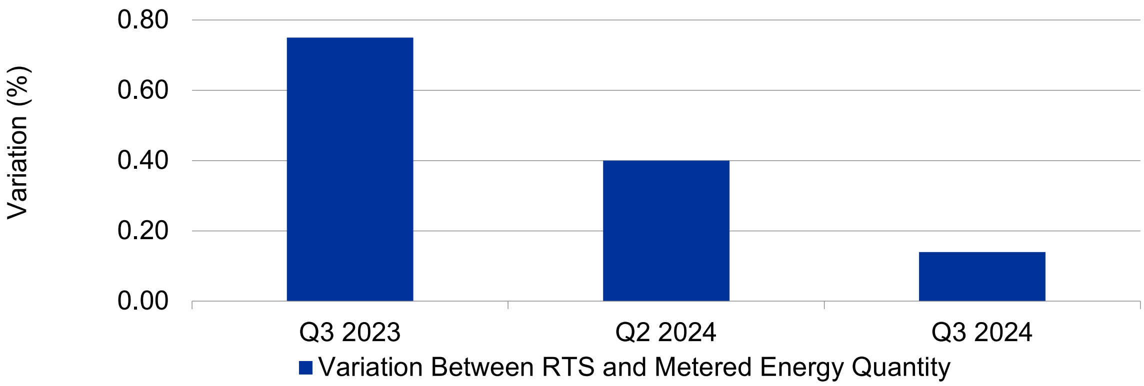


Chart 11 shows the variations in the pre-dispatch schedule ("PDS") and short-term schedule ("STS") against the real-time schedule ("RTS"). In Q3 2024, the monthly average load variation between the RTS and the STS remained relatively small at 0.09%, despite a 0.02 percentage point increase from 0.07% in Q2 2024 and Q3 2023.

The monthly load variation between RTS and PDS averaged at 0.26% in Q3 2024, which was a slight reduction in the accuracy from Q2 2024 at 0.21%. On the other hand, this was a marginal improvement in the load forecast accuracy of the PDS from Q2 2024 at 0.27%.

Overall, for all quarters, the variations between the RTS and the STS continued to be smaller in comparison to the variations between the RTS and the PDS. This is consistent with the expectation that there is a more accurate load forecasting nearer to real-time, as the STS is generated more frequently and closer to the RTS.

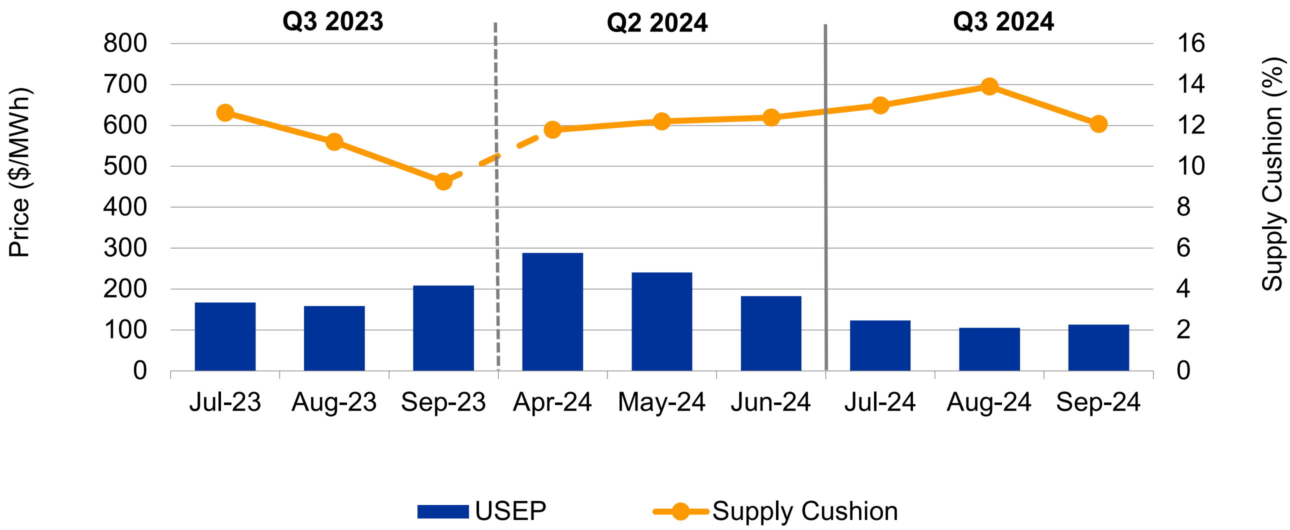
Chart 12. Quarterly Average Variation Between Real-Time Dispatch Schedule and Metered Energy Quantity



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.

Q3 2024 recorded an average variation of 0.14% between the RTS and the metered energy quantity, which was lower than 0.40% in Q2 2024, and significantly lower than 0.75% in Q3 2023. On a monthly average level, the variation in Q3 2024 experienced smaller fluctuations, ranging between 0.11% and 0.16%, as opposed to a range between 0.29% and 0.47% in Q2 2024 and between 0.51% and 0.94% in Q3 2023. The reduction this quarter implies a continual improvement of the load forecast accuracy in comparison to Q2 2024 and Q3 2023.

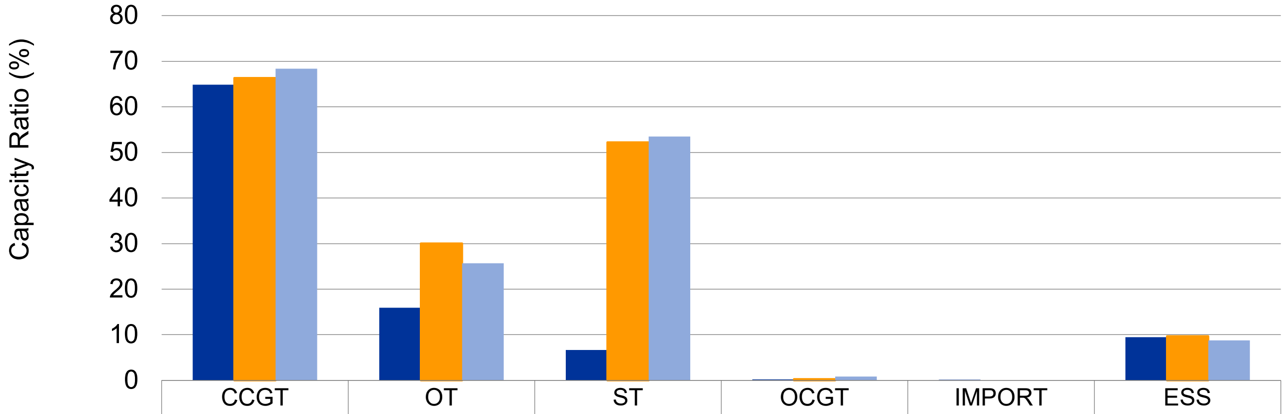
Chart 13. USEP and Supply Cushion



Compared to Q2 2024, the supply cushion expanded 2.27 percentage points, resulting in a 51.97% drop in the USEP in Q3 2024. The lower USEP was consistent with the 7.99% decrease in fuel oil price this quarter. The sharp USEP drop was largely attributed to the energy offers shifting to the lower offer price ranges as the proportion of energy offers priced above $3,000/MWh dropped 2.47 percentage points from 4.25% in Q2 2024 to 1.79% this quarter.

On a YoY comparison to Q3 2023, the supply cushion rose 1.96 percentage points from 11.02% in Q3 2023 to 12.98% this quarter. As a result, the USEP dropped 36.02% from $178.30/MWh to $114.07/MWh this quarter. Against the backdrop of the fuel oil price falling by 8.93%, the energy offer prices became cheaper with a 0.12 percentage point lower proportion of energy offers priced above $3,000/MWh. The less volatile USEP this quarter was also reflected with zero periods with TPC application.

Chart 14. Capacity Ratio by Generation Type



	CCGT	OT	ST	OCGT	IMPORT	ESS
Q3 2023	64.84	15.94	6.70	0.22	0.13	9.50
Q2 2024	66.30	30.07	52.19	0.26	0.00	9.68
Q3 2024	68.34	25.70	53.49	0.84	0.05	8.75

The capacity ratio of a generation facility measures its scheduled generation output relative to its maximum generation capacity. Chart 14 shows the quarterly average capacity ratios of the six generation types in the National Electricity Market of Singapore (“NEMS”), which comprise Combined-Cycle Gas Turbine (“CCGT”), Others (“OT”), Steam Turbine (“ST”), Open-Cycle Gas Turbine (“OCGT”), imports (“IMPORT”), and Energy Storage System (“ESS”).

Compared to Q2 2024, the capacity ratios increased across all of the generation types, with the exception of OT and ESS. Notably, this quarter saw scheduled output from IMPORT in September 2024, as compared to zero utilisation rate in all three months of Q2 2024. The capacity ratio for CCGT recorded the highest absolute increment of 2.04 percentage points this quarter, which was in line with the higher plant availability given the lower planned outage volume as indicated in Table 1. On the other hand, OT recorded the sharpest drop of 4.37 percentage points from 30.07% in Q2 2024 to 25.70% this quarter.

Compared to Q3 2023, the capacity ratios for CCGT, OT, ST and OCGT grew, but shrank for IMPORT and ESS. Notably, the increase in the capacity ratio for OCGT was likely due to the registration of two new OCGT facilities in Q3 2024.

Chart 15. Market Share of Generation Companies Based on Metered Energy Quantity[2]

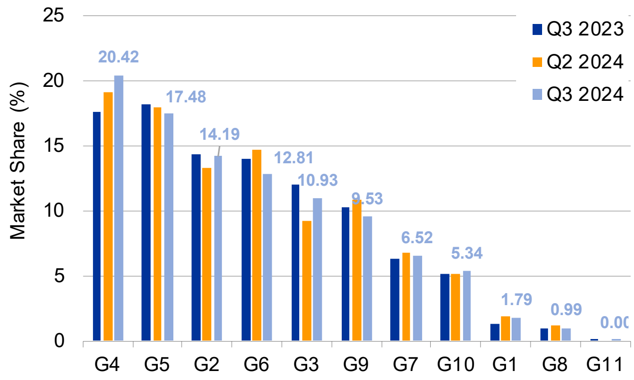
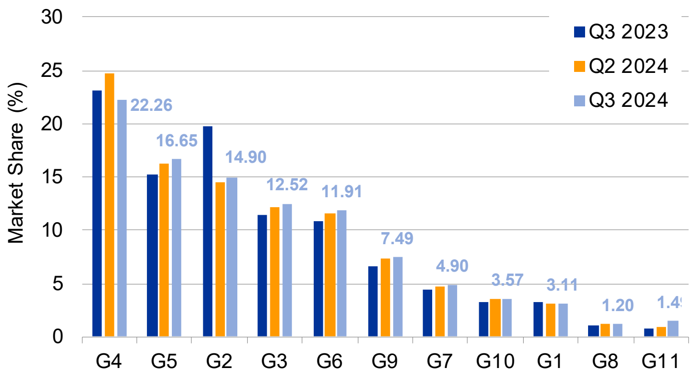


Chart 16. Market Share of Generation Companies Based on Maximum Generation Capacity[3]



The breakdown of market share in the NEMS based on metered energy quantity and maximum generation capacity by generation company and generation type is shown in Charts 15 and 16 respectively.

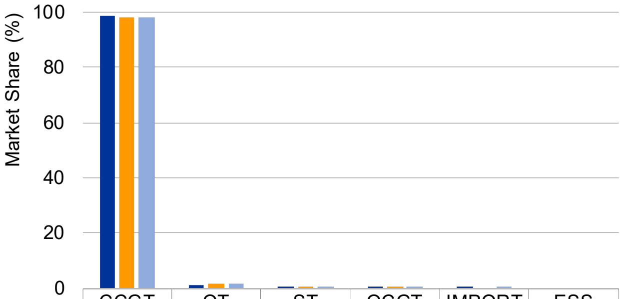
Based on metered energy quantity from Q2 2024 to Q3 2024, the combined market share of the three largest generation companies increased 0.34 percentage point from 51.75% to 52.09%. On a YoY comparison, this was also a 1.98 percentage points increase from 50.11% in Q3 2023. G4 and G5 remained in the top two positions in all three quarters, with G4 maintaining the lead this quarter with a further increment of 1.36 percentage points from Q2 2024. G2 was the third largest generation company in Q3 2023 and Q3 2024, while G6 replaced G2 to clinch the third position in Q2 2024. On QoQ comparison, G4's market share recorded the greatest increase of 1.36 percentage points, while G9's market share contracted the most by 1.35 percentage points. On a YoY comparison, G4's market share gained the most by 2.78 percentage points, while G2's market share experienced the largest decline of 1.20 percentage points.

Based on maximum generation capacity, the three largest generation companies (G4, G5, and G2) held a combined 53.81% of the total market share in Q3 2024, down from 55.44% in Q2 2024 and from 58.22% in Q3 2023. The decline was mainly due to the deregistration of two G4's CCGT units, despite the registration of two OCGT units which were of a smaller generation capacity. On a YoY comparison, G5's market share rose the most by 1.42 percentage points. On the other hand, G2's market share contracted the most by 4.92 percentage points, which was likely attributed to the deregistration of its ST facilities earlier in February 2024.

[2] Excludes intermittent generation facilities and Market Participants with net negative quarterly metered energy quantity.

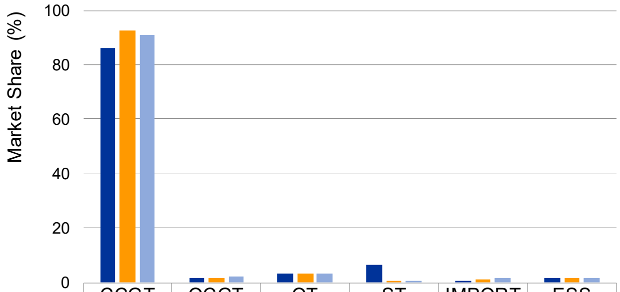
[3] Excludes intermittent generation facilities and Market Participants with less than 10 MW maximum generation capacity. The actual capacities of the ESS facilities are used for the computation.

Chart 17. Market Share by Generation Types Based on Metered Energy Quantity[4]



	CCGT	OT	ST	OCGT	IMPORT	ESS
Q3 2023	98.71	1.24	0.04	0.01	0.00	0.00
Q2 2024	98.03	1.92	0.05	0.01	0.00	0.00
Q3 2024	98.15	1.79	0.01	0.05	0.00	0.00

Chart 18. Market Share by Generation Types Based on Maximum Generation Capacity[5]



	CCGT	OCGT	OT	ST	IMPORT	ESS
Q3 2023	86.45	1.48	3.24	6.30	0.82	1.70
Q2 2024	92.45	1.58	3.17	0.12	0.88	1.79
Q3 2024	91.05	2.39	3.11	0.13	1.49	1.84

Most of the generation in the NEMS is produced by CCGT units, the most efficient generation technology. This is evident in the CCGT facilities continuing to dominate the market share based on metered energy quantity and maximum generation capacity.

Chart 17 shows that on a QoQ comparison, the market share of CCGT facilities increased the most by 0.12 percentage point, while the market share of OT facilities decreased the most by 0.13 percentage point. On a YoY comparison, this trend was reversed as the market share of CCGT facilities decreased the most by 0.56 percentage point, while the market share of OT units increased the most by 0.55 percentage point.

Chart 18 shows that on a QoQ comparison, the market share of OCGT facilities increased the most by 0.81 percentage point, while the market share of CCGT facilities decreased the most by 1.40 percentage points. This was likely attributed to the entry of two new OCGT facilities and the removal of two CCGT facilities in this quarter. On a YoY comparison, the market share of CCGT facilities increased the most by 4.60 percentage points, while the market share of ST facilities decreased the most by 6.18 percentage points. This was consistent with the deregistration of three ST facilities in February 2024. Notably, the market share of IMPORT based on maximum generation capacity also rose 0.61 percentage point and 0.66 percentage point on a QoQ and YoY comparison respectively due to the registration of a 200 MW IMPORT facility in September 2024.

[4] Excludes intermittent generation facilities and technology type with net negative quarterly metered energy quantity.

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

Chart 19. Frequency of Generation Companies as Pivotal Suppliers (PS) Per Period

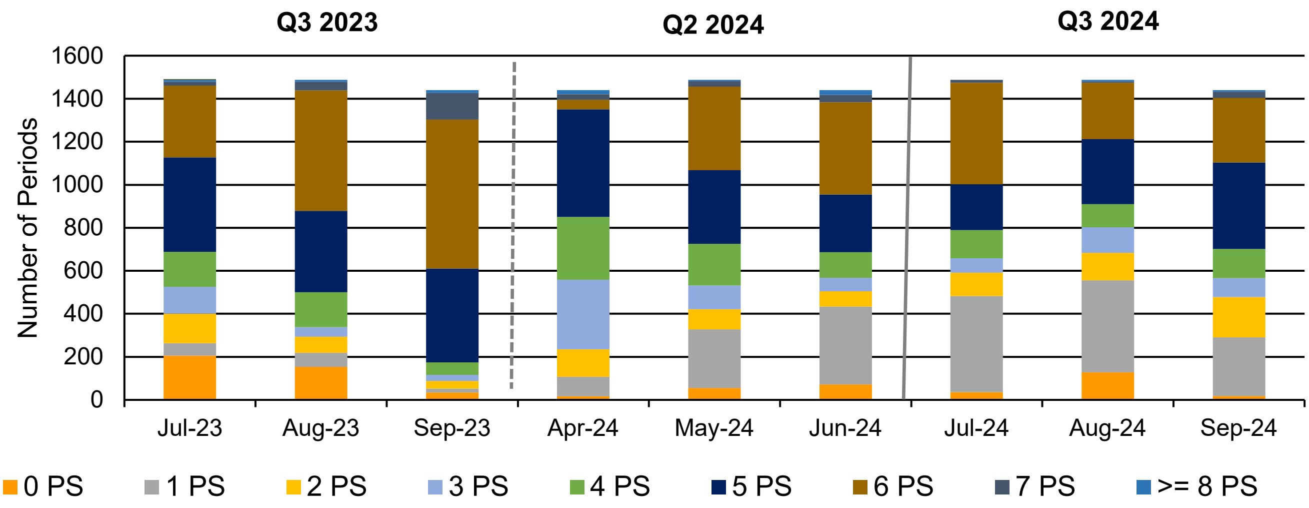


Chart 19 shows the frequency of pivotal suppliers per trading period for each month. The number of periods with 4 or more pivotal suppliers totaled 2,390 periods this quarter, down from 2,711 periods in Q2 2024 and from 3,435 periods in Q3 2023. In addition, the total number of periods with 1 pivotal supplier soared to 1,146 periods this quarter, from 724 periods in Q2 2024 and 141 periods in Q3 2023. This indicated that there were fewer generation companies with the potential ability to exercise unilateral market power.

Chart 20. Trend of Price Setting Generation Companies

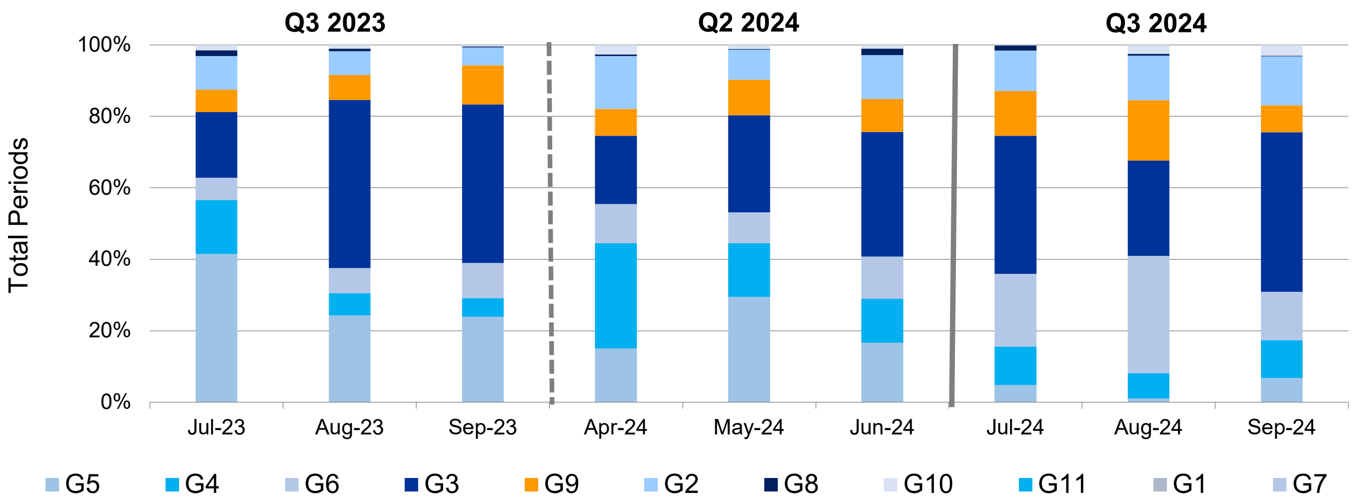
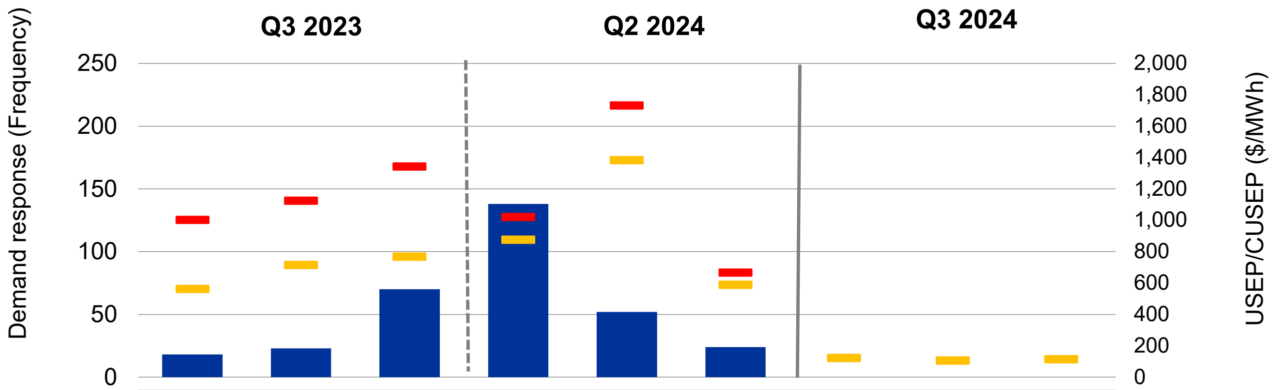


Chart 20 shows the monthly breakdown of price-setting generation companies. Of the top three price-setting generation companies, G3 held the largest share in all three quarters and recorded 35.47% in Q3 2024, a 10.11 percentage points increase from 25.36% in Q2 2024 and a 0.52 percentage point rise from Q3 2023. G6 was in the second position in Q3 2024, replacing G5 from Q3 2023 and Q2 2024, while G9 replaced G4 to clinch the third position this quarter.

Chart 21. Demand Response Activations



	Jul-23	Aug-23	Sep-23	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
DR Frequency	18	23	70	138	52	24	0	0	0
USEP ($/MWh)	562.74	714.49	769.08	875.48	1,384.06	589.07	123.23	105.74	113.23
CUSEP ($/MWh)	1,003.06	1,124.26	1,343.32	1,021.83	1,731.87	666.08			

Chart 21 shows the frequency of Demand Response ("DR") activations and the associated average USEP and counterfactual USEP ("CUSEP")[6] during those periods with DR activations. The frequency of DR activations is typically reflective of the frequency of higher USEP.

There was no DR activation in Q3 2024, as compared to 214 and 111 DR activations in Q2 2024 and Q3 2023 respectively. The absence of the DR activation is consistent with the lower energy prices noted in this quarter with the USEP averaging at $114.07/MWh. Despite the provision of demand bids in the market, the opportunity of DR activation was limited as there were only 19 periods where the USEP was above the minimum bid price. Specifically, the periodic USEPs in Q3 2024 ranged between $66.38/MWh (on period 27, 21 July 2024) and $4,263.11/MWh (on period 18, 22 July 2024).

[6] The CUSEP (in $/MWh) is calculated by the market clearing engine (MCE) with the assumption that there are no dispatchable energy bids.

Compliance Statistics for Q3 2024

Potential Breaches of the Market Rules	Determinations*	Enforcement
73 cases in total **0** non-gate closure **73** gate closure	**136 determinations in total** **5** cases determined to be in breach **0** cases determined to take no further action **131** cases determined not to be in breach	**3 determinations in total** **1** financial penalty **2** non-compliance letter **0** suspension order **0** termination order **0** other MSCP order **$7,000** of financial penalty imposed **$6,600** of costs awarded

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

The MSCP issued three rule breach determinations this quarter:

1. 2 cases from YTL PowerSeraya regarding failure to comply with gate closure rules on 10 April 2024 (Financial penalty $7,000, $2,200 costs)
2. 1 case from Senoko Energy regarding failure to comply with gate closure rules on 6 May 2024 (Letter of non-compliance, $2,200 costs)
3. 2 cases from YTL PowerSeraya regarding failure to comply with gate closure rules on 22 May 2024 (Letter of non-compliance, $2,200 costs)

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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If you have any specific query or feedback for the improvement of this publication, you may write to mau@emcsg.com.