Market Report

2025

National Electricity Market of Singapore

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2025 At a Glance

Total registered capacity of generators
▲ 15.6% to
14,264MW

32 new facilities were added in the market

2 new generators,
8 new wholesale market traders and
1 new retailer joined the market

Electricity consumption
▲ 1.9% to
58.4TWh

Generation supply
▲ 5.8% to
7,864MW

Annual value of products traded
▼ 28.4% to
$7.61 billion

Registered capacity of IGS facilities
▲ 47.5% to
1,517MW

Demand Response registered capacity
▲ 54.9% to
167MW

Demand Response payment
▼ 57.1% to
$2.2 million

Average Uniform Singapore Energy Price (USEP)
▼ 28.6% to
$116.57/MWh

Combined market share of top three generation companies fell to
50.6%

Market share of SP Services
▼ 3.2%pt to
22.3%

Energy Market Company: Letter From the Chairman

Dear Industry Members

2025 in Review

This year, we look back on 2025 with the additional perspective from recent geopolitical events that have increased the volatility of global energy markets. The conflict in the Middle East has renewed concerns about potential disruptions to energy supply chains, adding pressure to an already complex operating environment.

Singapore's electricity market ended the year in a good position. Supply conditions have improved meaningfully, with total generation supply rising 5.8 percent to 7,864MW. While electricity consumption reached a new high of 58.4 terawatt hours, the growth in supply meant the average supply cushion was lifted by 16.7 percent. This is primarily due to the registration of 32 new facilities in 2025, including new generation facilities by Meranti Power, PacificLight Power and Keppel Sakra Cogen.

This healthy cushion provides confidence that our electricity market will continue to be resilient during periods of higher stress and is an encouraging sign that the electricity market framework is operating as intended, with the annual average Uniform Singapore Energy Price declining 28.6 percent to $116.57/MWh.

EMC continues to support market stability, reliability and competitiveness through our market clearing engine, which balances supply and demand to deliver a feasible and economically efficient marketplace. This core function remains critical as Singapore navigates evolving energy challenges.

Our Raison d'Être

EMC was formed as part of Singapore's broader electricity market liberalisation—an intentional move to bring transparency, efficiency, and diversification to the ecosystem. These principles are even more relevant today, and EMC plays an important role through its multiple functions.

Through close collaboration with government and industry stakeholders, we are supporting the diversification of Singapore's energy sources through the "four switches". This includes enabling the integration of renewable energy, supporting the development of regional power connectivity, and facilitating the adoption of low-carbon solutions.

We are also operationalising schemes that empower consumers and businesses to contribute to system resilience. This includes demand-side measures such as the Demand Response programme, which incentivises large electricity consumers to reduce usage during peak periods.

In the face of heightened risks to the global energy supply chain, our position as a market intermediary allows us to identify opportunities where the energy trilemma of security, affordability, and sustainability can be balanced with minimal trade-offs – and even with potential future paybacks.

Growing Market Resilience

Our progress towards greater resilience is reflected across several fronts.

Registered Intermittent Generation Sources expanded to 1,517MW, equivalent to 2.17GWp, and renewable generation's share of total electricity supplied rose to 3.8 percent. The continued expansion of solar capacity enabled Singapore to achieve its original 2030 solar deployment target of 2GWp ahead of schedule. More recently, the Energy Market Authority (EMA) has announced a new target of 3GWp of solar deployment by 2030, reflecting confidence in Singapore's ability to further scale domestic renewables.

Flexibility resources also continued to grow, with Demand Response curtailment capacity reaching 167MW and energy storage systems expanding to 212MW of registered capacity.

In close partnership with our market participants, EMC has spent significant time and effort enhancing market arrangements, operational frameworks, and information flows to support higher levels of intermittency and system complexity arising from changes in Singapore's energy mix.

As Singapore advances towards greater regional power integration and larger volumes of electricity imports, maintaining system reliability remains a key priority. EMC continues to support the market in the procurement of contracted ancillary services to provide timely response in the event of system disturbances.

Among EMC's key initiatives are our collaboration with EMA on the development of ancillary services in Singapore, efforts to make solar forecasting information more readily accessible to market participants, as well as the revamp of the NEMS (National Electricity Market of Singapore) secured trading website with a refreshed interface and a more intuitive user experience.

Energy Market Company: Letter From the Chairman

Shaping the Market for 2026

Last year was also a year of reflection, as we embarked on extensive market research involving key stakeholders in the industry on how the electricity market needs to evolve to support Singapore's long-term energy transition goals.

The research showed that key stakeholders have a strong commitment to decarbonisation and net zero ambitions – a commitment that takes on new importance in the current environment.

They did, however, highlight challenges arising from fragmented approaches, diverging expectations, and the absence of a clearly articulated, system-wide roadmap. While individual organisations are advancing their own strategies, the study surfaced concerns that progress risks becoming uneven or misaligned without stronger coordination and shared direction.

As we look forward, our priority is therefore to strengthen collaboration across the energy ecosystem. The insights from EMC's market research highlight the value of deeper engagement and, as the independent market operator, EMC is well-placed to support this process.

We will continue facilitating dialogue, strengthening transparency, and working closely with the EMA and the industry to ensure that market evolution remains aligned with stakeholder objectives.

Sustainability will remain at the centre of our work. Beyond being an environmental imperative, it is increasingly integral to Singapore's energy security strategy. We will continue to refine market operations to ensure that the transition towards cleaner energy sources is implemented smoothly, and that the wholesale electricity market remains reliable, competitive, and future-ready.

I would like to thank our market participants, partners, and EMC colleagues for your continued professionalism and engagement throughout 2025.

While the challenges ahead are real, so are the opportunities. I am confident that with shared intent, constructive engagement, and continued trust in the market, the NEMS will continue to be resilient, sustainable, and competitive.

Tan Boon Gin
Chairman
Energy Market Company

Market Overview

Market Overview: Market History

The National Electricity Market of Singapore (NEMS) was established in January 2003, following a series of structural reforms to Singapore's electricity industry aimed at introducing competition and strengthening market efficiency.

The journey towards liberalisation began in October 1995 with the corporatisation of industry assets. This was followed by the launch of the Singapore Electricity Pool in 1998 – a day-ahead market designed to facilitate competitive bidding among power generation companies. By 2001, the introduction of a new legal and regulatory framework provided the foundation for the modern electricity market we operate today.

The NEMS remains integral to Singapore's overall energy policy framework, which seeks to balance economic competitiveness, energy security, and environmental sustainability. The NEMS places Singapore within a broader international movement to introduce market mechanisms into the electricity industry to:

- increase economic efficiency through competition;
- attract private investment;
- provide accurate price signals to guide production and consumption decisions;
- encourage innovation; and
- provide consumer choice.

Market Reform Milestones

Corporatisation	
1995	• Electricity functions of the Public Utilities Board corporatised • Singapore Power formed as a holding company
1996	• Singapore Electricity Pool (SEP) design process began
Singapore Electricity Pool (SEP)	
1998	• SEP commenced • PowerGrid is SEP Administrator and Power System Operator (PSO)
National Electricity Market of Singapore (NEMS)	
2000	• Decision for further reform to obtain full benefits of competition • New market design process began
2001	• Electricity industry legislation enacted • Energy Market Authority (EMA) established as industry regulator and PSO • Energy Market Company (EMC) established as the NEMS wholesale market operator • First phase of retail contestability (retail contestability threshold gradually lowered in subsequent years)
2003	• NEMS wholesale market trading began
2004	• Vesting contract regime introduced • Interruptible loads (IL) began to participate in the reserves market
2006	• First wholesale market trader joined the market and commenced trading as IL provider • First commercial generator since 2003 joined the market and started trading
2008	• Sale of Tuas Power to China Huaneng Group in March, Senoko Power to Lion Consortium in September, and PowerSeraya to YTL Power in December • Embedded generators (EG) joined the market
2009	• New EGs, small generators and incineration plants joined and started trading
2010	• Vesting tender introduced to tender out a percentage of non-contestable electricity demand to generation companies for bidding
2013	• Singapore's Liquefied Natural Gas (LNG) terminal started commercial operations • LNG vesting contract introduced
2015	• Electricity futures trading commenced
2016	• Demand Response programme introduced
2018	• Open Electricity Market (OEM) launched and rolled out in stages
2019	• Rollout of OEM across Singapore completed • Vesting contract regime rolled back to LNG vesting contract level
2021	• First energy storage system (ESS) joined the market
2022	• Electricity imports trial commenced
2023	• NEMS completed 20 successful years of trading

Market Overview: Industry Structure

Participants and Service Providers in the NEMS

Generators			
Aster Chemicals and Energy*	Linde Gas Singapore	Sembcorp Floating Solar Singapore	Taser Power
ExxonMobil Asia Pacific	Meranti Power*	Sembcorp Solar Singapore	TP Utilities
Keppel Merlimau Cogen	National Environment Agency	Senoko Energy	Tuas Power Generation
Keppel Sakra Cogen*	PacificLight Power	Senoko Waste-to-Energy	TuasOne
Keppel Seghers Tuas Waste-to-Energy Plant (Tuas DBOO Trust)	Sembcorp Cogen	Singapore Refining Company	YTL PowerSeraya
Wholesale Market Traders			
Air Liquide Singapore	JE Green Solutions	Singapore District Cooling	Terrenus Energy SL1X
BEWGI-UE NEWater	Keppel DHCS*	Singapore LNG Corporation	Terrenus Energy SL2
Blue Whale Energy*	Keppel EaaS*	SolarLand Alpha Assets	Terrenus Energy SR3
Crystal Clear Environmental	LYS Genco Beta	Sungreen Energy*	Yang Solar*
Green Power Asia	PSA Corporation	Sunseap Commercial Assets	9 Solar Fintech*
HSBC Institutional Trust Services (Singapore)	Public Utilities Board	Sunseap Leasing	
	Seatrium ACE*	SP Energy Services*	
Retailers			
Bioenergy	Flo Energy Singapore	PacificLight Energy	Sunseap Energy
Cleantech Solar Singapore Assets	Just Electric	Sembcorp Power	Tuas Power Supply
Diamond Electric	Keppel Electric	Senoko Energy Supply	Union Power
Engie South East Asia	MyElectricity*	Seraya Energy	
Market Support Services Licensee	**Market Operator**	**Power System Operator**	**Transmission Licensee**
SP Services	Energy Market Company	Power System Operator	SP PowerAssets

* *The following market participant changes took place in 2025:*

- *Aster Chemicals and Energy, Seatrium ACE, Keppel Sakra Cogen, Sungreen Energy, Blue Whale Energy, Yang Solar, MyElectricity, Keppel EaaS, 9 Solar Fintech, Keppel DHCS and SP Energy Services joined the market in January, February, February, April, July, July, August, August, September, September and December respectively.*
- *Shell Singapore withdrew from the market in April.*

Market Overview: Industry Structure

Singapore's electricity industry is structured to promote competition in both the wholesale and retail markets. This is achieved through a clear separation between contestable segments of the industry and those with natural monopoly characteristics.

Market Participant Changes

In 2025, the NEMS welcomed two new generators (Aster Chemicals and Energy, and Keppel Sakra Cogen), eight new wholesale market traders (Blue Whale Energy, Keppel DHCS, Keppel EaaS, Seatrium ACE, Sungreen Energy, Yang Solar, 9 Solar Fintech and SP Energy Services) and one new retailer (MyElectricity). This brought the total number of market participants (MPs) in the NEMS to 60 at the end of 2025, comprising 20 generators, 25 wholesale market traders and 15 retailers.

Generation Licensees

Generation licensees are companies with generating facilities of 10 megawatts (MW) or more that are connected to the transmission system and licensed by the Energy Market Authority (EMA) to trade in the wholesale electricity market.

Wholesale Market Traders

Wholesale market traders are companies, other than generation licensees or retail licensees, that are licensed by the EMA to trade in the wholesale electricity market. Wholesale market traders include companies with generating facilities of less than 10MW, companies that offer their own loads to be interrupted, as well as companies that provide services to other consumers interested in offering their loads to be interrupted.

Retail Electricity Licensees

Retail electricity licensees are companies that are licensed by the EMA to sell electricity to contestable consumers. Retail electricity licensees that are registered as MPs purchase electricity directly from the wholesale market.

Market Support Services Licensee — SP Services

A Market Support Services Licensee (MSSL) is authorised to provide market support services. Such services include facilitating customer transfers between retailers, meter reading and meter data management. SP Services is the only MSSL. In addition to its market support services function, SP Services also facilitates access to the NEMS for contestable consumers who have not appointed a retailer, and supplies electricity to non-contestable consumers.

Market Operator — Energy Market Company

Energy Market Company (EMC) operates and administers the wholesale market. This role includes calculating prices, scheduling generation, clearing and settling market transactions, and procuring ancillary services. EMC also administers the rule change process and provides resources that support market surveillance and compliance, and dispute resolution processes.

Transmission Licensee — SP PowerAssets

SP PowerAssets owns and is responsible for maintaining the transmission system.

Power System Operator

The Power System Operator (PSO), a division of the EMA, is responsible for ensuring the security of electricity supply to consumers. The PSO controls the dispatch of generation facilities, co-ordinates scheduled outages, oversees power system emergency planning, and directs the operation of the high-voltage transmission system. The PSO also oversees the real-time operation of the natural gas transmission system.

Regulator — Energy Market Authority

The EMA is the regulator of the electricity and gas industries and has the ultimate responsibility for the market framework and for ensuring that the interests of consumers are protected.

Consumers

Consumers are classified as either contestable or non-contestable. Contestable consumers purchase electricity from a retailer or from the wholesale market. Non-contestable consumers purchase electricity from SP Services at the regulated tariff.

Market Overview: Market Features

The NEMS incorporates several features that drive market efficiency and align its design with international best practices, including:

- **co-optimisation of energy, reserve and regulation products;**
- **security-constrained dispatch and nodal pricing;**
- **near real-time dispatch; and**
- **a Demand Response (DR) programme.**

Co-optimisation of Energy, Reserve and Regulation Products

Prices and quantities for energy, reserve and regulation products are determined through a sophisticated optimisation process involving approximately 50,000 mathematical equations. Integral to this process is co-optimisation, whereby the market clearing engine (MCE) evaluates the total costs and requirements of all products to determine the optimal dispatch of registered generation and load facilities to supply the market.

Security-Constrained Dispatch and Nodal Pricing

To determine the wholesale market prices, offers and bids submitted by market participants are matched with the system demand forecast and system security requirements. The MCE produces a security-constrained economic dispatch by taking into account:

- available generation capacity;
- ability of generation capacity to respond (ramping);
- relationship between the provision of energy, reserves and regulation (co-optimisation);
- power flows in the system;
- physical limitations on the flows that can occur in the transmission system;
- losses incurred during power transmission; and
- constraints related to system security.

This process is run half-hourly to determine the:

- dispatch quantity that each generation unit is to produce and each load facility in the DR programme is to curtail (see details of DR programme on page 9);
- reserve and regulation capacity that each generation unit is required to maintain;
- level of interruptible load (IL) that is scheduled; and
- corresponding prices for energy, reserves and regulation in the wholesale market.

Energy prices vary at different points on the network. These differences reflect both transmission losses and network constraints thereby revealing the costs of delivering electricity to each point on the network.

The MCE models the transmission network to ensure that the dispatch is structured in a physically feasible manner, taking into account the capacity and security requirements of the transmission system. For each half-hour trading period, the MCE calculates the prices to be received by market participants at the 140 injection nodes, as well as prices at up to 900 withdrawal (off-take) nodes[1] that form the basis of the prices paid by customers. This method of price determination promotes economically efficient short-term scheduling of generation facilities.

Energy, Reserve and Regulation Products

	Description	Purchaser	Seller
Energy	Generated electricity	Retailers	Generators
Reserve	Stand-by generation capacity or interruptible loads (ILs) that can be drawn upon when there is an unforeseen shortage of supply Two classes of reserves are traded: 1) primary reserve (9-second response); and 2) contingency reserve (10-minute response)	Generators	Generators, Retailers and Wholesale Market Traders
Regulation	Generation that is available to fine-tune the match between generation and load	Generators and Retailers	Generators

[1] *Numbers of injection and withdrawal nodes are as at 31 December 2025.*

Market Overview: Market Features

EMC uses the MSSL's metered data and the MCE's discovered prices to settle daily market transactions. Generators receive the market price for energy that is determined at their point of connection to the transmission network (injection node). Retailers pay the Uniform Singapore Energy Price (USEP), which is the weighted-average of the nodal prices at all off-take nodes.

Generators pay for reserves according to the risk they contribute to the system. Regulation is paid for by retailers in proportion to their energy purchases and by dispatched generators up to a ceiling of five megawatt hours for each trading period.

Near Real-Time Dispatch

Market prices and dispatch quantities for energy, reserves and regulation are calculated five minutes before the start of each half-hour trading period. This ensures that the market outcomes reflect prevailing power system conditions, the most recent offers made by generators, as well as the most recent bids made by demand response aggregators.

To support near real-time dispatch, EMC produces market forecast schedules up to a week ahead of the relevant trading period. These forecast schedules increase in frequency as the trading period approaches real-time to provide MPs with timely information to adjust their trading positions prior to physical dispatch.

Demand Response Programme

The DR programme was introduced in April 2016 to allow consumers to submit bids in the energy market to provide load curtailments. Loads located in the same zone can be aggregated and registered as a single load registered facility (LRF) in the market. These LRFs can submit energy bids if they satisfy the necessary requirements, and the MCE will schedule them for load curtailment in a given dispatch period. Scheduled and compliant load curtailments will receive incentive payments for contributing to a better market clearing outcome. These incentive payments will be recovered from contestable consumers through hourly energy uplift charges.

An ex-post assessment will be conducted by comparing actual metering data against the expected consumption based on the LRFs' dispatch schedules. LRFs that are scheduled for curtailment must reduce their consumption accordingly, while those not scheduled for curtailment should maintain their normal consumption levels based on their self-declared baseline. Financial penalties will be imposed on LRFs that are deemed to have deviated from their dispatch schedules, and all financial penalties collected will be returned to the market via the monthly energy uplift charges.

Market Governance

Market Governance: Overview

Governing Documents and Institutions

The Energy Market Authority (EMA) was established under the Energy Market Authority of Singapore Act 2001 and serves as the electricity market regulator under the Electricity Act 2001. It is responsible for, among other mandates:

- creating the market framework for electricity and gas supply;
- promoting the development of the electricity and gas industries;
- protecting the interests of consumers and the public;
- issuing licences; and
- advising the Government on energy policies.

Rule Change Process

The day-to-day functioning of the National Electricity Market of Singapore (NEMS) wholesale market is governed by the Singapore Electricity Market Rules.

The rule change process is the responsibility of the Rules Change Panel (RCP). Appointed by the Energy Market Company (EMC) Board, RCP members represent generators, retailers, wholesale market traders, the financial community, the Power System Operator (PSO), the Market Support Services Licensee (MSSL), the transmission licensee, electricity consumers and EMC, ensuring representation of all key sectors of the industry.

The rule change process is designed to maximise transparency and opportunities for public involvement. Rule modifications recommended by the RCP require the support of the EMC Board and the EMA. When approving changes to the Market Rules, the EMA is required to consider whether the proposed rule modifications (i) unjustly discriminate in favour of, or against, a market participant (MP) or a class of MPs; or (ii) are inconsistent with the functions and duties of the EMA under subsection 3(3) of the Electricity Act.

The RCP is supported by EMC's Market Administration team, which provides economic analysis of rule modification proposals and makes recommendations to the RCP. Every year, EMC publishes the RCP's work plan on its website to ensure that stakeholders remain informed about the likely evolution of the market.

Market Surveillance and Compliance

The Market Surveillance and Compliance Panel (MSCP) monitors and investigates the conduct of market entities, as well as the structure, performance and activities of the NEMS. The MSCP is appointed by the EMC Board and comprises professionals who are independent of the NEMS, with extensive combined experience across financial markets, law, power system operations and economics.

The MSCP is supported by EMC's Market Assessment Unit (MAU). The MAU evaluates activities that may indicate breaches of or inefficiencies in the Market Rules, market manuals or System Operation Manual, and potential flaws in the NEMS' overall structure, presenting its findings and recommendations for the MSCP's determination.

Where the MSCP determines that a market entity is not compliant with the Market Rules, the MSCP may take enforcement actions such as imposing financial penalties and issuing non-compliance letters, directions, and orders.

The MAU routinely submits to the MSCP, a quarterly Market Watch report that describes its day-to-day monitoring, cataloguing and evaluation activities and analyses. The MSCP, in turn, provides EMC with a summary of its investigative and monitoring activities through the MSCP Annual Report, which has been published annually since 2007.

Dispute Resolution

The Market Rules set out the dispute resolution process for market entities in the NEMS, which consists of three progressive stages: negotiation, mediation, and arbitration. The process aims to provide a fair, efficient, and cost-effective way of resolving disputes outside the courts while maintaining relationships in the NEMS.

The dispute resolution process is managed by the Dispute Resolution Counsellor (DRC) who is appointed by the EMC Board. In addition, the DRC helps familiarise market entities with the dispute resolution and compensation regime, and appoints legal professionals to serve on the mediation and arbitration panels, collectively known as the Dispute Resolution and Compensation Panel. The DRC is assisted by the MAU in facilitating dispute resolution in the NEMS, emphasising efficiency and fairness in the dispute resolution and compensation process.

Market Governance: Letter From the Chair, Rules Change Panel

Dear Industry Members

As our energy landscape shifts to integrate more renewable energy and electricity imports, and to enable new models of market participation driven by innovation and technology, the market must evolve in lockstep. At the core of this evolution process, the Rules Change Panel (RCP) plays a critical role in aligning market arrangements with policy, technology and the operational needs of a modern, flexible power system.

As of December 2025, Singapore has surpassed expectations by achieving more than 2GWp of solar generation capacity, putting it well ahead of its 2030 target. The rapid growth of intermittent solar generation in the supply mix has heightened the need for stronger system stability measures. Battery Energy Storage Systems (BESS) are therefore crucial in smoothing real-time fluctuations, balancing supply and demand, and supporting overall system stability.

The rule change to model BESS, which came into effect in August 2025, was subsequently enhanced to incorporate state-of-charge considerations and clarify energy storage offer requirements, thereby improving the accuracy and effectiveness of market clearing for BESS.

The Panel also supported a compensation framework to allow BESS to be eligible for compensation during periods of market energy price revisions, aligning their treatment with other Generation Registered Facilities (GRFs) in the National Electricity Market of Singapore (NEMS).

To bolster system stability, the RCP supported a proposal to exempt GRFs under free governor control from the Automatic Financial Penalty Scheme (AFPS) when they are responding positively to frequency changes. This addresses market participants' (MPs) concerns regarding financial penalties for actions that, while technically are deviations, in fact contribute to grid stability.

Finally, to enhance market transparency, the RCP further supported a proposal to expand the publication of Temporary Price Cap (TPC) information. Providing MPs with more real-time and forecast data, will enable them to anticipate TPC activation or deactivation better and assess potential price impacts, ultimately improving market efficiency.

These market developments would not have been possible without the active participation and contributions of my fellow RCP members. As we embark on the complex rule changes outlined in the workplan, the diversity of perspectives within the Panel remains crucial. It ensures that we rigorously evaluate the merits and trade-offs of each proposal, delivering optimal outcomes for the market as we navigate Singapore's evolving energy landscape.

Finally, I want to extend my heartfelt thanks to Ms Koay Yi Jing for her contributions during her term on the Panel. As she steps down, we wish her every success and look forward to continuing to work with her in other capacities. At the same time, I am pleased to welcome Mr Tan Jian Hui to the Panel in 2026. I look forward to the fresh perspectives and ideas that will continue to drive progress in the evolution of the NEMS.

Toh Seong Wah
Chair
Rules Change Panel

Market Governance: Market Evolution

Rule Changes Considered by the RCP

As part of the Rules Change Panel's (RCP) continual effort to facilitate development of the wholesale electricity market, the following rule changes were discussed:

- RC388: Registration of Facilities Connecting to the Distribution Network
- RC390: Market Clearing and Offers for Energy Storage Systems (ESS)
- RC391: Publication of Temporary Price Cap (TPC) Information
- RC393: Compensation for Energy Storage Systems (ESS)
- RC394: Exemption from the Automatic Financial Penalty Scheme (AFPS) for Deviating Generation Registered Facilities (GRFs) on Free Governor Control
  RC377: Regulation Cost Allocation to Generation Settlement Facilities (GSFs) above 10MW

Registration of Facilities Connecting to the Distribution Network

EMC is required by the Market Rules to seek the PSO's advice on whether a facility poses a threat to the reliability or security of the transmission system before registering the facility.

This rule change assesses whether the PSO's advice on facilities connecting to the distribution network is required. The aim is to streamline the registration process for such facilities and reduce administrative burden.

EMC has learnt from the PSO that existing obligations under the Transmission Code are sufficient to ensure that facilities connecting to the distribution network pose no threat to the reliability or security of the transmission system.

EMC proposes to amend the market rules such that for any facility connecting to the distribution network, EMC is not required to seek advice from PSO for the purpose of registering the facility, regardless of technology type and facility classification.

At the 144th RCP meeting held on 14 November 2024, the RCP unanimously supported EMC's recommendation. The EMA approved the Market Rules to reflect RCP's decision. These rules took effect on 16 April 2025.

Market Clearing and Offers for Energy Storage Systems (ESS)

This rule change aims to increase the accuracy of the market clearing formulation for ESS and clarify requirements for ESS' energy storage offers.

To facilitate accurate modelling of ESS in the Market Clearing Engine (MCE), EMC proposed rule modifications to:

- the market clearing formulation for ESSs; and
- the requirements for standing offers and offer variations by ESS.

At the 146th RCP meeting held on 13 March 2025, the RCP unanimously supported EMC's recommendations. The EMA approved the Market Rules to reflect RCP's decision. These rules took effect on 12 August 2025.

Publication of Temporary Price Cap (TPC) Information

This rule change reviews the publication of information relating to the TPC mechanism in the Singapore Wholesale Electricity Market (SWEM).

Product prices in the SWEM are normally subject to the primary price caps as set out in the Market Rules. When the TPC is activated, product prices will instead be capped at TPC levels, which are typically lower than the primary price cap, until the TPC is deactivated.

When the TPC mechanism was introduced, only the Uniform Singapore Energy Price (USEP) not capped by the TPC was published as the Reference USEP. Information on the clearing prices for Primary Reserves, Contingency Reserves, Regulation, and Market Network Nodal Energy Prices before the application of the lower TPC limits when the TPC is activated was not available. This rule change assesses a proposal to bridge this gap.

The RCP discussed the matter and supported publishing the historical and real-time prices for Primary Reserves, Contingency Reserves, Regulation, and Market Network Nodal Energy Prices that are unaffected by the TPC. EMC drafted rule changes to give effect to this.

The RCP discussed the proposed modifications at its 146th meeting and the Panel unanimously supported the proposed modifications. The EMA approved the rule changes on 5 June 2025. The rules will come into effect once EMC completes the necessary system changes.

Market Governance: Market Evolution

Compensation for Energy Storage Systems (ESS)

The Singapore Wholesale Electricity Market (SWEM) adopts ex-ante pricing[2] where settlement prices are determined by the market clearing engine (MCE) just prior to the start of each dispatch period. Nevertheless, ex-post price revision is permitted under specified circumstances. Under these circumstances, the revised prices are used for settlement. The Market Rules specify the criteria and calculation for compensation to Generation Registered Facilities (GRFs).

Currently, the compensation formulae in the Market Rules refer only to GRFs with energy offers, which excludes ESS with energy storage offers. Thus, compensation is currently not provided for ESS.

Furthermore, current compensation formulae are based on GRF offers containing ten price-quantity pairs for injection (e.g., positive quantities). These are not appropriate for ESS offers, which contain five price-quantity pairs for discharging (e.g., positive quantities) and five price-quantity pairs for charging (e.g., negative quantities).

Therefore, EMC proposed rule modifications to allow ESS to claim compensation for periods with market energy price revision, consistent with other GRFs.

At the 148th RCP meeting held on 15 May 2025, the RCP unanimously supported EMC's recommendations. The EMA approved the Market Rules to reflect the RCP's decision on 17 July 2025. The rules will come into effect once EMC completes the necessary system changes.

Exemption from the Automatic Financial Penalty Scheme (AFPS) for Deviating Generation Registered Facilities (GRFs) on Free Governor Control

With the AFPS, the market imposes financial penalties on GRFs, when they deviate from their dispatch schedules by more than 10MW.

This rule change proposed amendments to an existing exemption to the AFPS, specifically where a GRF operates on free governor control and responds positively to a power system disturbance.

GRFs on free governor control operate autonomously. They utilise governors within a generator to automatically adjust output in response to the power system's frequency fluctuations. Given that governors are in-built mechanisms installed within GRFs, any output deviations from dispatch schedules should be recognised as a consequential outcome of governors responding to real-time system frequency fluctuations.

Previously, in the absence of a power system disturbance, a GRF operating on free governor control in such a situation was classified as a deviating GRF and therefore subject to the AFPS, despite positively responding to maintain system stability.

EMC proposed rule modifications to:

- remove the dependency on the occurrence of a power system disturbance event; and
- provide that a GRF on free governor control which responds positively to frequency changes in the power system and is compliant with capability requirements and standards outlined in the Transmission Code, shall be exempted from AFPS for deviation from schedules.

The RCP unanimously supported EMC's recommendations. The EMA approved the Market Rules to reflect the RCP's decision. These rules took effect on 27 November 2025.

Regulation Cost Allocation to Generation Settlement Facilities (GSFs) above 10MW

In the Singapore Wholesale Electricity Market (SWEM), regulation costs are allocated based on the causer-pays principle, capping each Generation Settlement Facility's (GSF's) share to the first 5MWh per trading period.

The recent influx of larger GSFs, driven by increased solar deployment, necessitates a review of regulation cost allocation. EMC proposes removing the 5MWh cap on regulation costs for GSFs such that all generation facilities pay a fair share.

At the 149th RCP meeting, the RCP by majority vote endorsed this proposal on a conceptual level. EMC plans to implement the changes only in the next material market system update. EMC will also report to the RCP before embarking on this.

[2] *The NEMS has adopted an ex-ante pricing regime since the market's inception. Ex-ante pricing was adopted for the certainty of prices it provided market participants prior to dispatch.*

Market Governance: Letter From the Dispute Resolution Counsellor

Dear Industry Members,

Dispute Resolution and Compensation Panel

The Dispute Resolution and Compensation Panel (DRCP) was established under the Market Rules to provide dedicated dispute resolution services to participants of the National Electricity Market of Singapore (NEMS), when required.

The DRCP members are as follows:

Mediation Panel

1. Chandra Mohan
2. Daniel John
3. Engelin Teh, Senior Counsel
4. Geoff Sharp
5. Professor Joel Lee
6. Lim Lei Theng
7. Lim Tat
8. Professor Nadja Alexander
9. Shirli Kirschner

Arbitration Panel

1. Chelva Rajah, Senior Counsel
2. Giam Chin Toon, Senior Counsel
3. Kenneth Tan, Senior Counsel
4. Professor Lawrence Boo
5. N Sreenivasan, Senior Counsel
6. Naresh Mahtani
7. Philip Harris
8. Raymond Chan
9. Dr Robert Gaitskell, King's Counsel
10. Tan Chee Meng, Senior Counsel
11. Professor Tan Cheng Han, Senior Counsel

Dispute Management System Contacts

Pursuant to the Market Rules, each market entity has nominated at least one Dispute Management System (DMS) contact as the first point of engagement in the event of a dispute.

The current DMS contacts are:

1. 9 Solar Fintech - Senthil Kumar Karuppiah
2. Air Liquide Singapore – Lim Yong Yi
3. Aster Chemicals – Aina Lim
4. Bioenergy – David Leong
5. Cleantech Solar Singapore Assets – Andre Nobre
6. Crystal Clear Environmental – Frank Tan
7. Crystal Clear Environmental – Yang Jia
8. Diamond Electric – Olivier Veteau
9. Energy Market Company – Dominic Tan
10. Engie South East Asia – Floriane Jacquart
11. Engie South East Asia – Sharlin Khor
12. ExxonMobil Asia Pacific – Kenneth Tay
13. ExxonMobil Asia Pacific – Ma Xiu Yan
14. Flo Energy Singapore – Matthijs Guichelaar
15. Green Power Asia – Daniel Ma
16. JE Green Solutions – Chin Cherk Min
17. JE Green Solutions – Tan Kuen Jong
18. Just Electric – Wittman Wah
19. Keppel DHCS – Randelle Ong
20. Keppel Electric – Joelyn Wong

21. Keppel Electric – Tay Hock Hai
22. Keppel Merlimau Cogen – Alvern Chong
23. Keppel Merlimau Cogen – Jeremy Lim
24. Keppel Seghers Waste-to-Energy – Lee Song Koi
25. Keppel Seghers Waste-to-Energy – Victor Fong
26. LYS Genco Beta – Jonathan Chong
27. Meranti Power – Tan Chor Kiat
28. MyElectricity – Joe Tan
29. National Environment Agency – Sara Raeburn
30. National Environment Agency – Yap Hwee Tat
31. PacificLight Energy – Ng Zi Kang
32. PacificLight Power – Yang Jia Xin
33. Power System Operator – Lee Kim Hwee
34. Power System Operator – Loh Poh Soon
35. Public Utilities Board – Lee Si Jia
36. Sembcorp Cogen – Lai Kum Fai
37. Sembcorp Floating Solar Singapore – Fendy Nursalim
38. Sembcorp Floating Solar Singapore – Kenny Kee
39. Sembcorp Power – Tan Ying Li
40. Sembcorp Power – Yvonne Goh
41. Sembcorp Solar Singapore – Fendy Nursalim
42. Sembcorp Solar Singapore – Kenny Kee
43. Senoko Energy – Poo Siok Yin
44. Senoko Energy Supply – Michelle Lim
45. Senoko Waste-to-Energy – Lee Song Koi
46. Senoko Waste-to-Energy – Clifton Tan
47. Seraya Energy – Sarah Sum
48. Seraya Energy – Ang Yi
49. Singapore District Cooling – Dennis Chong
50. Singapore District Cooling – John Tan
51. Singapore LNG Corporation – Jonathan Chew
52. Singapore LNG Corporation – Ray Tan
53. Singapore Refining Company – Joel Chong
54. SP Energy Services – Cheong Wai Khuen
55. SP Energy Services – Christina Li Dan Qing
56. SP PowerAssets – Chan Hung Kwan
57. SP Services – Lee Chui Ping
58. Sungreen Energy – Kenneth Ting
59. Taser Power – Lee Si Jie
60. Taser Power – Bryan Lim
61. Terrenus Energy SL1X – Charles Wong
62. Terrenus Energy SL1X – David Chan
63. Terrenus Energy SL2 – Charles Wong
64. Terrenus Energy SL2 – David Chan
65. TP Utilities – Daniel Lee
66. Tuas Power Generation – Priscilla Chua
67. Tuas Power Supply – Jazz Feng
68. Tuas Power Supply – Kessler Wong
69. TuasOne – Kwanwei Sim
70. TuasOne – Mitsuru Tada
71. Union Power – Ellen Teo
72. Union Power – Ng Ghee Sung
73. Union Solar – Eric Lim
74. Widex Technology SG – Tommy Lee
75. YTL PowerSeraya – Lee Si Jie
76. YTL PowerSeraya – Bryan Lim

Dispute Resolution Training

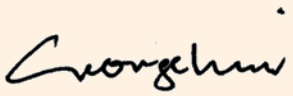
As an integral aspect of my role, I am responsible for providing training in dispute resolution matters tailored to the stakeholders within the DMS.

On 26 May 2025, I conducted a briefing and refresher session on NEMS' dispute resolution process for the DMS contacts. This briefing session was conducted with the support and coordination of Energy Market Company's Market Assessment Unit.

Conclusion

I am pleased to announce that no formal disputes were submitted in 2025.

I would like to thank the esteemed members of the DRCP and the designated DMS contacts for their contributions in supporting the dispute resolution process within NEMS.

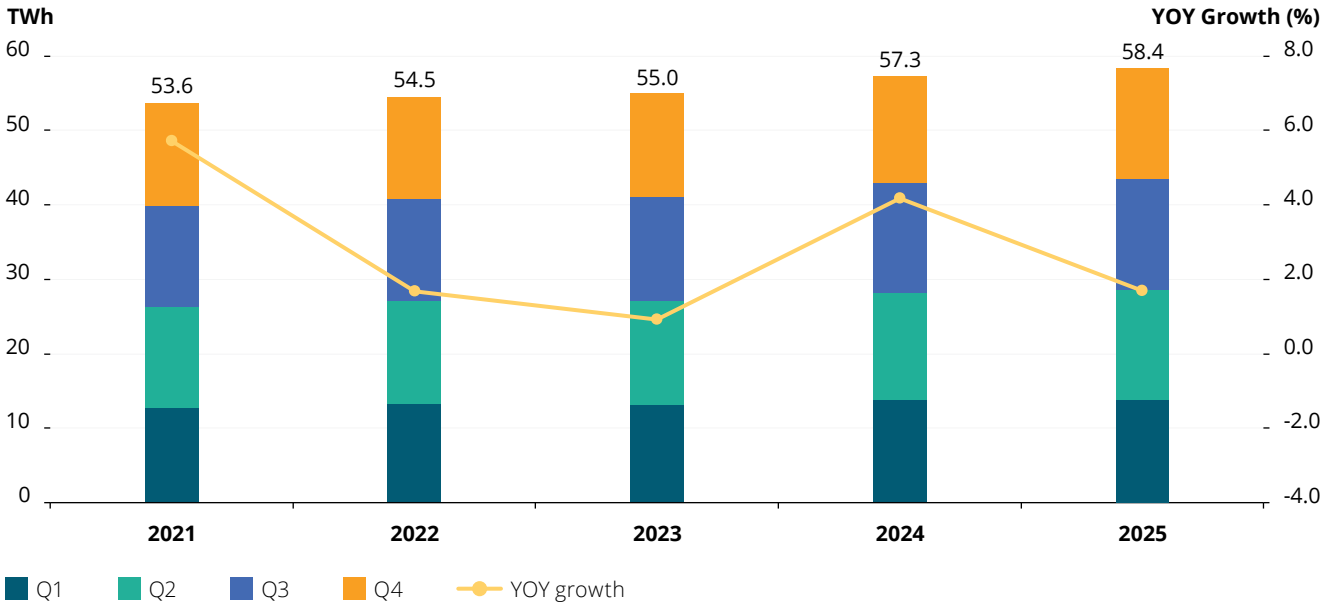


George Lim
Senior Counsel
Dispute Resolution Counsellor

Market Performance

Market Performance: Overview of the Year

Annual Electricity Consumption 2021–2025



Electricity consumption hits record high in 2025 amid modest growth

Electricity purchased by market participants (MPs) is settled using electricity consumption data provided by the Market Support Services Licensee (MSSL).

In 2025, electricity consumption grew 1.9 percent year-on-year (YOY), moderating from the previous year and lagging behind the projected 5.0 percent[3] growth in Singapore's economy. Despite the modest growth rate, total electricity consumption reached 58.4 terawatt hours (TWh), surpassing last year's peak to set a new record high.

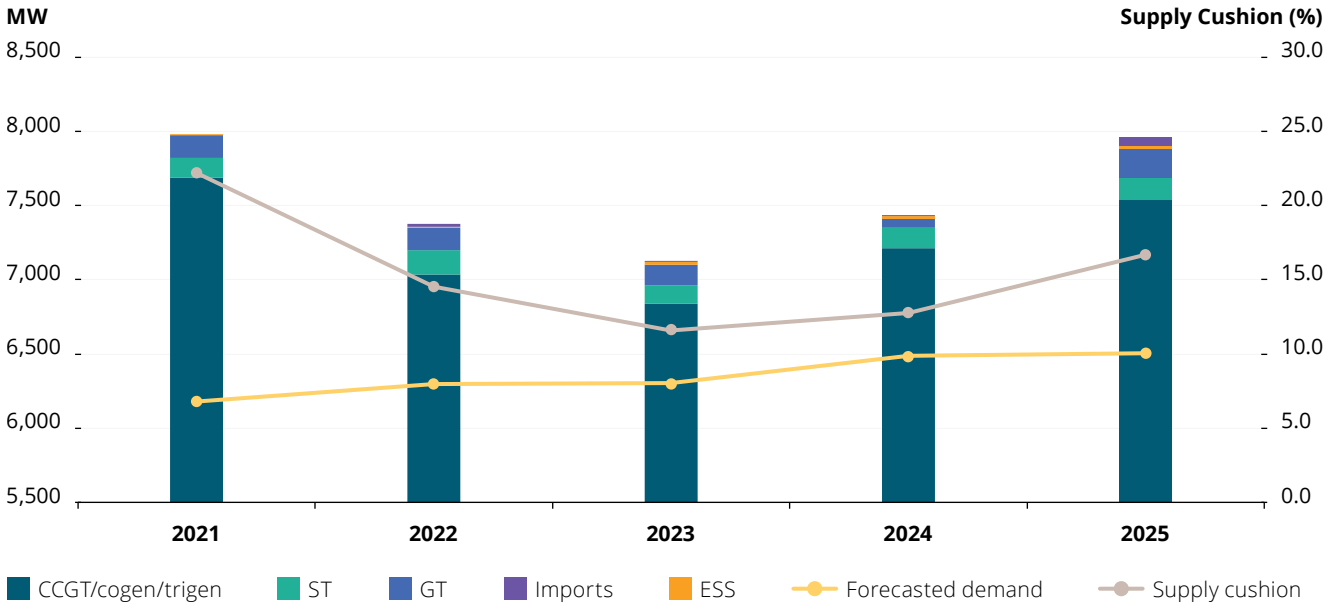
Compared to the same quarters in 2024, growth in electricity consumption reflected a soft start, with the first quarter remaining flat. The subsequent quarters gained momentum and posted steady growth rates between 1.4 percent and 3.5 percent. Remarkably, electricity consumption remained at record-high levels across all quarters since the market's inception.

The sustained electricity consumption levels were underpinned by ongoing economic expansion, particularly in the manufacturing sector, bolstered by robust demand for AI-related products. The sector remained a key driver of electricity usage.

[3] *MTI Upgrades 2026 GDP Growth Forecast to "2.0 to 4.0 Per Cent": Ministry of Trade and Industry, Singapore, 10 February 2026.*

Market Performance: Overview of the Year

Annual Supply by Facility Generation Type 2021–2025



Annual generation supply and supply cushion strengthen further

In 2025, fewer periods of upstream gas curtailments relative to 2024, coupled with reduced annual generation maintenance levels, supported further recovery in both generation supply and the supply cushion[4] from the previous year. Annual generation supply expanded by 5.8 percent to 7,864 megawatt (MW), maintaining the growth momentum observed last year. Similarly, the supply cushion improved by 3.9 percentage points to 16.7 percent, marking a rebound from the record-low levels observed over the past three years.

Against the backdrop of a higher total supply, improvements were observed across all facility generation types. The increase in overall generation supply was primarily driven by a 3.5 percent increase in CCGT/cogen/trigen supply, which reached 7,469MW. This segment remained the dominant contributor, standing at 14.0 percent above the forecasted demand and reflecting a 2.8 percentage point improvement compared to 2024.

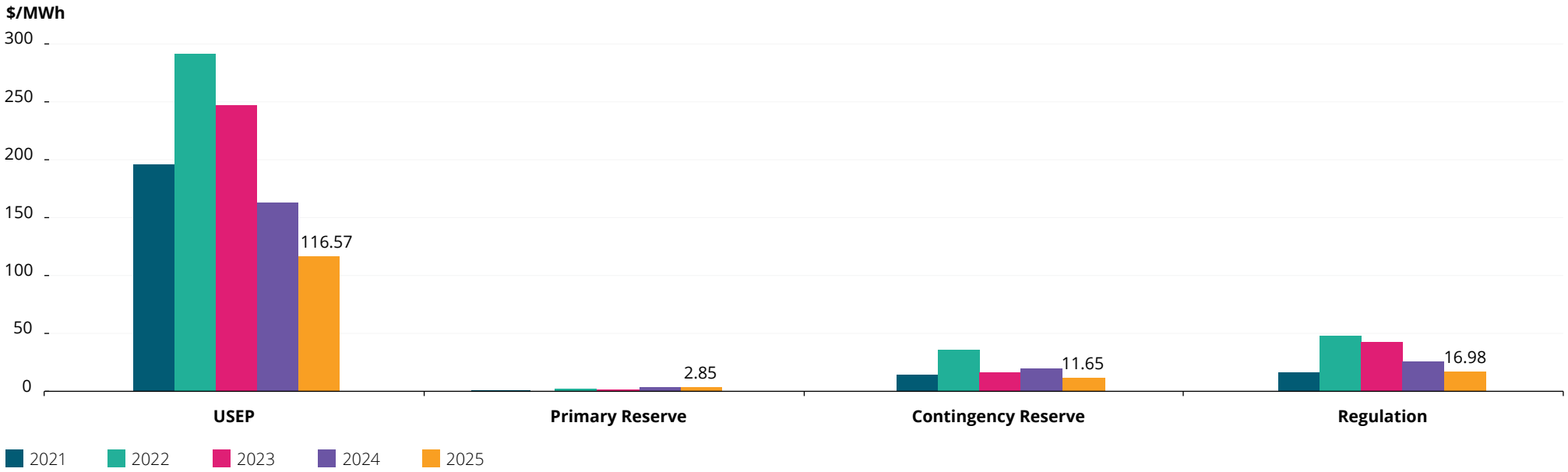
Gas Turbine (GT) supply saw a sharp rebound, more than tripling to 190MW and reversing the steep declines recorded in the previous year. The surge was largely attributed to the registration of three new GT facilities in 2025. Meanwhile, Steam Turbine (ST) supply edged up marginally by 0.7 percent, recording a modest 1MW increase to 132MW. Imports supply increased significantly to 50MW, up from 3MW in 2024, supported by the addition of new import capacity towards the end of 2024. Energy Storage System (ESS) supply[5] also expanded to 21MW, representing a 31.3 percent increase from the previous year.

[4] Supply cushion measures the percentage of total generation supply that is available after matching off forecasted demand. It is calculated by subtracting forecasted demand from total supply, over total supply.

[5] Based on modelled offer capacity, accounting only for the discharging capability.

Market Performance: Overview of the Year

Annual USEP and Ancillary Service Prices 2021–2025



USEP and ancillary service prices decrease across the board

The annual average Uniform Singapore Energy Price (USEP) fell sharply by 28.6 percent to $116.57 per megawatt-hour (MWh) in 2025, down from $163.18/MWh in 2024. This marked the third consecutive year of decline since USEP peaked in 2022 at $291.81/MWh. The YOY decline in USEP was attributed primarily to the improved supply cushion and higher volumes of lower-priced energy offers. The annual USEP was 38.6 percent below the annual base vesting price (BVP) of $191.60/MWh.

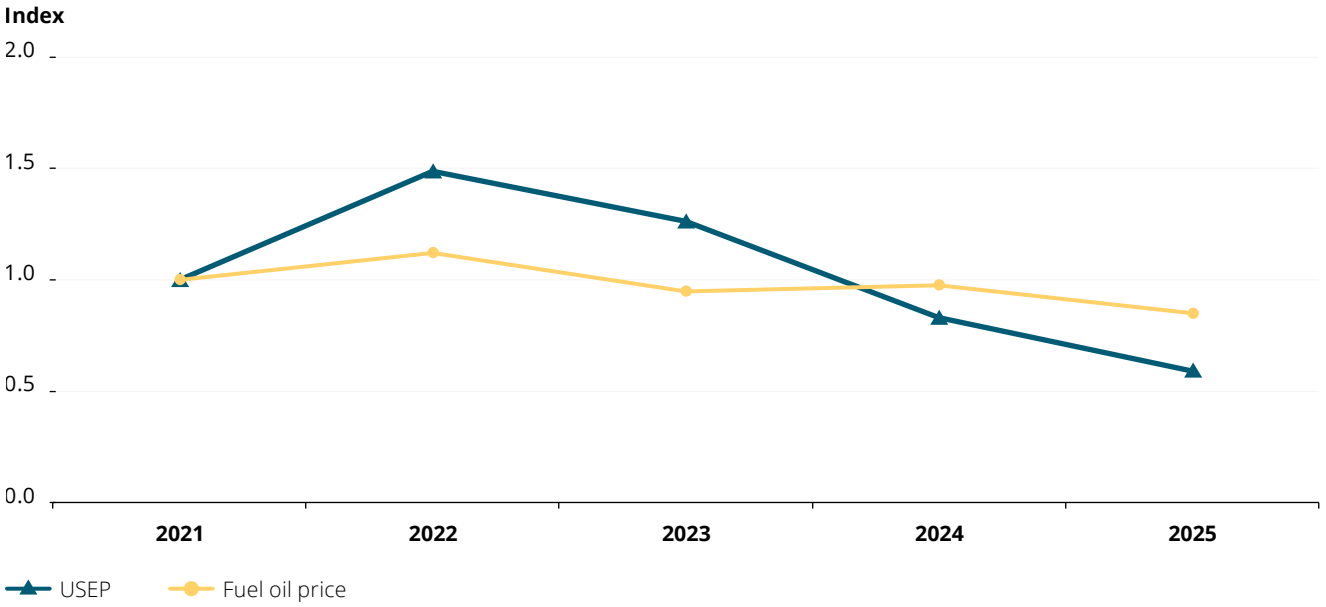
Prices for both primary and contingency reserves edged down. The primary reserve price declined marginally by $0.01/MWh, settling at $2.85/MWh. Despite an increase in the primary reserve requirement and a reduction in total primary reserve offers, the minimal YOY movement was due to lower monthly price volatility, with narrower month-to-month fluctuations when compared to 2024.

The contingency reserve price registered a sharp drop of 40.9 percent, falling from $19.70/MWh to $11.65/MWh. The reduction was mainly driven by a net increase in contingency reserve offers and a higher volume of offers submitted in the cheaper tranches. This decline was further supported by fewer periods of contingency reserve shortfall during the year.

Similarly, the regulation price declined 34.0 percent, from $25.72/MWh in 2024 to $16.98/MWh in 2025, underpinned by more offers in cheaper tranches and fewer periods of regulation shortfall. In addition, the regulation requirement was revised downwards from 113MW to 108MW in February 2025, further easing price pressures in the regulation market.

Market Performance: Overview of the Year

Annual USEP and Fuel Oil Price Movements 2021–2025



USEP tracks lower fuel oil prices

In 2025, the USEP index[6] declined further to 0.59 while the fuel oil price index[7] fell to 0.88, with both indices moving in the same downward direction. This alignment underscored the strong correlation between wholesale electricity prices and fuel oil costs, given the significant role of fuel oil in setting marginal generation costs in Singapore's electricity market.

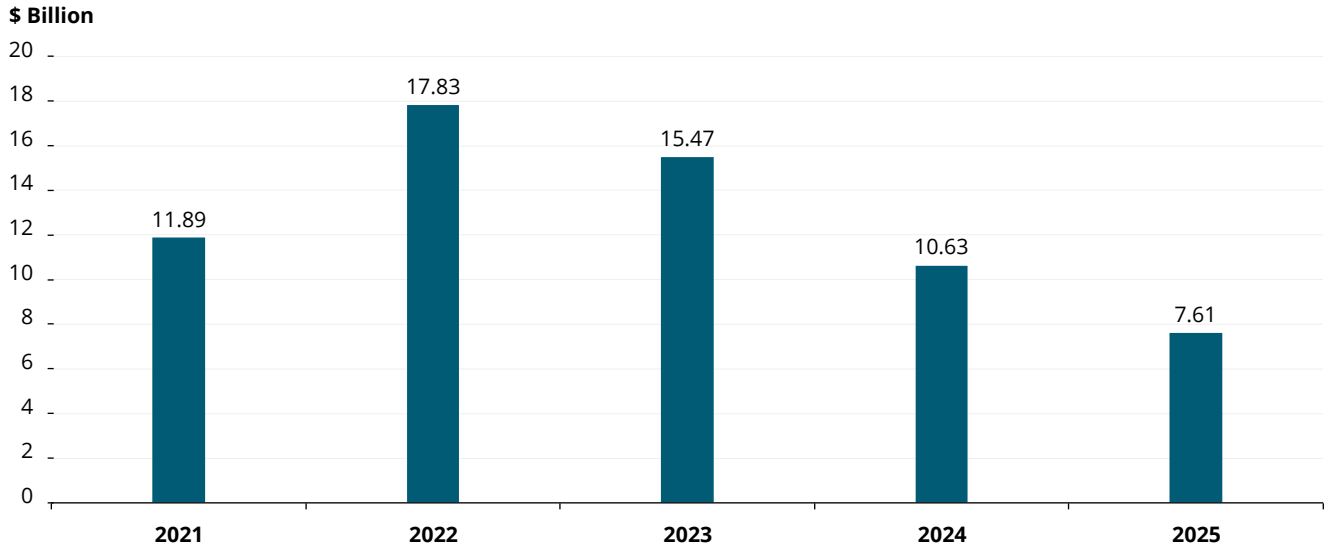
Over the past five years, the USEP index peaked in 2022, mirroring the surge in global fuel prices during that period. While both indices trended downwards after 2022, the fuel oil price index saw a temporary uptick in 2024 before resuming its decline in 2025. This divergence highlights that, while fuel oil prices remain a key driver of USEP movements, other factors such as the level of the supply cushion, the volume of contracted electricity and changes in energy offer prices also exert significant influence on wholesale electricity prices, occasionally causing USEP to deviate from movements in fuel oil prices.

[6] *The USEP index is computed using 2021 as the index base. Therefore, the USEP index in 2021 is 1, while the USEP index in 2025 is 0.59 (computed using the 2025 USEP of $116.57/MWh divided by the 2021 USEP of $196.33/MWh).*

[7] *The fuel oil price index is used here as a proxy for fuel oil price.*

Market Performance: Overview of the Year

Annual Value of Products Traded 2021–2025



Annual value of products traded declines further to a five-year low

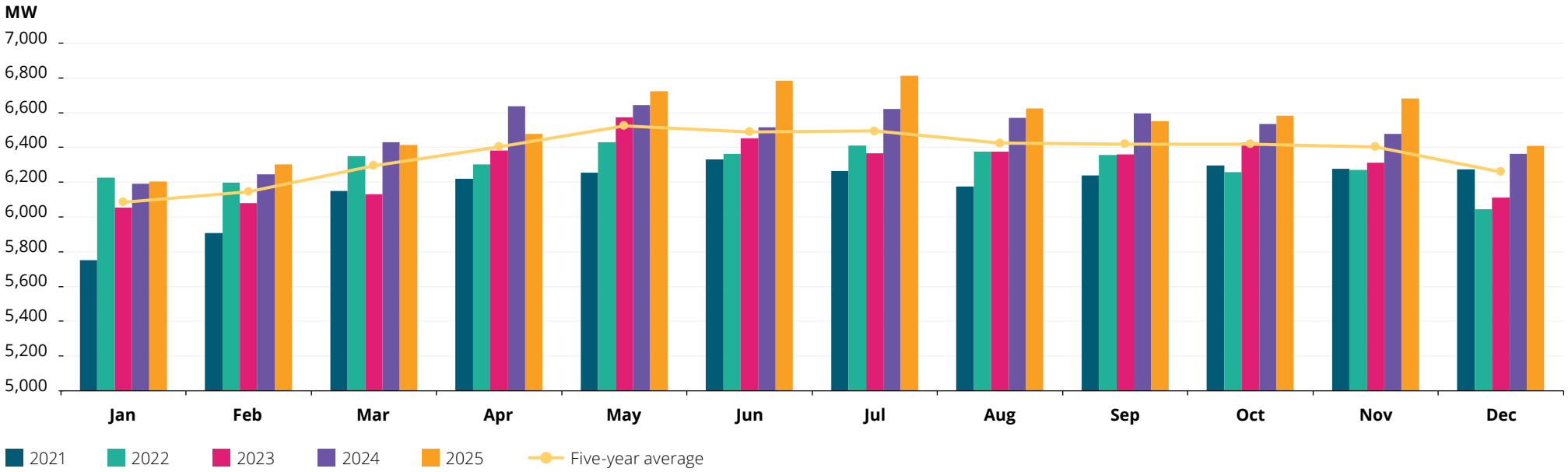
The value of products traded represents the total transacted value of all products traded in the NEMS, across the energy, reserves, and regulation markets. Energy Market Company (EMC) uses metered demand and generation data from the MSSL, as well as market prices in the NEMS, to settle market transactions daily.

In 2025, the annual value of products traded fell sharply by 28.4 percent to $7.61 billion, down from $10.63 billion in 2024, marking the lowest level in five years. This also marked the third consecutive year of decline since the peak of $17.83 billion in 2022, driven primarily by lower prices across both the energy and ancillary service markets.

The energy market accounted for 99.0 percent of the total traded value, while the reserve and regulation markets contributed 0.7 percent and 0.3 percent respectively.

Market Performance: Energy Demand

Monthly Forecasted Demand 2021–2025



Forecasted demand sustains growth momentum in most months

Forecasted demand refers to the projected electricity consumption in Singapore. The forecast is provided in real time by the Power System Operator (PSO) and is a key component in determining the USEP.

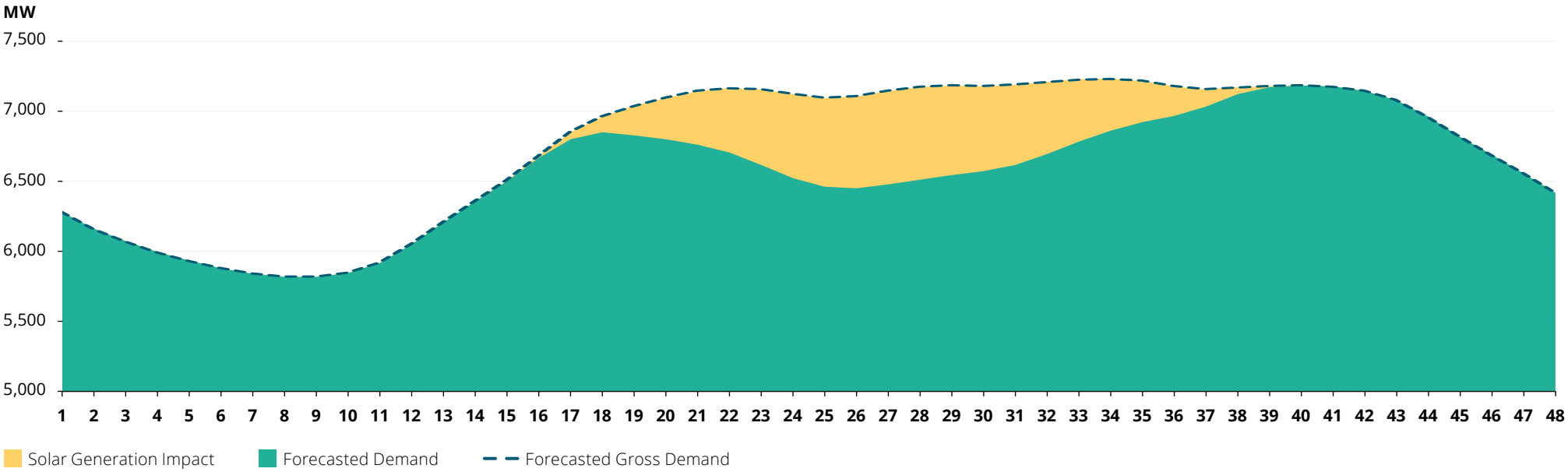
In 2025, annual forecasted demand rose by 1.0 percent to 6,549MW, extending its upward trajectory. Monthly forecasted demand reached new highs in most months except January, March, April and September. Compared to 2024, forecasted demand was stronger in nearly all months except March, April and September.

Monthly average demand peaked in July, marking a shift from the historical peak in May, which had persisted from 2022 to 2024. June posted the steepest YOY growth of 4.1 percent to 6,783MW, driven by warmer weather conditions. June's average temperature of 29.4 degrees Celsius was the highest recorded in 2025, reinforcing the link between weather and electricity demand.

Consistent with the previous year, January remained the month with the lowest monthly average demand, registering a modest 0.2 percent YOY increase to 6,204MW. Correspondingly, January's average temperature of 27.3 degrees Celsius was the lowest in 2025.

Market Performance: Energy Demand

Impact of Solar Generation on Forecasted Gross Demand 2025



Solar generation offsets slightly more than 10 percent of demand during daylight hours

Forecasted gross demand[8] represents baseline electricity demand, which includes the portion supplied by solar generation[9], while forecasted demand reflects net demand after the impact of solar generation is factored in. The solar generation impact indicates the extent to which solar generation offsets underlying demand during daylight hours.

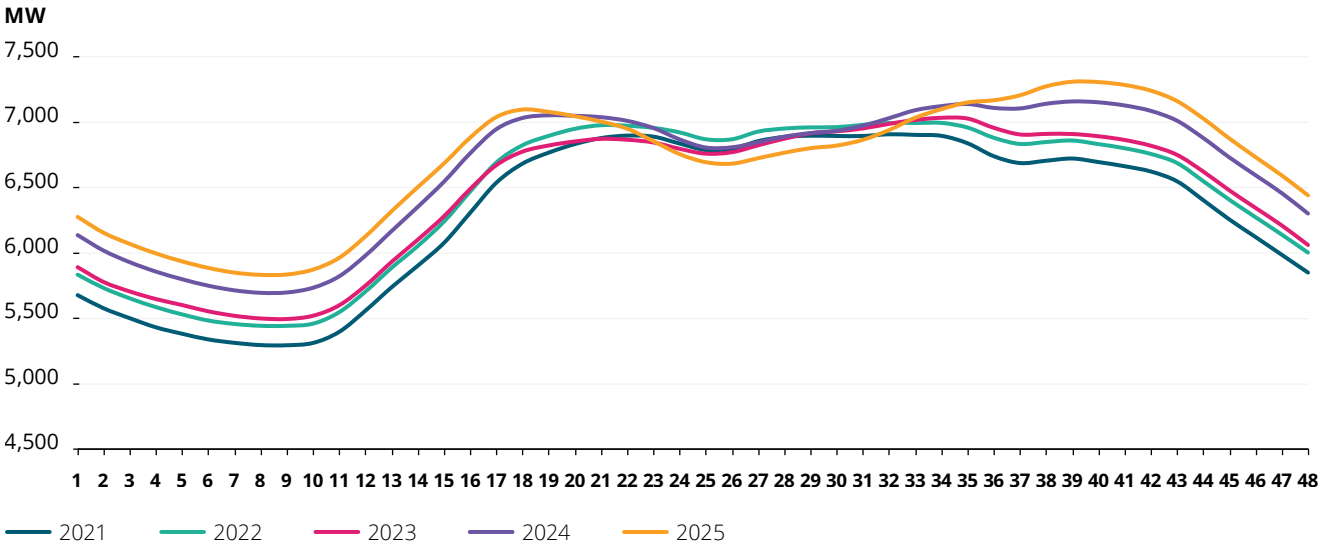
In 2025, annual forecasted gross demand averaged 6,739MW, which was 2.9 percent higher than the annual forecasted demand. On average, solar generation impact ranged between 6MW and 666MW during daylight hours (between Periods 15 and 38). This means that solar generation covered between 0.1 percent to 10.3 percent of forecasted gross demand during these periods, reducing the net load on conventional generation resources.

[8] *Forecasted gross demand is the average of forecasted demand and forecasted solar of all periods, to yield an estimate of the gross electricity demand without accounting for solar generation.*

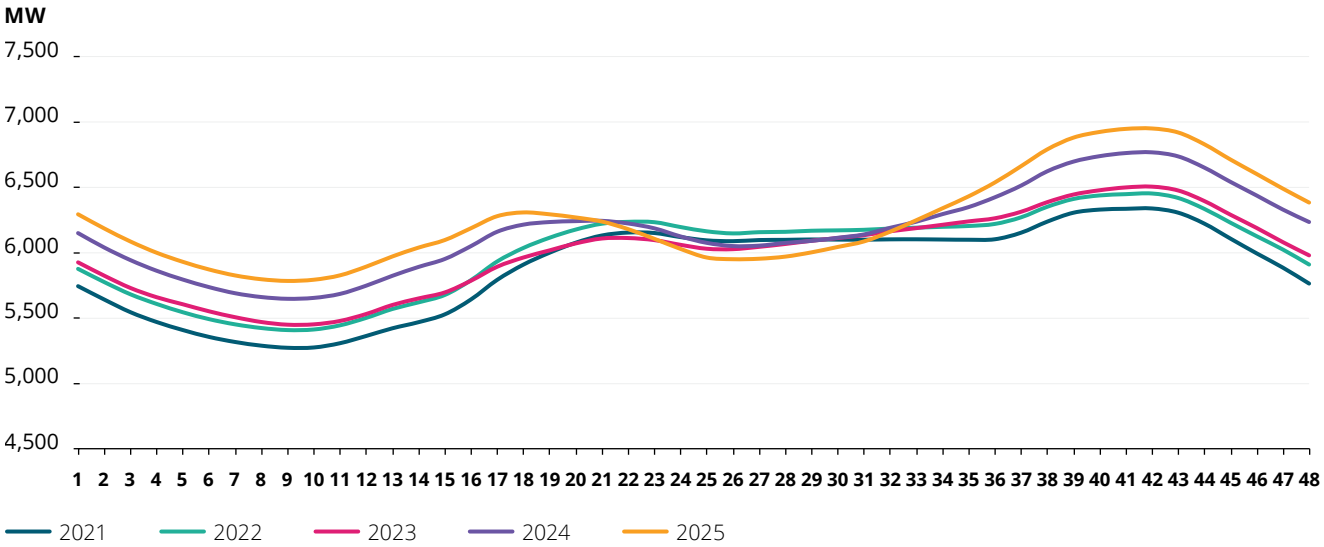
[9] *Solar generation forecast is provided in real-time by the PSO and has been incorporated into the Market Clearing Engine since 21 February 2024.*

Market Performance: Energy Demand

Weekday Forecasted Demand Profile 2021–2025



Weekend/Public Holiday Forecasted Demand Profile 2021–2025



Influence of solar generation on forecasted demand mirrors last year's trend

In 2025, the growing share of solar generation in the energy mix continued to shape the periodic forecasted demand profile throughout the day. Similar to the pattern observed in the previous year, dips in periodic forecasted demand were more pronounced during Periods 26 to 29, coinciding with peak solar generation periods.

On weekdays, half-hourly forecasted demand previously peaked in Period 32, averaging 6,908MW in 2021. With the rise in solar generation over recent years, the weekday peak half-hourly forecasted demand has shifted later to Period 39, averaging 7,304MW in 2025, underscoring higher demand after solar irradiance periods (Periods 15 to 38).

In contrast, the weekend/public holiday half-hourly forecasted demand peaked in Period 41 at an average of 6,337MW in 2021 and in Period 42 at an average of 6,944MW in 2025. As these peaks fall outside the daylight hours, they were not influenced by solar generation. The slight shift in the peak to a later period indicates that demand remained elevated further into the evening on weekends and public holidays. Nevertheless, the dip in forecasted demand between Periods 26 and 29 at midday and the sharp increase from Period 39 onwards after solar irradiance periods remained evident in 2025.

Similarly, when examining Periods 15 to 25, during which the morning peak had historically occurred, a shift was observed. On weekdays, the morning peak previously materialised in Period 22, averaging 6,898MW in 2021, but shifted earlier to Period 18, averaging 7,090MW in 2025. Likewise, the weekend/public holiday morning peak also advanced from Period 22 at an average of 6,153MW in 2021 to Period 18 at an average of 6,303MW in 2025.

Market Performance: Energy Supply

Generation and Load Facilities Registered, De-registered and Revised in 2025

New Facilities Registered

Market Participant	Generation Type	Total Registered Capacity (MW)
9 Solar Fintech	4 IGS units	0.550
Blue Whale Energy	1 LRF unit	0.300 (Load Curtailment), 0.300 (Contingency Reserve)
Crystal Clear Environmental	1 IGS unit	0.440
	2 LRF units	5.000 (Load Curtailment), 0.700 (Contingency Reserve)
Diamond Electric	1 LRF unit	37.500 (Load Curtailment), 5.000 (Contingency Reserve)
Keppel EaaS	1 IGS unit	4.670
	1 NEIGF unit	1.270
Keppel Sakra Cogen	1 CCGT unit	600.000
Linde Gas Singapore	1 ST unit	23.900
Meranti Power	2 GT units	682.000
MyElectricity	1 IGS unit	0.450
PacificLight Power	1 GT unit	100.000
Public Utilities Board	1 Others	5.900
Sembcorp Solar Singapore	7 IGS units	100.190
Singapore District Cooling	1 ESS unit	9.600
	2 IGS units	1.080
Sungreen Energy	1 IGS unit	1.690
Sunseap Commercial Assets	1 NEIGF unit	2.910
Sunseap Leasing	1 IGS unit	3.600
Yang Solar	1 IGS unit	2.100

Facilities De-registered

Market Participant	Generation Type	Total Registered Capacity (MW)
Diamond Electric	2 LRF units	4.000 (Load Curtailment), 4.700 (Contingency Reserve)
PSA Corporation	1 ESS unit	2.200

Facilities Transferred

Transferor	Transferee	Generation Type	Total Registered Capacity (MW)
Shell Singapore	**Aster Chemicals and Energy**	2 CCGT units	127.800
Sunseap Leasing	**Sunseap Commercial Assets**	1 IGS unit	0.108

Capacity Revisions

Market Participant	Generation Type	Total Revised Capacity (MW)
Diamond Electric	1 LRF unit	15.200 (Load Curtailment)
Crystal Clear Environmental	2 LRF units	0.200 (Load Curtailment), 0.200 (Contingency Reserve)
Engie South East Asia	1 IGS unit	3.926
ExxonMobil Asia Pacific	1 CCGT unit	6.000
Keppel Merlimau Cogen	1 CCGT unit	10.000
Singapore District Cooling	2 LRF units	5.000 (Load Curtailment)
Solarland Alpha Assets	1 IGS unit	11.800
SP Services	2 IGS units	354.180

32 new facilities registered in 2025

At the end of 2025, total registered capacity[10,11] of generation facilities in the NEMS stood at 14,264MW. Of this, 75.4 percent (10,754MW) belonged to the CCGT/cogen/trigen category. As at 31 December 2025, there were 144 generation facilities[12], 17 load facilities, three import facilities and four ESS facilities registered in the NEMS.

During the year, 17 MPs added 32 new facilities to the market, including one CCGT/cogen/trigen facility, one ST facility, three GT facilities, 19 IGS facilities, one ESS facility, four load facilities, one biogas power generation facility and two NEIGFs. In addition, two CCGT/cogen/trigen facilities, four IGS facilities and five load facilities revised their registered capacity during the year. Further to that, ownership transfers were completed for three facilities, comprising two CCGT facilities and one IGS facility.

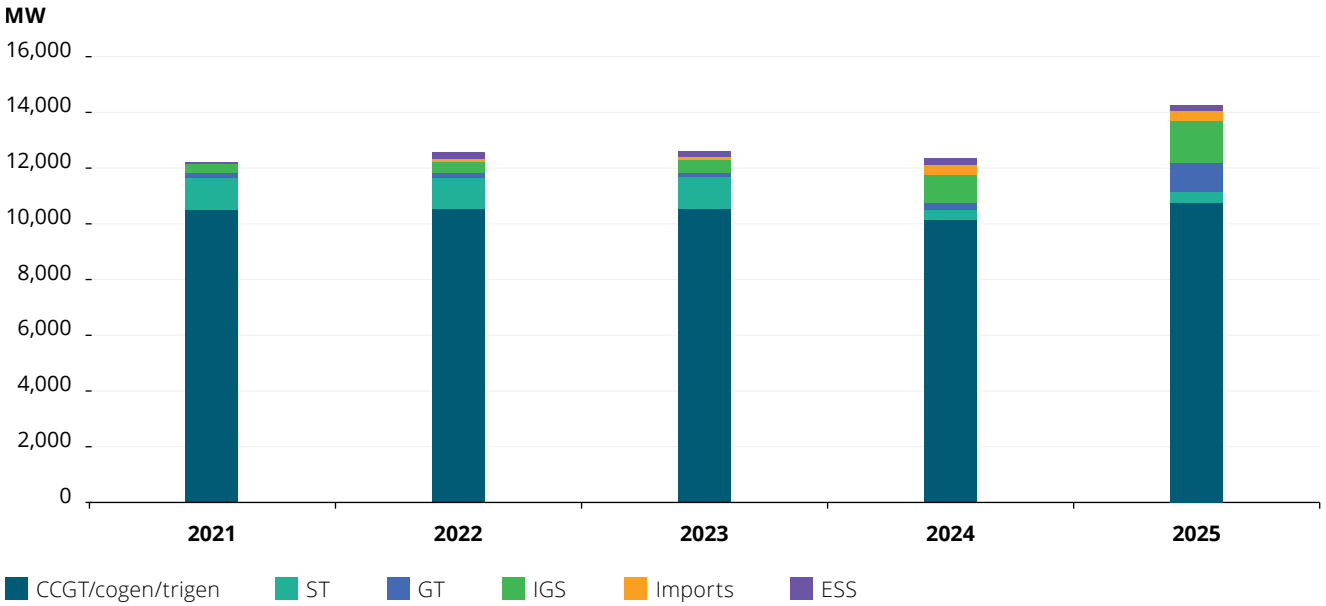
A total of five facilities were de-registered in 2025, including two CCGT/cogen/trigen facilities, one ESS facility and two load facilities.

CCGT/cogen/trigen = Combined-cycle gas turbine/cogeneration/trigeneration (combined category) | ESS = Energy Storage Systems | GT = Gas turbine | IGS = Intermittent generation sources | IRF = Import registered facilities | LRF = Load registered facilities | NEIGF = Non-exporting embedded intermittent generation facilities | ST = Steam turbine | Others = Biogas power generation unit

[10] *The capacity revisions of SP Services' facilities effective on 7 Jan 2026 were included to better reflect the actual capacities as at 2025.*
[11] *Registered capacity included Energy Storage Systems, Imports and NEIGFs.*
[12] *Includes 11 NEIGFs.*

Market Performance: Energy Supply

Generation Capacity 2021–2025



Registered capacities rebound strongly in 2025

Total registered capacity[13] of generation facilities rose by 15.6 percent, from 12,343MW in 2024 to 14,264MW in 2025. The strong recovery was driven by new registrations across all generation plant types except Imports. Registered capacity of CCGT/cogen/trigen grew by 6.1 percent to 10,754MW, while GT capacity rebounded sharply by 300.8 percent to 1,042MW. Notably, these two plant types together contributed an additional 1,398MW to total registered capacity in 2025. On the other hand, the registered capacity of ST increased by 6.7 percent to 383MW. IGS, including NEIGFs, expanded by 47.5 percent to 1,517MW, and ESS increased by 2.4 percent to 212MW, while Imports remained unchanged at 250MW[14].

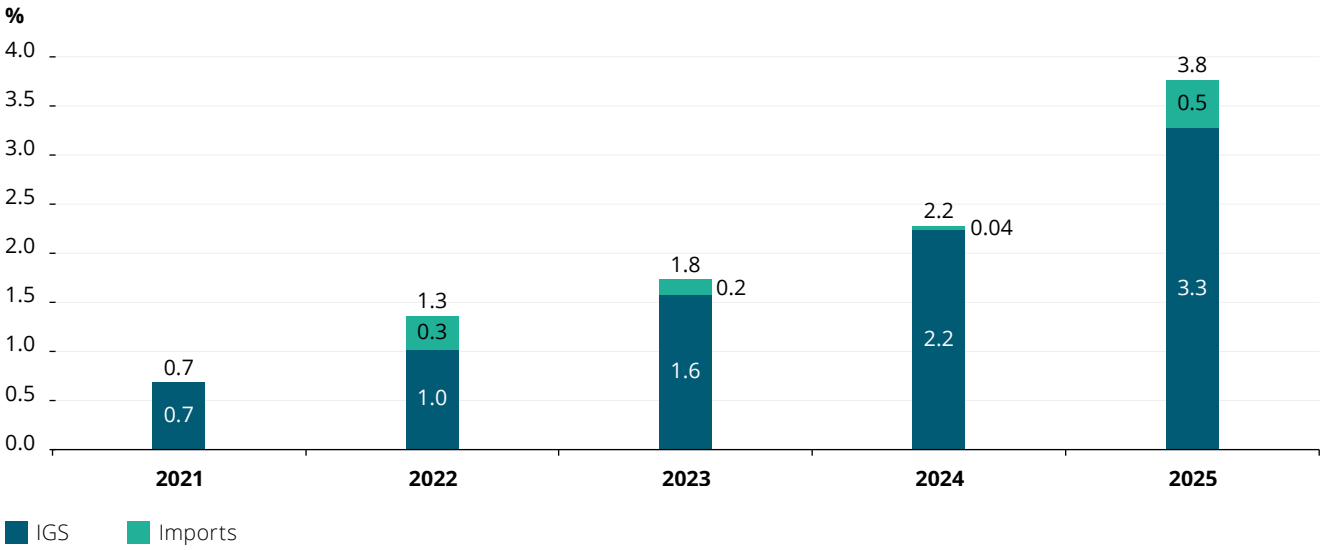
Despite a decline of 6.7 percentage points in share, CCGT/cogen/trigen facilities continued to dominate, accounting for 75.4 percent of total registered capacity in 2025. The shares of ST, Imports and ESS declined marginally. ST's share fell by 0.2 percentage points to 2.7 percent of total registered capacity, as the contribution from other sources increased. Similarly, the shares of Imports and ESS declined by 0.3 and 0.2 percentage points to 2.5 percent and 1.5 percent, respectively. The share of IGS, including NEIGFs, grew by 2.3 percentage points to 10.6 percent.

Similarly, total licensed capacity[15] in the NEMS (which captures facilities with a generation capacity larger than or equal to 10MW) rose by 2,075MW, from 12,641MW to 14,717MW[16] in 2025. The increase was primarily attributed to expanded GT capacity from Meranti Power and PacificLight Power, as well as additional CCGT/cogen/trigen capacity from the Keppel Sakra Cogen facility.

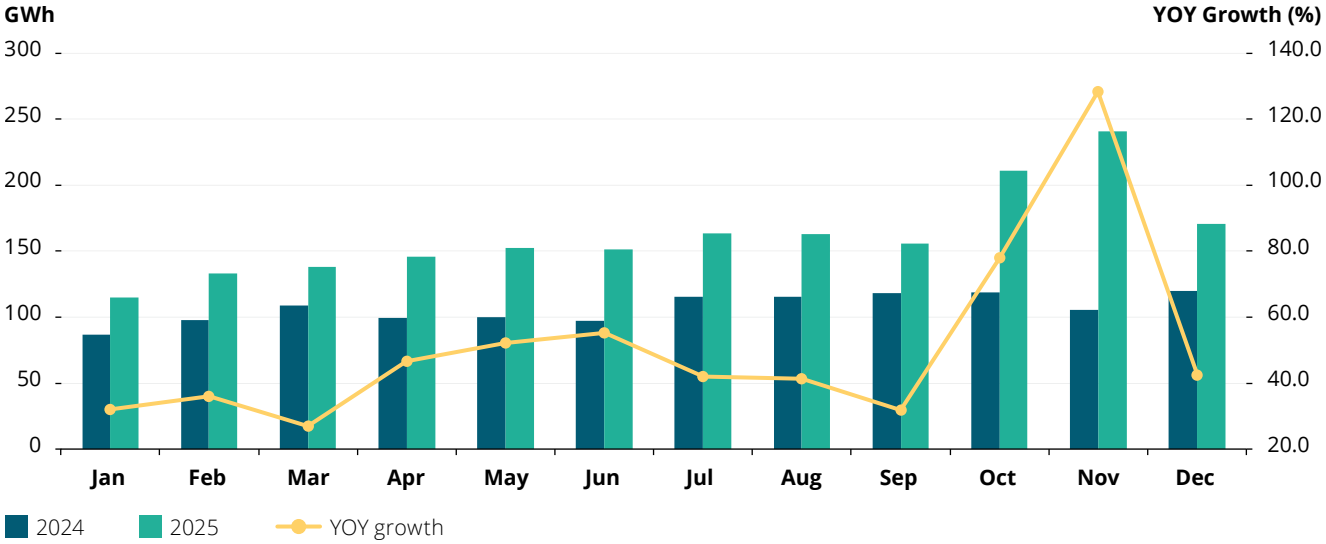
[13] *Registered capacity included Energy Storage Systems, Imports and NEIGFs.*
[14] *Import capacities of Keppel Electric IRFs are capped at 200MW.*
[15] *Since 2020, the total registered capacity has been greater than the total licensed capacity. This was primarily due to increasing capacities of intermittent generation sources, which were mostly excluded from the total licensed capacity.*
[16] *Licensed capacity included generation facilities ≥10MW and imports.*

Market Performance: Energy Supply

Renewable Generation Market Share 2021–2025 (Based on Metered Generation)



Monthly IGS Generation 2024 Versus 2025



Renewable market share gains momentum year after year

The combined market share of renewable generation[17] continued its upward trajectory in 2025, increasing by 1.6 percentage points to 3.8 percent, driven by growth in both IGS and Imports.

IGS remained the dominant contributor, expanding by 1.1 percentage points to 3.3 percent, reflecting ongoing additions of solar capacity and strong performance of existing installations. The steady YOY increase in IGS market share also underscores Singapore's commitment to scaling renewable energy within the energy mix.

Meanwhile, Imports improved by 0.5 percentage points, supported by sustained cross-border trading activities. This growth highlights the role of regional energy cooperation in diversifying Singapore's energy sources.

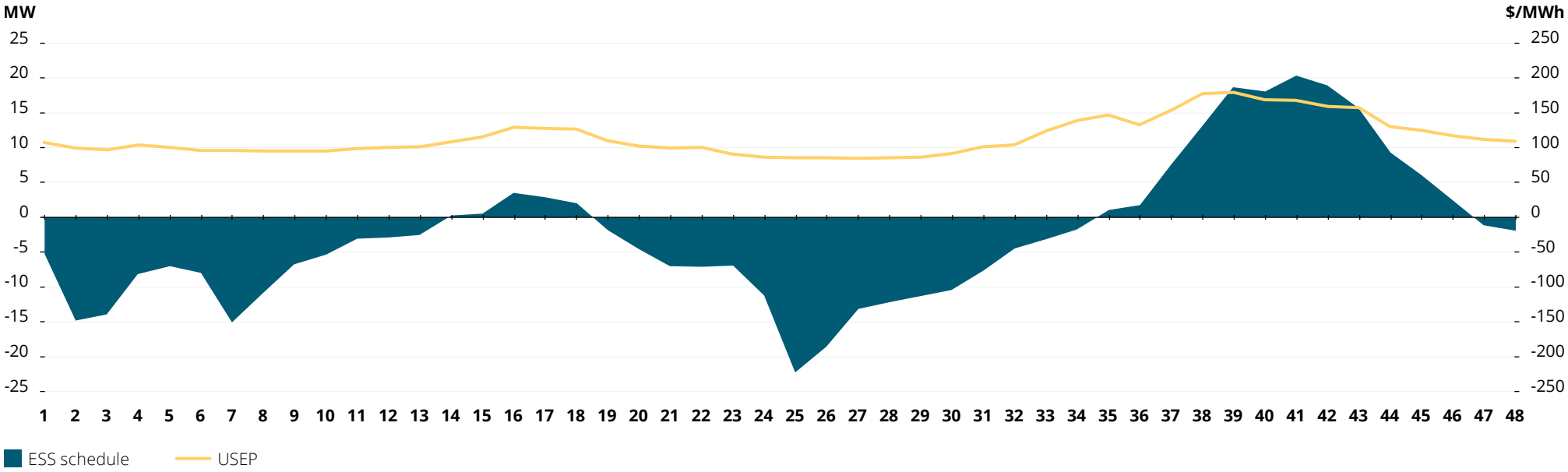
Expanding registered capacity fuels rapid growth in IGS generation

IGS generation continued its strong upward trend in 2025. Monthly average IGS generation rose by 51.2 percent to 162GWh, supported by sustained growth in IGS registered capacity, which increased by 47.5 percent to 1,517MW. On a monthly basis, IGS generation consistently registered YOY growth, with the sharpest increase occurring in November, when monthly generation peaked at 241GWh, up by 128.2 percent compared to 2024.

[17] *Includes renewable sources from IGS and imports from low-carbon sources.*

Market Performance: Energy Supply

Energy Storage Systems (ESS) Charge and Discharge Profile 2025



ESS demonstrates fast-response capability in supporting supply adequacy and system reliability

From September 2025, ESS was modelled with its full-spectrum capability in the Market Clearing Engine (MCE), enabling a more accurate reflection of the unique characteristics and operational dynamics of ESS.

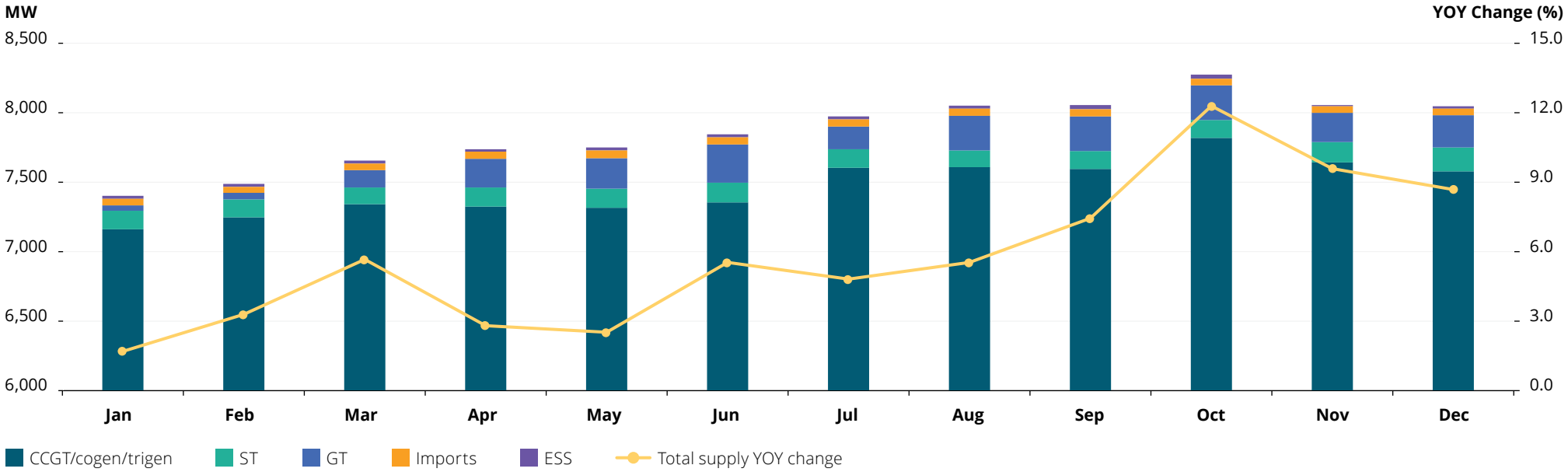
Under the enhanced MCE modelling, ESS exhibited a clear price-responsive arbitrage strategy. ESS's charging activity was concentrated in the earlier part of the day, spanning Period 1 through Period 34, with brief discharging observed between Periods 14 and 18. Charging peaked in Period 25 at 22MW, aligning with periods of lower underlying demand, when lower USEP made it favourable for ESS to charge at lower cost.

From Period 35 onwards, ESS transitioned into discharging, peaking in Period 41 at 20MW. The discharge phase occurred during evening peak price periods, enabling ESS to inject into the grid when prices were elevated. The discharge sustained across several periods before tapering off toward the end of the day.

This behaviour underscored ESS's unique characteristics in price arbitrage and system flexibility. By charging when prices were lower and discharging when prices were higher, ESS not only maximised arbitrage opportunities but also contributed to grid stability by smoothing demand-supply imbalances. The sharp contrast between charging and discharging also highlighted the responsiveness of ESS to real-time market signals and its growing importance in managing volatility and supporting system reliability as the power system evolves amid the energy transition.

Market Performance: Energy Supply

Monthly Supply by Facility Generation Type 2025



Total supply posts YOY gains in all months

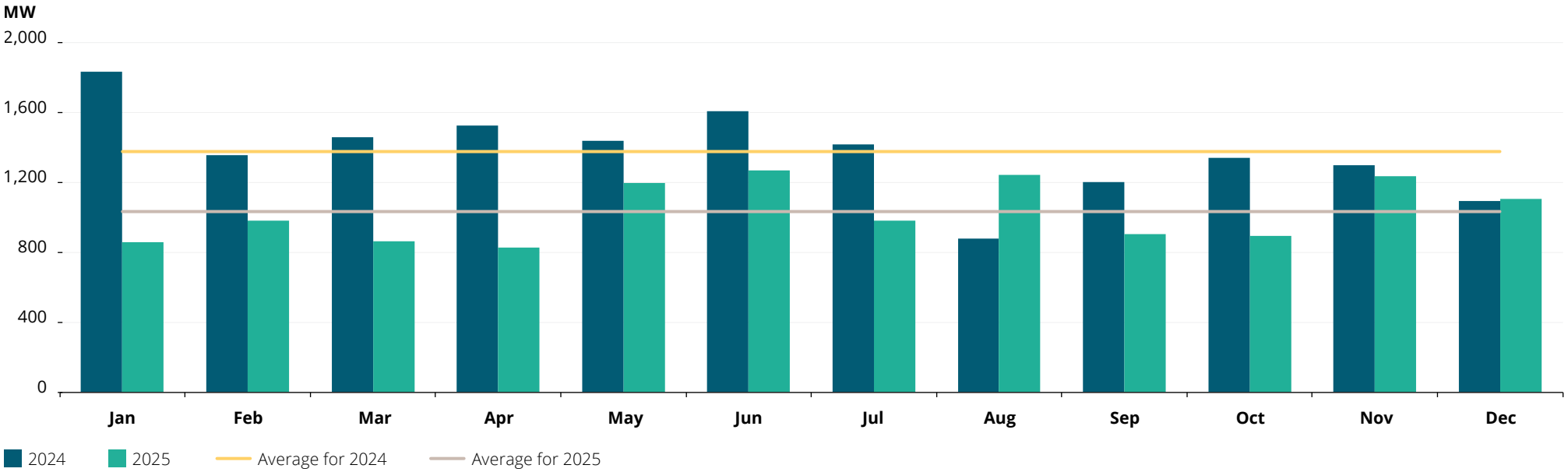
Total supply expanded by 5.8 percent in 2025, supported by reduced maintenance levels YOY. Compared to 2024, total supply growth was sustained across all months, with gains ranging between 1.7 percent and 12.3 percent.

The supply mix remained dominated by the most efficient generation type, CCGT/cogen/trigen, contributing 95.0 percent of total supply in 2025. This share, however, represented a 2.1 percentage point decline from 2024. ST supply edged down by 0.1 percentage points to 1.7 percent, while GT supply increased by 1.5 percentage points to 2.4 percent. The proportion of ESS supply rose marginally by 0.1 percentage points to 0.3 percent and Imports increased by 0.6 percentage points.

Supply levels strengthened throughout the year, consistently surpassing the 7,500MW mark in most months except January and February. The highest monthly supply was recorded in October at 8,277MW, coinciding with the highest YOY growth, while January saw the lowest supply at 7,405MW. The elevated monthly supply observed in October was largely driven by the increase in CCGT/cogen/trigen offers, aligning with the month that recorded the lowest level of CCGT/cogen/trigen maintenance.

Market Performance: Energy Supply

Monthly Generation Maintenance 2024 Versus 2025



Lower generation maintenance activities in 2025

Annual average generation maintenance levels[18] declined markedly in 2025, falling by 24.9 percent to 1,034MW. The monthly generation maintenance levels were lower YOY in all months except August and December. The highest monthly average generation maintenance level was 1,285MW in June, while the lowest was 828MW in April.

The standard deviation of monthly generation maintenance declined from 251MW in 2024 to 164MW in 2025, indicating a narrower range of monthly generation maintenance levels. This reflected more effective coordination of outages under the annual overhaul program of generating units, supporting a more even distribution of maintenance activities across the year while preserving system reliability.

Correspondingly, the ratio of generation maintenance to registered capacity decreased from 11.2 percent in 2024 to 7.2 percent in 2025.

[18] *Generation maintenance refers to the overhaul and retrofitting of generation facilities. Generation maintenance levels are calculated based on the Annual Generator Outage Programme (AGOP) provided by the PSO.*

Market Performance: Energy Supply

Monthly Supply Cushion and Available Generation Capacity in excess of Offer Capacity 2025

Higher available generation capacity in excess of offer capacity throughout the year

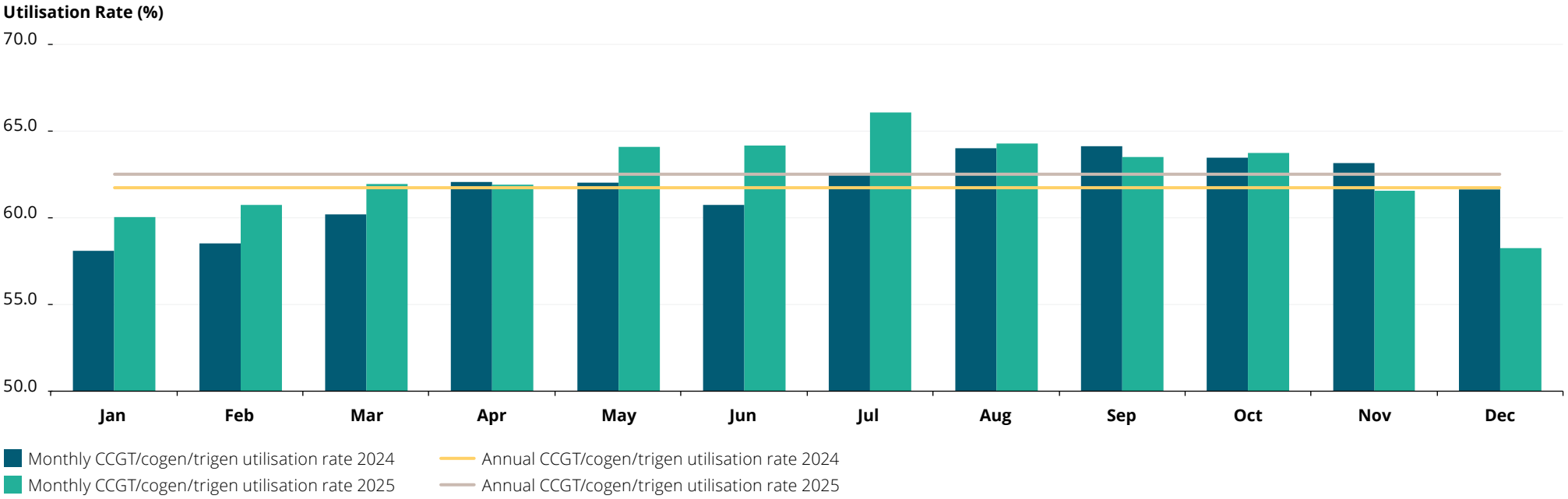
Available generation capacity in excess of offer capacity, referring to generation capacity not on maintenance and not offered to the market, remained elevated throughout 2025. The largest surpluses were observed in the first quarter, before softening slightly yet remaining strong in subsequent quarters. Movements in available CCGT/cogen/trigen capacity in excess of offer capacity largely mirrored available generation capacity trends.

Available generation capacity in excess of offer capacity peaked at 3,522MW in December, while available CCGT/cogen/trigen capacity in excess of offer capacity peaked at 2,158MW in January.

On a YOY comparison, available generation capacity in excess of offer capacity increased in all months, with gains ranging between 7.2 and 47.4 percent. In contrast, available CCGT/cogen/trigen capacity in excess of offer capacity was lower YOY in all months except April, November and December. The reduced availability was consistent with increased CCGT/cogen/trigen supply offered to the market, which contributed to the overall rise in generation supply in 2025. Against the backdrop of higher overall availability and stronger CCGT/cogen/trigen supply, the supply cushion was elevated throughout 2025, rising in all months between 1.1 and 9.1 percentage points.

Market Performance: Energy Supply

Monthly CCGT/cogen/trigen Utilisation Rate 2025



Steady improvement in CCGT/cogen/trigen utilisation rates

Utilisation rate is defined as the ratio of scheduled energy to registered capacity.

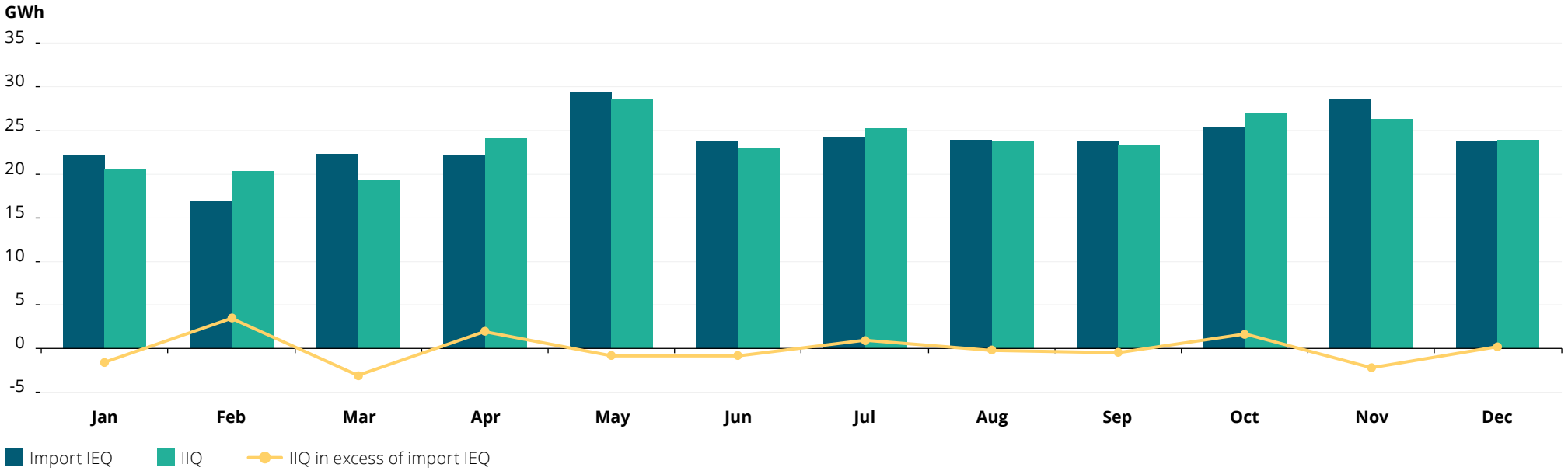
In 2025, the annual CCGT/cogen/trigen utilisation rate rose by 0.8 percentage points to 62.5 percent. On a monthly basis, the utilisation rate ranged between 58.2 percent and 66.1 percent. Compared to 2024, utilisation was higher in all months except April, September, November and December. The largest increase of 3.5 percentage points was recorded in July.

On another note, the annual ST utilisation rate climbed 4.4 percentage points to 37.7 percent, with monthly values ranging between 32.7 percent and 47.8 percent. However, compared to 2024, ST utilisation showed mixed movements, where the utilisation rates were lower in six out of the 12 months, with gains ranging between 0.4 percentage points and 27.6 percentage points and declines ranging between 0.4 percentage points and 3.6 percentage points.

Similarly, the annual GT utilisation rate increased by 3.4 percentage points to 4.0 percent in 2025, with monthly utilisation ranging between 0.1 percent and 15.3 percent. Comparing YOY, the GT utilisation rate increased between 0.1 percentage points and 15.1 percentage points in all months except September and October.

Market Performance: Energy Supply

Monthly Import Generation and Net Imported Intertie Quantities 2025



IEQ = Injection energy quantity | IIQ = Net imported intertie quantity

Net imported intertie quantity closely tracks import generation quantity

Import generation quantity (Import IEQ) refers to flows from import facilities. Net imported intertie quantity (IIQ) refers to flows into or out of the transmission system due to intertie activity which includes power system mutual support between Singapore and Malaysia and import generation arrangements. Throughout 2025, IIQ closely tracked Import IEQ, indicating strong alignment between scheduled imports and actual intertie flows.

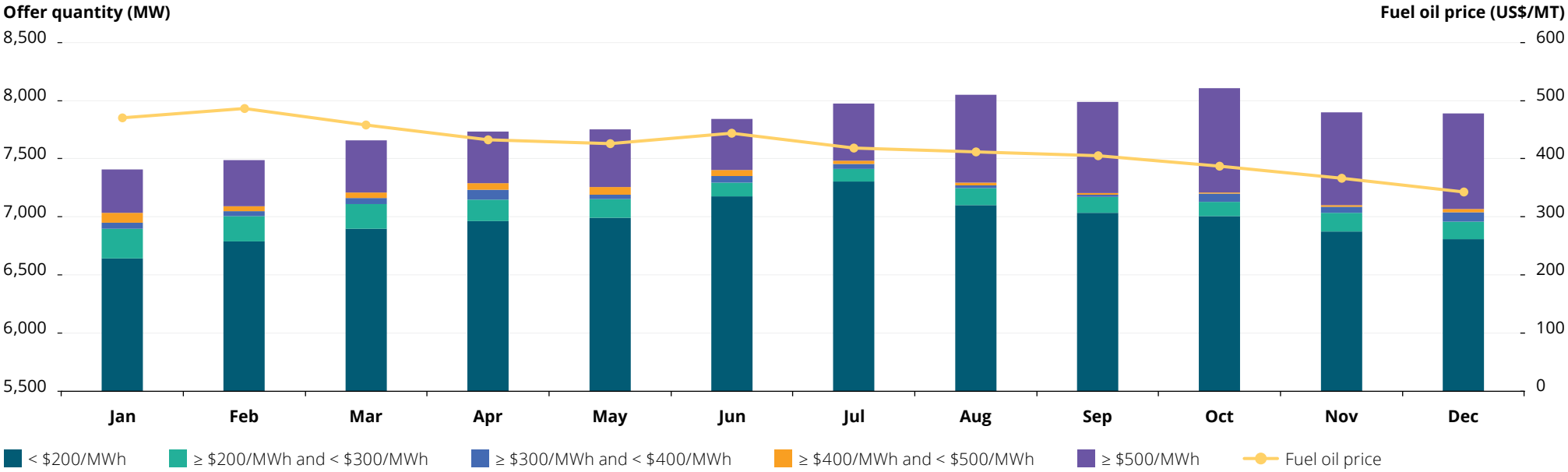
Both Import IEQ and IIQ remained positive in all months, underscoring the role of imports in maintaining system balance and supporting Singapore's supply adequacy. Monthly IIQ ranged between 19.2GWh and 28.5GWh, while Import IEQ ranged between 16.9GWh and 29.3GWh, reflecting stable import supply throughout the year.

On a monthly basis, the IIQ in excess of the Import IEQ fluctuated between -3.1GWh and 3.5GWh[19]. The maximum difference was observed in February, coinciding with the lowest Import IEQ, and the minimum in March, when IIQ was at its lowest level.

[19] *A positive value denotes net electricity imports into Singapore via the intertie, while a negative value denotes net electricity exports out of Singapore.*

Market Performance: Energy Supply

Monthly Energy Offer Price Composition and Fuel Oil Price 2025



Cheaper fuel oil prices set the stage for lower-priced energy offers

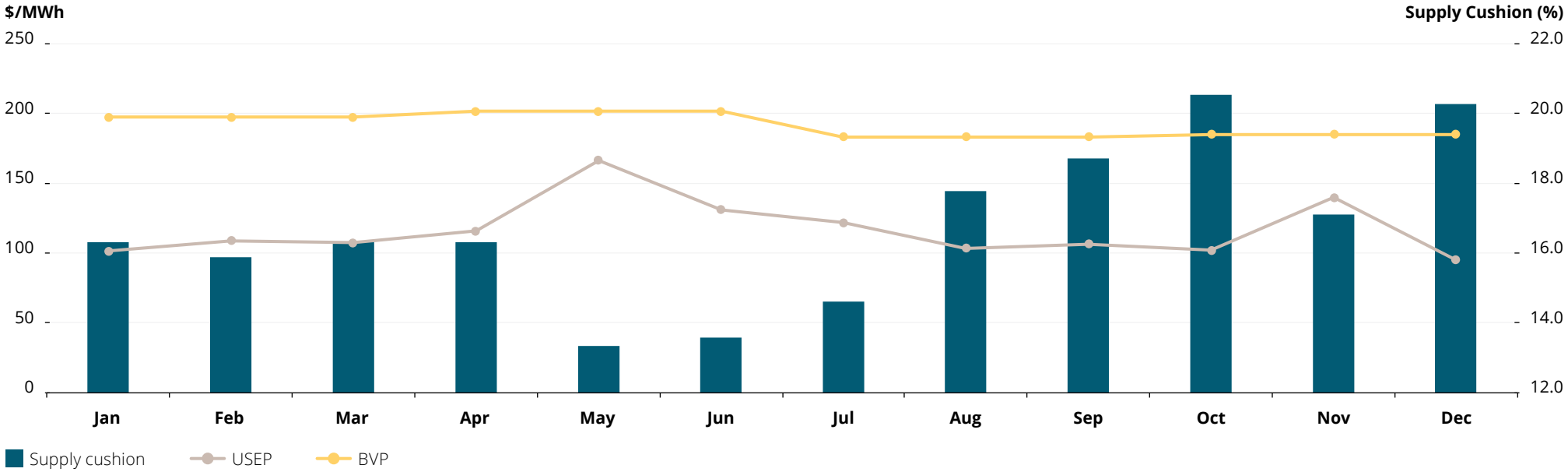
Fuel oil prices trended downward throughout 2025, averaging above US$450.00/MT in the first three months before steadily softening over the remainder of the year to below US$350.00/MT in December. The highest monthly fuel oil price of US$486.74/MT was recorded in February, while the lowest price of US$343.17/MT was recorded in December. Compared to 2024, fuel oil prices were lower in all months except January and February, underlining improved fuel oil supply conditions.

The cheaper fuel oil prices set the stage for a high proportion of lower-priced energy offers. Across all months, more than 85.0 percent of energy offers were priced below $200.00/MWh, ranging between 86.4 percent and 91.6 percent. Similarly, translating the price distribution into offer quantities showed that the offers below $200.00/MWh consistently dominated and exceeded the 6,500MW level in every month, broadly covering the average forecasted demand in 2025.

However, despite lower fuel oil prices observed between August and December, a higher proportion of energy offers was recorded in the above $500.00/MWh range. The increase may be attributed to adjustments in offer strategies under conditions of ample supply, where some generators positioned small offer quantities at higher price bands to accommodate potential tightening in system conditions.

Market Performance: Energy Prices

Monthly USEP, Base Vesting Price and Supply Cushion 2025



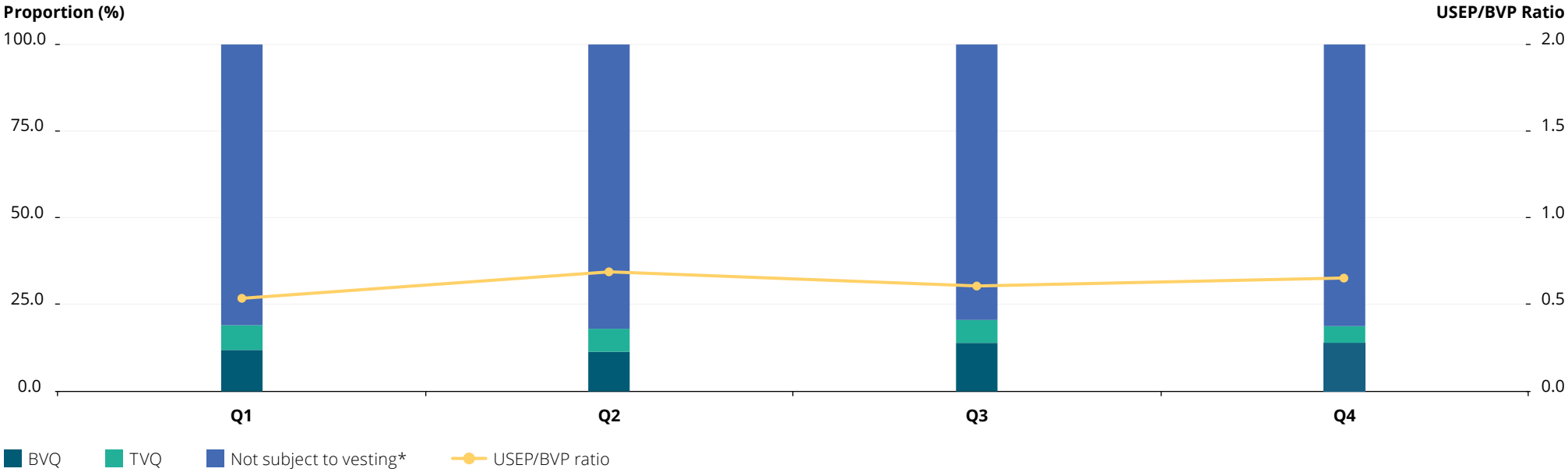
USEP positions below base vesting price (BVP) for all months

In 2025, the average USEP registered below the BVP in all months, ranging between 17.4 percent and 48.6 percent lower. The largest difference between the monthly USEP and the monthly BVP occurred in January, when the USEP was $95.74/MWh lower than the BVP. While market-clearing prices were generally below the estimated long-run costs of generation, most generation companies held contracted volumes to hedge spot price exposure.

The sustained decline in USEP was primarily driven by an increase in the supply cushion. The annual average supply cushion increased by 3.9 percentage points YOY to 16.7 percent, with the monthly values consistently higher than in 2024, ranging between 13.3 percent and 20.5 percent. This reflects improved generation availability and competitive offers, which exerted downward pressure on energy prices.

Market Performance: Energy Prices

Quarterly Vesting Quantities Proportion 2025



* *Adjustments arising from residual vesting scheme are not considered.*

Proportion of vesting quantities increases

Under the five-year Vesting Regime Framework effective from 1 July 2023, the EMA allocates the Base Vesting Quantity (BVQ) and may, from time to time, tender portions of the Non-Contestable Consumer (NCC) load, referred to as the Tender Vesting Quantity (TVQ). The primary objective of these measures is to hedge against price fluctuations, ensuring that the cost of energy procured by SP Services supplying to NCCs remains stable and aligned with regulated pricing.

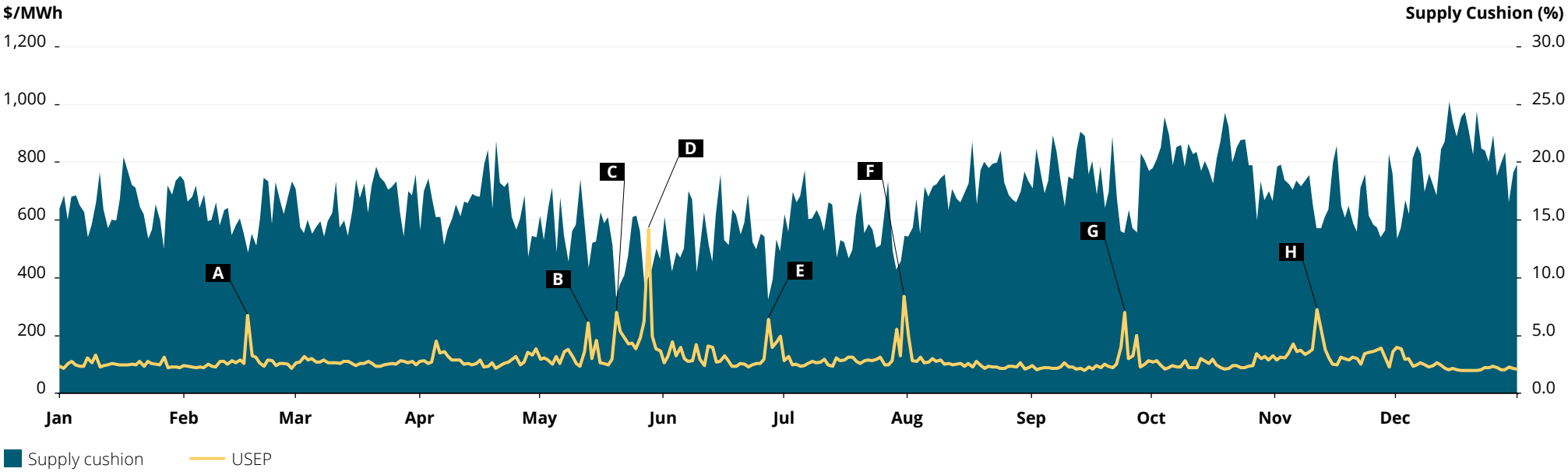
In the first two quarters of 2025, the proportion of BVQ ranged between 11.2 and 11.9 percent respectively, before rising further in the last two quarters to 13.9 and 14.0 percent respectively. In contrast, the proportion of TVQ started stronger in the first three quarters, between 6.7 percent and 7.1 percent and softened to 4.8 percent in the last quarter.

The hedge price under the current Vesting Regime Framework is determined by EMA based on the long-run marginal cost of the most efficient power generation technology that accounts for at least 25 percent of the total electricity demand in Singapore. Comparing USEP to BVP provides insights into how the energy price trends align with the benchmarked generation cost. A ratio below 1.0 suggests that spot prices are trading below the benchmark generation cost, while a ratio above 1.0 indicates the opposite.

In 2025, the ratio of USEP to BVP was below 1.0 in all quarters, ranging between 0.5 and 0.7, indicating that spot prices were consistently lower than the benchmark generation cost throughout the year.

Market Performance: Energy Prices

Daily USEP and Supply Cushion 2025



In 2025, the supply cushion widened by 3.9 percentage points YOY to 16.7 percent, primarily driven by a stronger increase in total supply relative to forecasted demand. The improved supply cushion contributed to a 28.6 percent decline in the USEP, bringing it down to $116.57/MWh for the year.

Price volatility eased significantly, with only one day where the daily USEP exceeded $500.00/MWh, compared to 13 in 2024. Nonetheless, this year's USEP volatility, though subdued, continued to be driven largely by sudden reductions in total supply, alongside the effects of solar intermittency, which persisted from last year's trend and emerged as a key driver of sudden price surges.

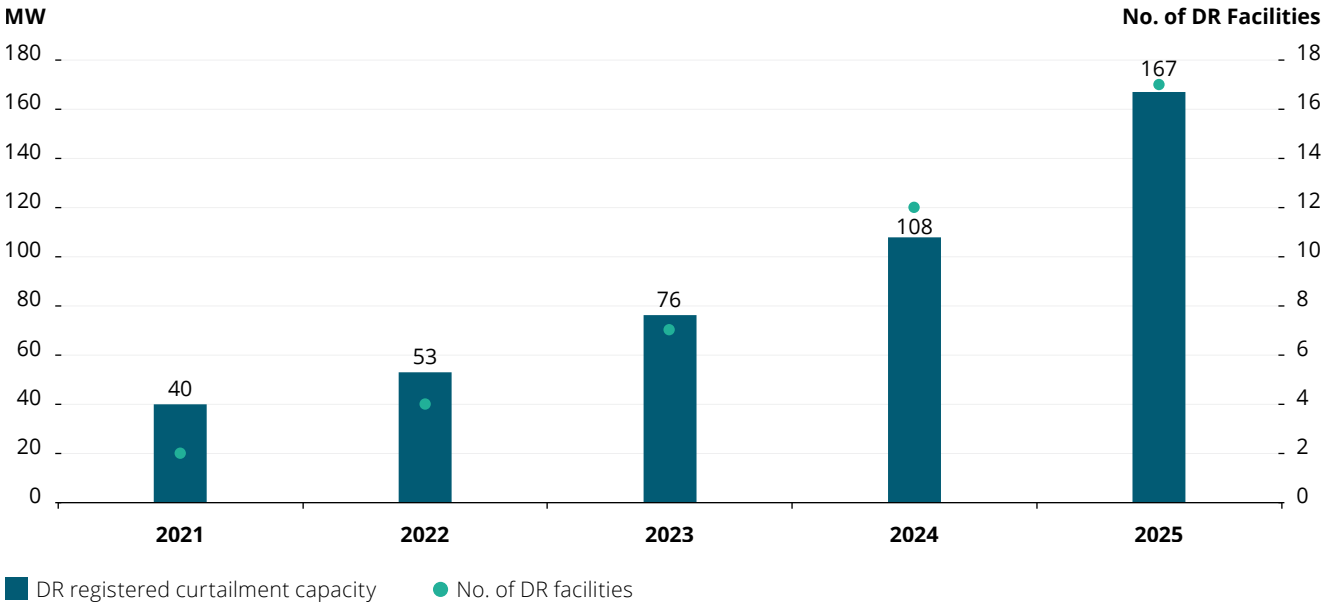
Points A, B, G and H highlight instances where solar intermittency amplified price fluctuations, resulting in sudden increases in the periodic forecasted demand and the corresponding periodic USEP spikes. In these instances, the daily USEP averaged above $230.00/MWh. The periodic maximum USEP surged above $4,000.00/MWh on 17 February 2025 (Point A) and 24 September 2025 (Point G) and exceeded $700.00/MWh on 13 May 2025 (Point B) and 11 November 2025 (Point H). Each instance coincided with a similar phenomenon observed during the day – there were periods where solar generation declined by more than 250MW compared to the preceding periods.

Points C and F highlight instances where price spikes were attributed to the declines in total supply, due to forced outages of CCGT/cogen/trigen. On these occasions, the daily USEP averaged above $250.00/MWh. The periodic maximum USEP reached $1,011.25/MWh on 20 May 2025 (Point C) and $4,473.42/MWh on 31 July 2025 (Point F). Notably, on Point C, a forced outage of one CCGT unit coupled with six CCGT units on planned maintenance led to the periodic USEP clearing above $500.00/MWh across nine different periods during the day. During these nine periods, the supply cushion ranged between 0.9 percent and 4.4 percent.

Points D and E highlight instances where price surges were attributed to an overall lower supply cushion. Of these instances, the daily USEP averaged $567.83/MWh and $256.72/MWh respectively. Specifically, 28 May 2025 (Point D) marked the first and only instance of a Temporary Price Cap (TPC) event activation in 2025. On this day, the USEP cleared above $1,000.00/MWh during Periods 38 to 43, peaking at $4,457.94/MWh in Period 40. The USEP spike was driven by the forecasted demand rising faster than the growth in total supply. Consequently, supply cushion narrowed to low levels, ranging between 3.1 percent and 3.9 percent during these periods.

Market Performance: Demand Response

Annual Demand Response Registered Curtailment Capacity 2021–2025



Continuous expansion in Demand Response curtailment capacity

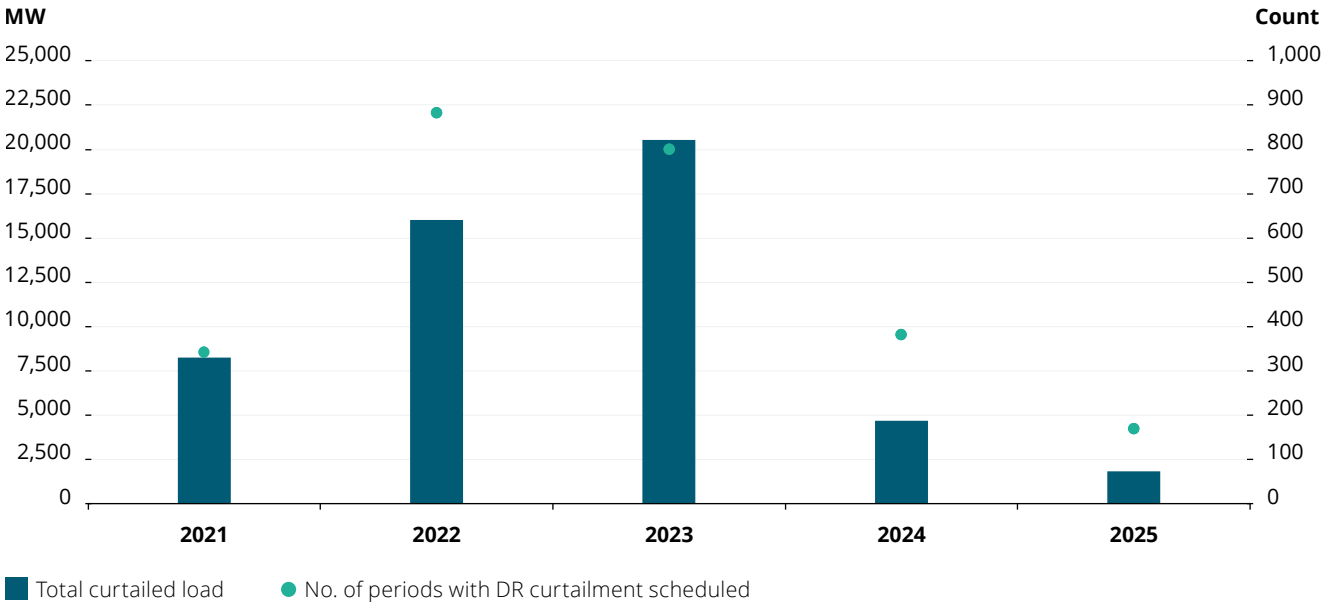
The Demand Response (DR) programme was introduced in 2016 to enable contestable consumers to participate directly in the wholesale market by reducing their electricity demand voluntarily in response to market conditions. This is particularly relevant during periods of high wholesale market prices or when the supply condition is tight.

To encourage more participation in the DR programme, a Demand Side Management (DSM) Sandbox was introduced from 1 January 2023 to 31 December 2024. The sandbox lowered the compliance threshold from 95 to 80 percent and introduced a grace threshold that waived penalties for the first two instances of under-delivery. These revised criteria were formalised and adopted as the new operational rules for the DR programme from 2025 onwards.

The registered DR curtailment capacity has maintained strong growth, exceeding 40.0 percent YOY for the past three years. As of 31 December 2025, the number of DR facilities rose from 12 facilities in 2024 to 16 facilities, while the number of DR providers increased from five to six. The expansion in DR facilities drove a 54.9 percent YOY increase in the DR registered curtailment capacity to 167MW.

Market Performance: Demand Response

Annual Demand Response Curtailment Scheduled 2021–2025



Periods with DR curtailment scheduled and total curtailed load continue to decline

The number of periods with DR curtailment fell to 170 in 2025 from 382 in 2024, continuing the downward trend for the second consecutive year. This decline was attributed to the lower USEP observed in 2025. Notably, the number of trading periods with USEP exceeding the minimum bid price[20] decreased significantly by 69.2 percent to 316 periods in 2025 from 1,027 periods in 2024.

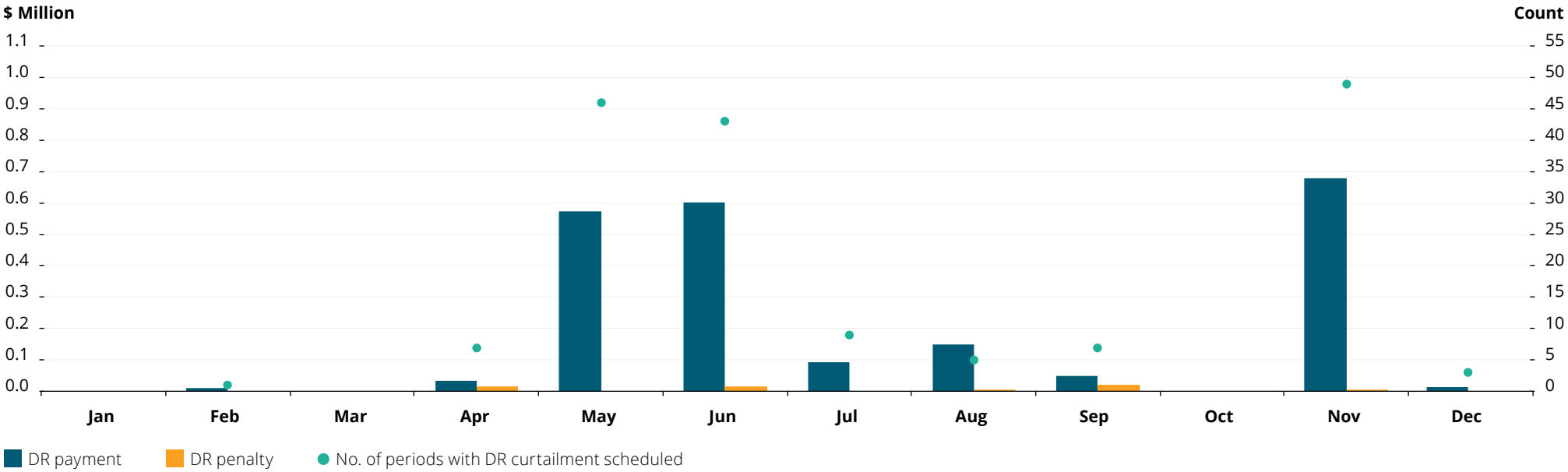
On a half-yearly basis, the number of periods of DR curtailment in the first half of the year was higher at 97, compared to 73 such periods in the second half of the year. On a monthly basis, the DR curtailment activity was subdued across most months, except for May, June and November. These months recorded modest upticks in load curtailment activity, aligning with more frequent occurrences of higher USEP and instances where USEP exceeded the minimum bid price.

Despite the continued growth in the DR registered curtailment capacity, the total curtailed load in 2025 declined sharply by 60.9 percent to 1,829MW.

[20] *Minimum bid price for DR is set at 1.5 times the Base Vesting Price (BVP). This price floor was introduced by EMA to deter strategic or non-cost-reflective bidding and to ensure that DR is activated primarily during periods of tight supply or elevated wholesale prices.*

Market Performance: Demand Response

Monthly Demand Response Payment and Penalty 2025



DR payment amount reduces with lower load curtailed

Compared to 2024, the spread between the Counterfactual Uniform Singapore Energy Price (CUSEP) and USEP (or RUSEP[21], during TPC activations) in 2025 narrowed to between -$1.85/MWh and $220.93/MWh and averaged lower at $28.31/MWh. This indicates that with each MW, consumers benefited less from the lower estimated average cost savings of $28.31/MWh in 2025, compared to $95.65/MWh for each MW in 2024.

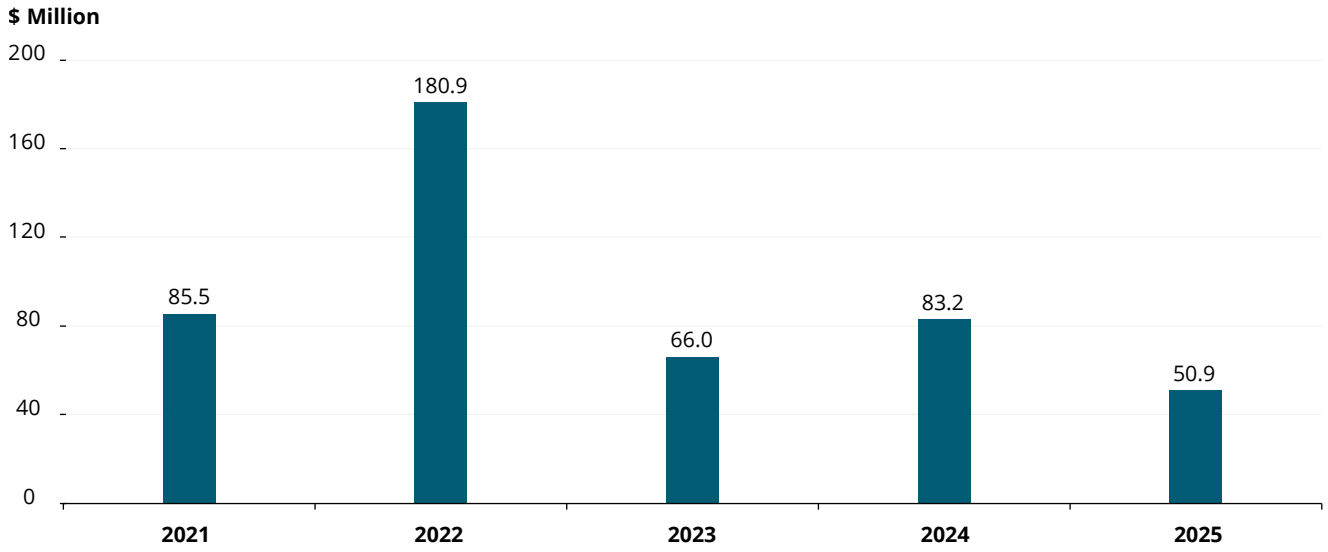
The annual DR payment amounted to $2.2 million in 2025, a significant decrease of 57.1 percent from $5.1 million in 2024. Although there were DR payments in nine months this year, compared to only six months in 2024, the total DR payments were still lower due to fewer curtailment periods and lower curtailed load.

After accounting for the DR penalty refunds, the annual DR penalty was recorded at $60,000.00 across five months in 2025.

[21] *From 1 July 2023, the Reference USEP (RUSEP) was used as a comparison when the TPC mechanism was introduced.*

Market Performance: Ancillary Markets

Annual Reserve Payment 2021–2025



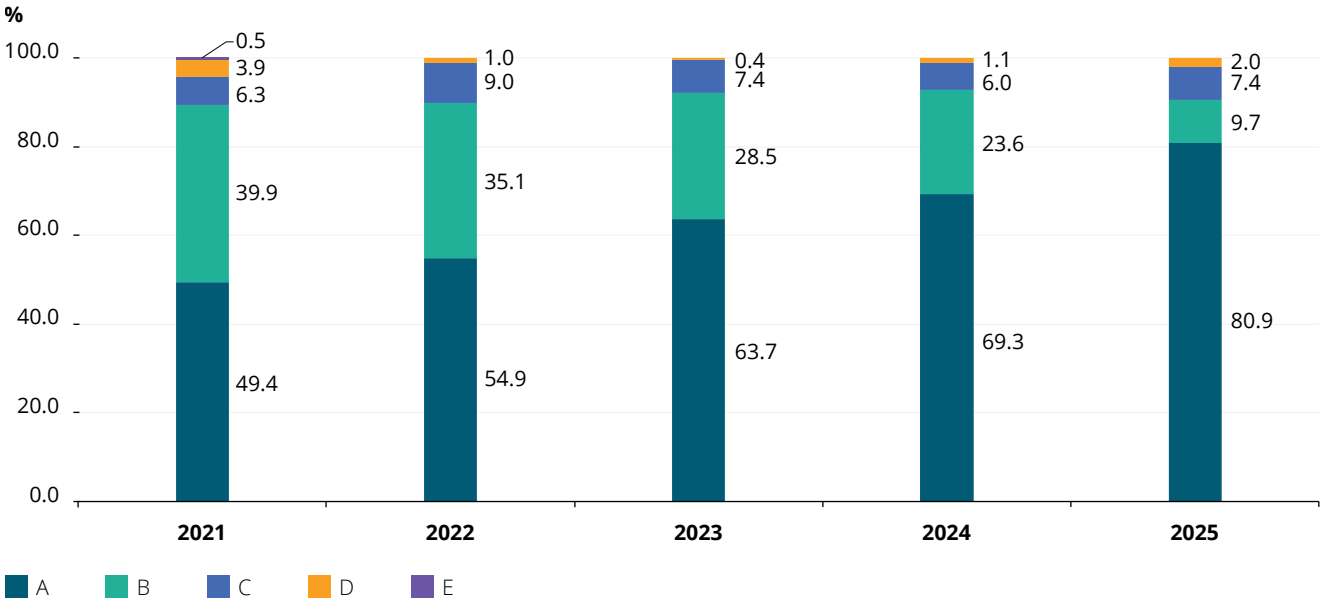
Decline in reserve payments driven by lower prices

Reserves serve as a backup in the electricity market for unexpected outages caused by generators tripping. The amount of reserves required is determined by the amount needed should the largest online generator trip. In the NEMS, two reserve products are traded: primary and contingency reserves. Each reserve has its own price and response time, the latter being nine seconds for primary reserve and ten minutes for contingency reserve. Generators bear the cost of procuring reserves.

Reserve costs declined sharply in 2025, falling by 38.7 percent to $50.9 million compared to $83.2 million in 2024. This marked the lowest level in eight years following a record high in 2022 and a brief uptick in 2024. The price reduction was primarily driven by a sharp drop in contingency reserve price, which decreased by 40.9 percent to $11.65/MWh.

Market Performance: Ancillary Markets

Reserve Provider Group Effectiveness for Primary Reserve Class (Aggregate) 2021–2025



Statistics exclude IL providers.

Increase in Group A reserve providers accompanied by lower overall effectiveness

Reserve providers in the NEMS are classified into five groups: Group A represents reserve providers with the highest level of responsiveness, and Group E represents those with the lowest level of responsiveness. A higher level of responsiveness attracts a higher proportion of reserve price.

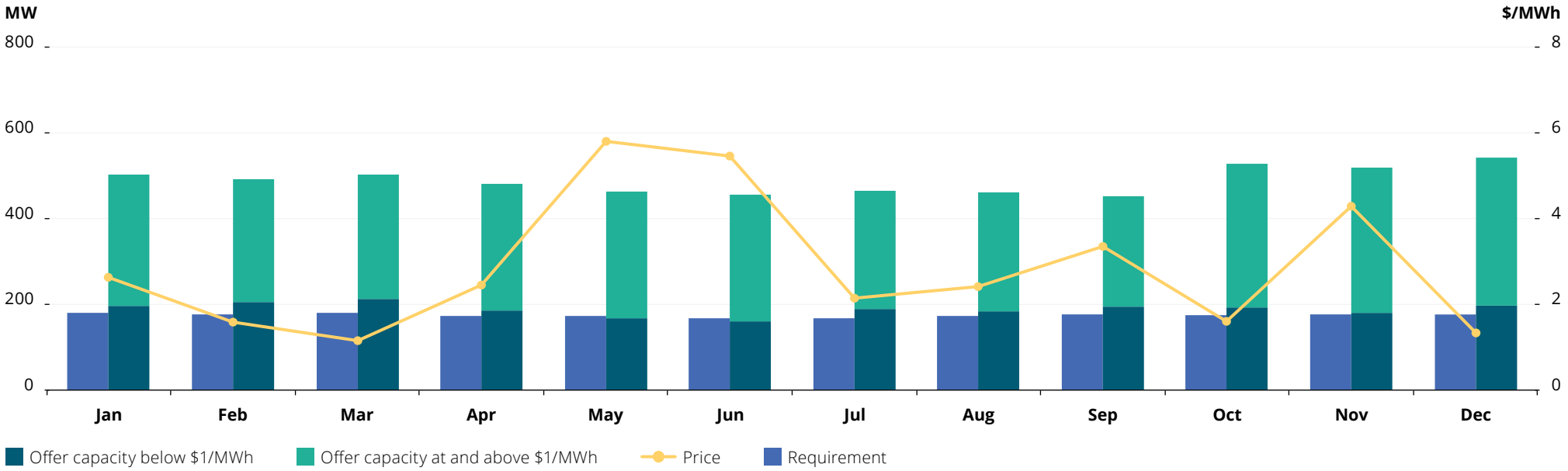
In 2025, the total number of reserve providers increased by 11 to reach 129. Notably, some of the reserve providers previously in Group B shifted into other groups. The percentage of reserve providers in Group A rose significantly by 11.6 percentage points, reaching 80.9 percent, the highest level since the market started. Groups C and D also saw modest growth by 1.4 percentage points and 0.9 percentage points, respectively, while Group B declined by 13.9 percentage points. Since 2022, there have been no reserve providers in the Group E category.

Despite the strong performance of Group A, the overall effectiveness of reserve providers in 2025 was moderately lower. The combined proportion of reserve providers in the more responsive Groups A and B fell from 92.9 to 90.6 percent in 2025, while the proportion of reserve providers in the less responsive Groups C, D and E increased from 7.1 percent to 9.4 percent.

All contingency reserve providers were classified in Group A.

Market Performance: Ancillary Markets

Monthly Primary Reserve Price, Requirement and Supply 2025



Primary reserve price holds steady overall

In 2025, the annual average primary reserve price decreased marginally by 0.3 percent, falling by $0.01/MWh to $2.85/MWh. The lowest monthly average price of $1.15/MWh was observed in March, and the highest monthly average price of $5.81/MWh was observed in May. The higher prices observed in May and June were due to fewer offers in the cheaper tranches, while the price spike in May was further supported by one period of primary reserve shortfall.

The annual average primary reserve requirement rose from 170MW in 2024 to 175MW in 2025, while the annual primary reserve offers reduced by 1.4 percent to 489MW. On a monthly basis, the primary reserve requirement ranged between 167MW and 180MW, with the lowest requirement seen in June and July and the highest in January and March. On the other hand, the monthly primary reserve offers were lowest in September at 453MW and highest in December at 542MW.

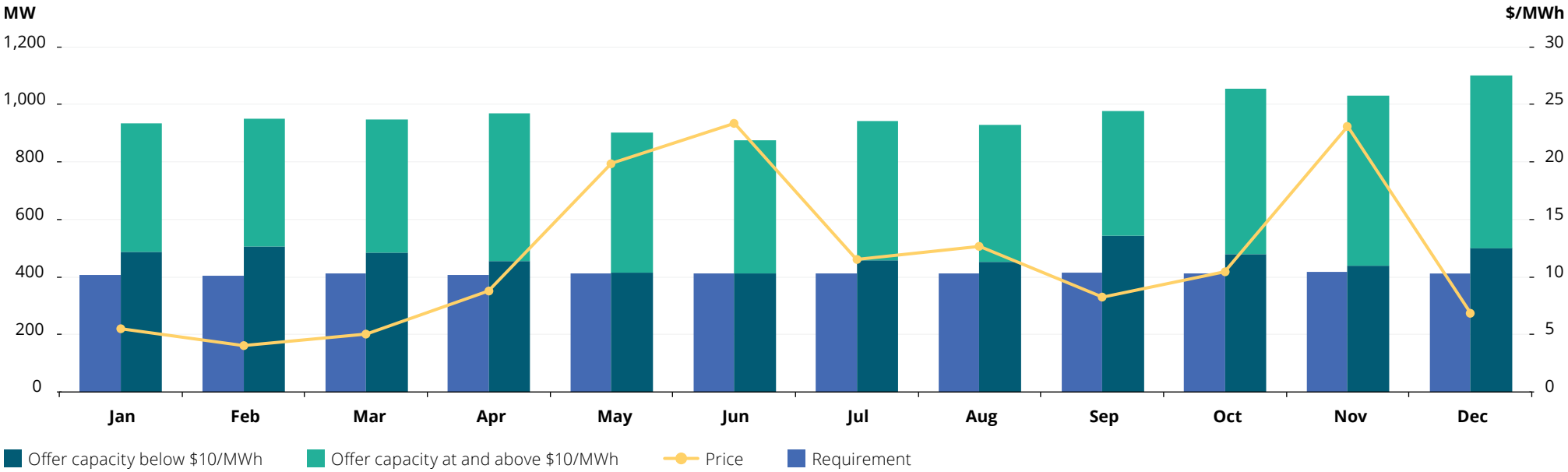
The proportion of primary reserve offers below $1.00/MWh reduced by 1.0 percentage point, averaging 38.6 percent this year, with the monthly proportions ranging between 34.7 percent and 43.0 percent.

Despite the combination of a higher primary reserve requirement, fewer total primary reserve offers, and overall reduced volumes in the cheaper offer tranches, the annual average primary reserve price remained largely unchanged. The minimal YOY price movement was driven by lower monthly price volatility. This was reflected in the decline in the standard deviation of monthly average prices from $2.03/MWh in 2024 to $1.50/MWh in 2025, indicating a narrower spread between the highest and lowest monthly prices in 2025.

As had been the case in 2024, there were no intertie disconnections and adjustments to the Risk Adjustment Factor (RAF) in 2025. The RAF remained at 1.0. There were three periods of primary reserve shortfall in 2025, compared to none in 2024.

Market Performance: Ancillary Markets

Monthly Contingency Reserve Price, Requirement and Supply 2025



Contingency reserve price lowers with cheaper offers

The annual average contingency reserve price plummeted 40.9 percent to $11.65/MWh in 2025 from $19.70/MWh in 2024. The highest monthly average price of $23.37/MWh was observed in June, while the lowest was registered in February at $4.07/MWh.

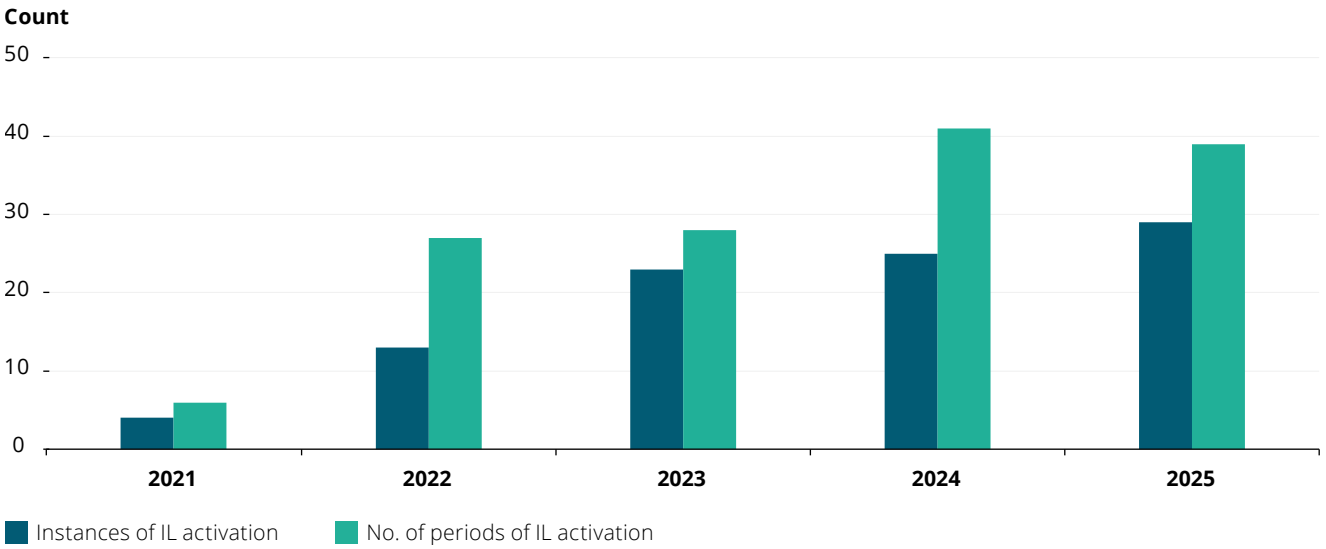
Compared to 2024, the proportion of contingency reserve offers below $10.00/MWh increased slightly by 0.7 percentage points to 48.5 percent. The average contingency reserve requirement rose 1.7 percent to 411MW, while the annual average contingency reserve offers increased 5.9 percent to 969MW.

On a monthly basis, the contingency reserve requirement hovered above 400MW in all months. The lowest contingency reserve requirement of 405MW was recorded in February, while the highest was seen in November at 416MW. The contingency reserve offers were above 900MW in all months, except June, which took a small dip to 875MW and aligned with the higher price. The offers were at their highest from October to December, registering above the 1,000MW level.

The total number of periods with contingency reserve shortfall dropped to 30 in 2025 from 58 in 2024, in line with the overall strengthened supply conditions observed throughout the year.

Market Performance: Ancillary Markets

Annual Interruptible Load (IL) Activations for Contingency Reserve Market 2021–2025

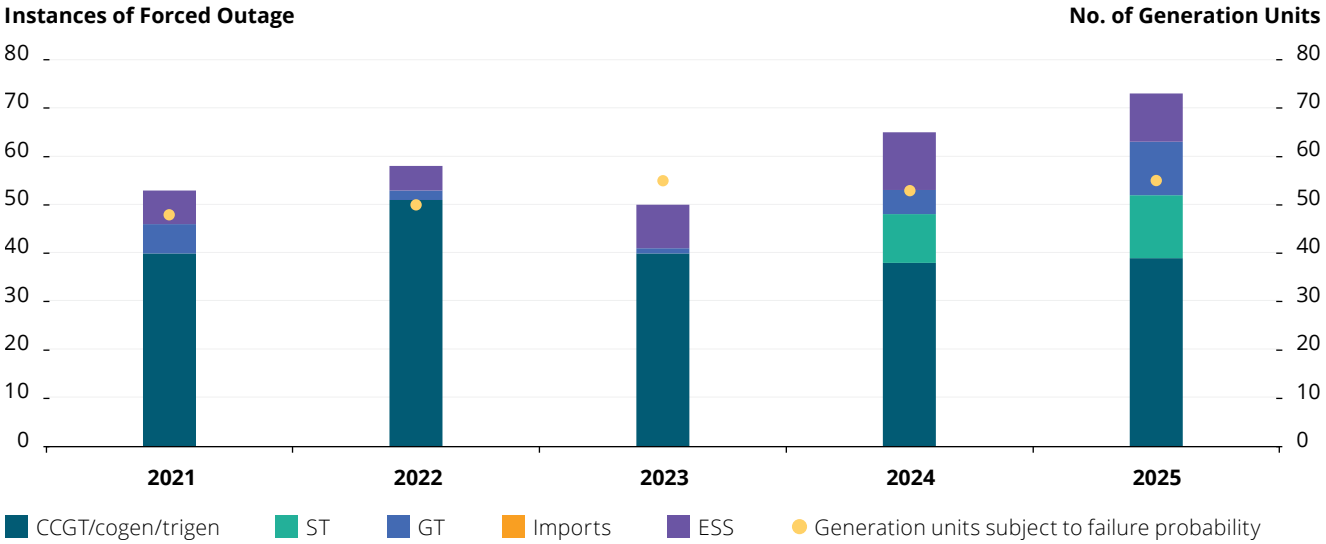


More frequent interruptible load activations with shortened durations

As of 31 December 2025, there was no registered capacity for interruptible load (IL) for primary reserve. For contingency reserve, the total IL registered capacity rose by 3.5 percent, from 28.8MW to 29.8MW.

In 2025, the number of IL activations for contingency reserve edged up from 25 to 29, while the total number of periods when IL was activated for contingency reserve reduced slightly from 42 to 39. This meant that 0.2 percent of the total number of periods in 2025 saw IL activation, the same proportion as in 2024.

Annual Forced Outages by Generation Type 2021–2025



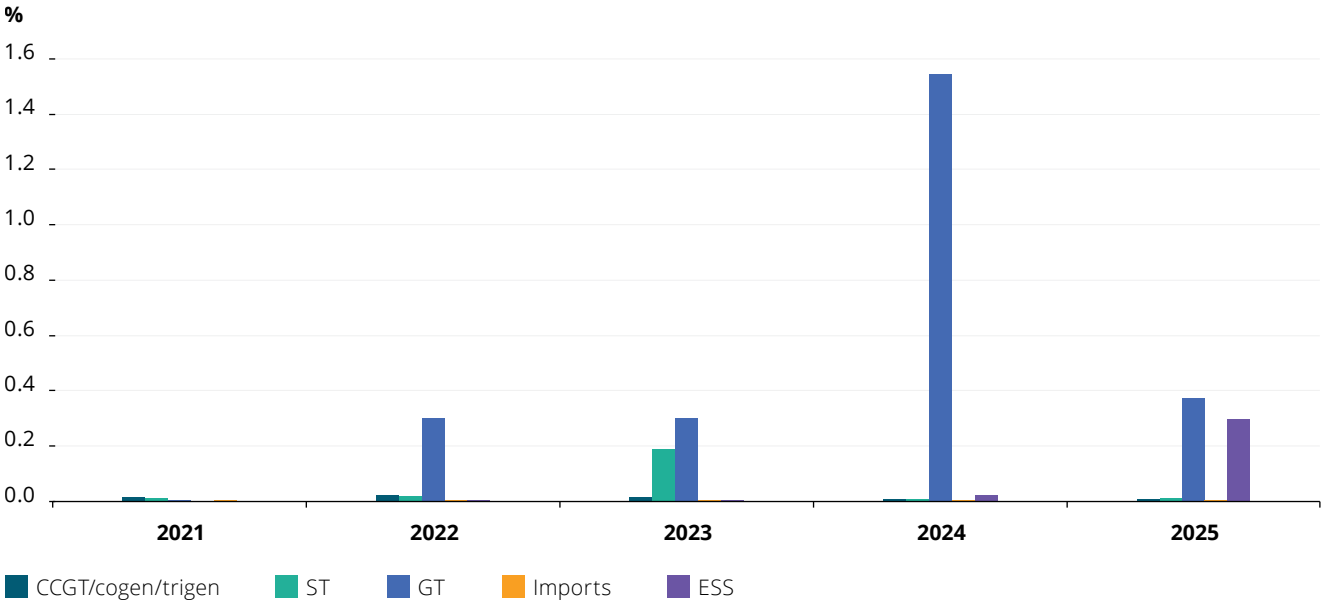
The number of generation units refers to the number of generation units registered in the NEMS which are subject to reserve responsibility share.

Forced outages increase among fewer generation units

In 2025, 55 generation units were subject to failure probability, with 73 forced outages recorded, an increase from 65 outages in 2024. These outages occurred across 26 generation units, compared to 34 units in 2024, indicating that outages were observed among a smaller set of generation units YOY, including two commissioning units. Most generation plant types recorded more forced outages except ESS, which saw two fewer instances compared to last year. Imports remained unchanged with zero outages in 2025.

Market Performance: Ancillary Markets

Average Failure Probability 2021–2025



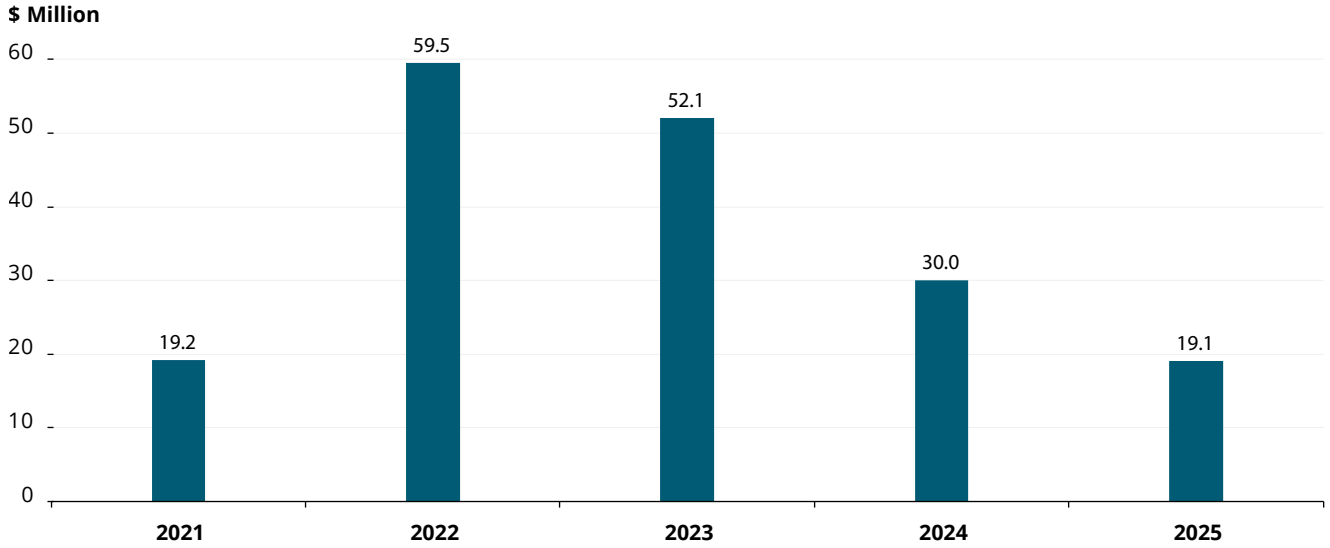
Reliability in GT deteriorates

The average failure probability for a Generation Registered Facility (GRF) is the probability that, after being dispatched by the PSO for a settlement interval, the GRF will either cease operating, disconnect from the transmission system, or both, during that settlement interval, even if no other GRF fails. A generation facility with a lower failure probability will be allocated less reserve cost compared to one with a higher failure probability. In short, failure probability is a measure of the reliability of the generation facility. The lower the failure probability, the higher the reliability of the generation facility.

The average failure probabilities of CCGT/cogen/trigen, ST and GT facilities were 0.010 percent, 0.013 percent and 0.372 percent, respectively, in 2025. Compared to 2024, the failure probability of GT facilities declined while that of ESS and ST increased. The failure probability of CCGT/cogen/trigen and Import facilities remained unchanged in 2025, at 0.010 percent and 0.001 percent, respectively.

Market Performance: Ancillary Markets

Annual Regulation Payment 2021–2025



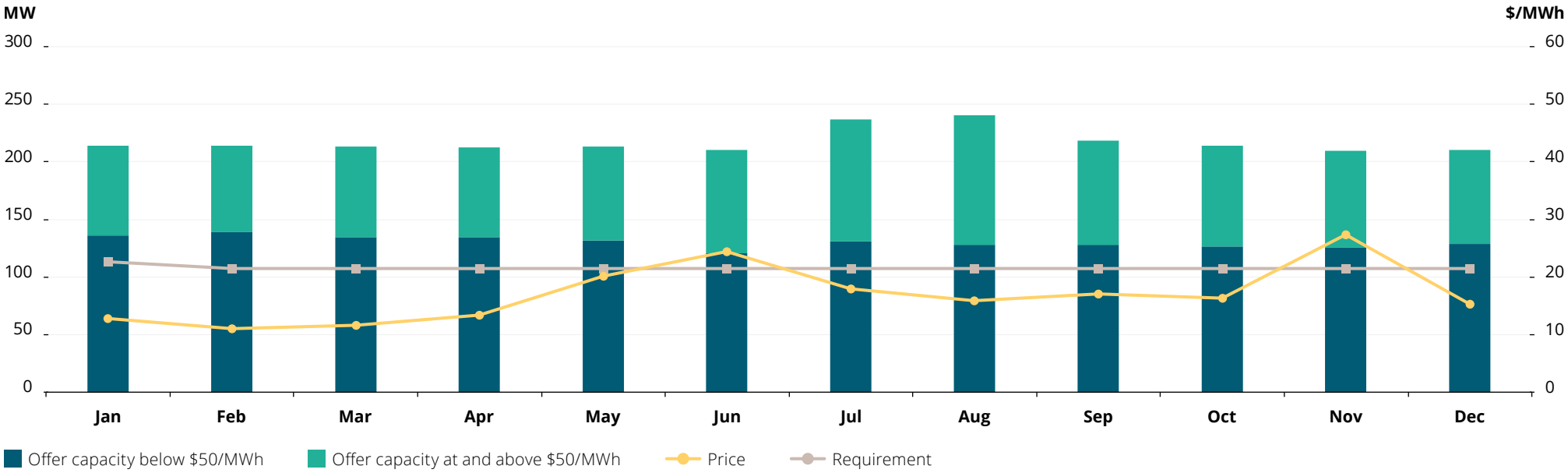
Regulation payment continues to fall for the third consecutive year

Regulation payment continued its downward trend in 2025, falling sharply by 36.4 percent to $19.1 million. This decline was primarily driven by a 33.9 percent drop in regulation price to $17.00/MWh, coupled with a reduction in regulation requirement from 113MW to 108MW, effective 1 February 2025.

Compared to 2024, the monthly regulation payment decreased across ten months. The average monthly regulation payment ranged between $0.9 million and $2.6 million throughout the year. The highest regulation payment was recorded in November 2025, coinciding with the highest monthly regulation price of $27.31/MWh, also recorded in the same month.

Market Performance: Ancillary Markets

Monthly Regulation Price, Requirement and Supply 2025



Lower regulation prices accompanied by fewer shortfalls

In 2025, the annual average regulation price fell to $16.98/MWh from $25.72/MWh in 2024. The highest monthly average price was $27.31/MWh in November, while the lowest monthly average was $11.00/MWh in February. The proportion of regulation offers below $20.00/MWh rose by 2.9 percentage points, reaching 60.4 percent this year compared to 57.5 percent in 2024, highlighting cheaper offer prices.

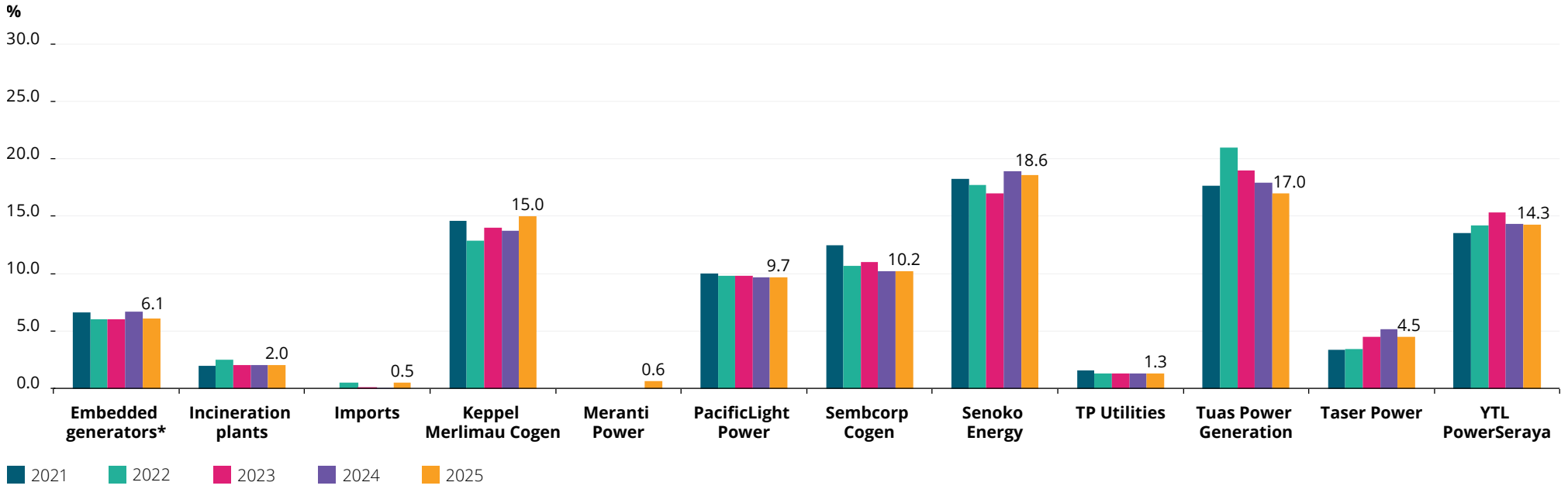
The annual regulation requirement was reduced from 113MW to 108MW effective 1 February 2025, while the annual average regulation offers decreased slightly by 1.1 percent to 217MW.

Compared to 2024, the regulation offers declined by 0.7 percent and 4.5 percent in all months except July and August, with the largest drops occurring in May and June. The proportion of regulation offers below $20.00/MWh ranged between 53.3 percent and 65.1 percent throughout the year. Regulation prices were lower in all months except July, August and November. Notably, May, June and November were the only three months where the regulation prices exceeded $20.00/MWh. These months coincided with periods of heightened USEP volatility, as these months recorded the most instances of USEP exceeding $500.00/MWh in 2025.

The total number of periods with regulation shortfall declined from 20 in 2024 to 14 in 2025.

Market Performance: Competition in the Generation and Retail Markets

Annual Market Share by Generation Company 2021–2025 (Based on Scheduled Generation)



* *Embedded generators exclude TP Utilities.*

Change in the position of the top three generation companies amid reduced combined market share

In 2025, Keppel Merlimau Cogen replaced YTL PowerSeraya to join Senoko Energy and Tuas Power Generation as the top three generation companies with the largest annual market share. Compared to 2024, the combined market share of these three leading generation companies declined by 0.5 percentage points to 50.6 percent, marking the third consecutive year of decline.

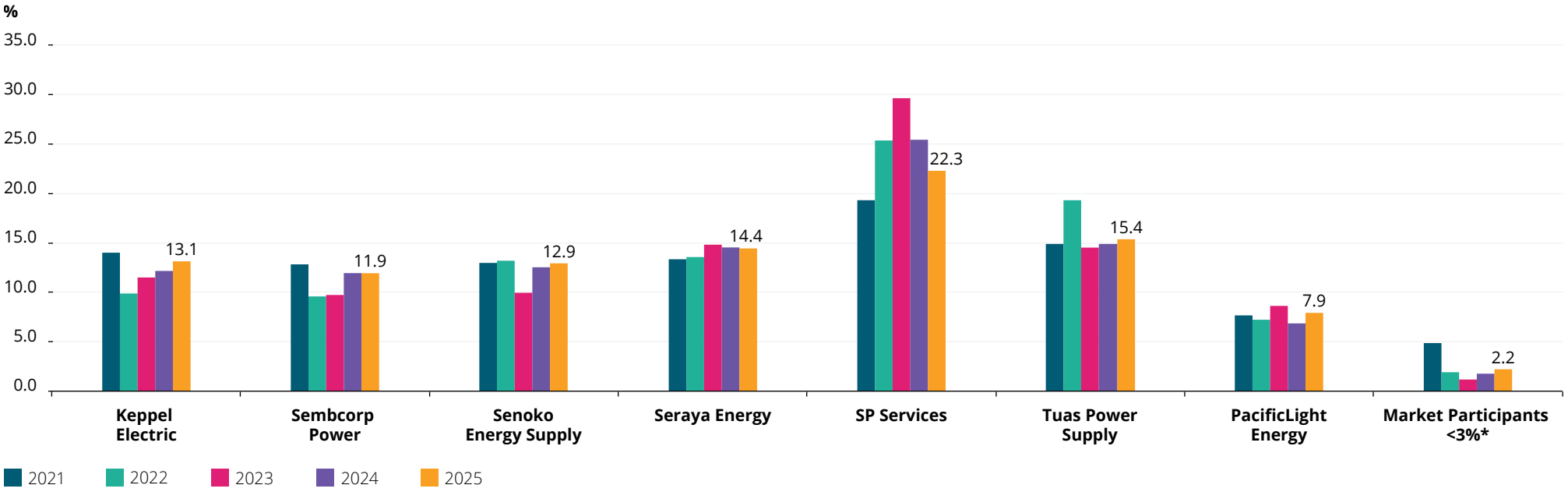
Among the generation companies that experienced a decline in market share, Tuas Power Generation's market share contracted the most, by 0.9 percentage points. This was followed by Taser Power and EGs, decreasing by 0.6 percentage points each. Senoko Energy's market share shrank 0.3 percentage points.

For the remaining generation companies, Keppel Merlimau Cogen led the gains at 1.3 percentage points. Imports' market share expanded 0.5 percentage points, while those of PacificLight Power, Sembcorp Cogen, TP Utilities, YTL PowerSeraya and the incineration plants remained at 9.7 percent, 10.2 percent, 1.3 percent, 14.3 percent and 2.0 percent, respectively.

Meranti Power, which entered the market in 2025, achieved an average market share of 0.6 percent for the year.

Market Performance: Competition in the Generation and Retail Markets

Annual Market Share of Market Support Services Licensee and Retailers 2021–2025 (Based on Withdrawal Energy Quantity)



* *Market participants <3% refers to Best Electricity Supply, Bioenergy, Cleantech Solar Singapore Assets, Diamond Electric, Engie South East Asia, Flo Energy Singapore, GreenCity Energy, Just Electric, MyElectricity, Sunseap Energy and Union Power.*

Mixed movements in market share across SP Services and other retailers

In the Open Electricity Market (OEM), the consumption of residential consumers who have switched from SP Services to retailers and who selected the Load Profiling (LP) metering option (LP consumers) is included as part of the system residual load, which will be wholly settled by SP Services in the NEMS. SP Services bilaterally settles the consumption of each retailer's aggregated LP consumers outside the NEMS.

To better reflect the market share of the retailers, the consumption of these LP consumers needs to be allocated back to their respective retailers. This allocation has been done and reflected in the retailers' market share figures since 2019.

In 2025, SP Services' market share shrank 3.2 percentage points to 22.3 percent, marking its second consecutive year of decline. Despite this, SP Services retained its position with the largest market share. Among the larger retailers[22], Keppel Electric regained market share after falling slightly behind in the previous year, joining Seraya Energy and Tuas Power Supply as the top three retailers after SP Services. Together, these three retailers accounted for a combined market share of 42.8 percent.

Excluding SP Services, Seraya Energy was the only retailer to record a decline in market share, edging down by 0.1 percentage point. All other retailers (including Keppel Electric, PacificLight Energy, Senoko Energy Supply and Tuas Power Supply) registered gains in market share, ranging between 0.4 percentage points and 1.0 percentage points. Sembcorp Power's market share remained unchanged from the previous year.

Within the 'Market participants <3%' category, which comprises retailers that each hold a market share under 3.0 percent, the combined market share of this category gained 0.4 percentage points to 2.2 percent.

[22] *Excludes consumers who purchase from SP Services.*

Market Performance: Settlement, Prudential Management, Automatic Financial Penalty Scheme and Minimum Stable Load Compensation Scheme

EMC is the financial clearing house for the wholesale market and settles the following transactions:

- **energy;**
- **ancillary market products — two classes of reserve (primary and contingency) and regulation;**
- **bilateral and vesting contracts;**
- **uplift charges;**
- **financial adjustments;**
- **fee recovery of EMC and the PSO administration costs; and**
- **contracted ancillary services not provided through the ancillary market (black-start and fast-start services).**

The market is well secured. To cover the exposure of a debtor and the time required to manage a default, all retailers must provide ongoing collateral to EMC. This credit support protects EMC and other MPs from payment defaults. EMC reviews the risk exposure of MPs daily.

Margin Calls and Notices of Default – 1 January to 31 December 2025

A margin call is issued when a retailer's estimated net exposure reaches a value that is equivalent to or greater than 55.0 percent of its level of credit support for MPs, or 60.0 percent of its level of credit support for the MSSL. There were no margin calls issued in 2025. A notice of default is issued when an MP is unable to remit to the EMC settlement clearing account by the end of the business day following its payment due date. In 2025, there were no default notices[23] issued by EMC.

Automatic Financial Penalty Scheme (AFPS) and Minimum Stable Load (MSL) Compensation Scheme – 1 January to 31 December 2025

The AFPS is a penalty scheme that was introduced in November 2015 and applied to all Generation Registered Facilities (GRFs) that deviate from their dispatch schedules by more than 10MW. The intent is to discourage the GRFs from non-compliance with dispatch instructions. The AFPS was subsequently extended to include all Load Registered Facilities (LRFs) under the DR programme introduced in April 2016, and now applies to all LRFs with restricted energy bids that deviate from their dispatch schedules. In 2025, there were 85 periods when the AFPS was triggered, including 19 periods for deviating LRFs. The total penalty collected was $456,646.40. The penalty collected was returned to the market via the monthly energy uplift charges.

The MSL compensation scheme compensates participating GRFs when they are constrained for energy at their MSLs, and their offer prices are higher than the marginal clearing price. It was implemented in November 2015 to enhance system security and create financial certainty for these facilities in recovering costs. In 2025, there was no instance of MSL compensation.

[23] *A default notice is issued to a defaulting market participant until the market participant is suspended.*

Market Performance: Contracted Ancillary Services

In addition to the co-optimised energy, reserve and regulation markets, EMC negotiates and enters ancillary services contracts on behalf of the Power System Operator (PSO), to ensure the reliable operation of Singapore's power system. For example, if these services cannot be procured competitively due to a limited number of available suppliers, their prices are regulated.

For the period from 1 April 2025 to 31 March 2026, the contracted ancillary services include black start capability and fast start services.

Black start capability services ensure that there is an initial generation to supply electric power for system restoration following a complete blackout. Based on the PSO's operational requirements, EMC procured 103.248MW of black start capability services at a cost of $12.1 million for the period from 1 April 2025 to 31 March 2026.

Fast start services ensure that, once activated by the PSO, electricity supply can be delivered within ten minutes to balance the power system in the event of an unexpected increase in demand and/or forced or unplanned outages of generating units, and to sustain continuous operations for at least four hours. Based on the PSO's operational requirements, EMC procured 782.00MW* of fast start services at a cost of $87.6 million for the period from 1 April 2025 to 31 March 2026.

Contracted Ancillary Services – 1 April 2025 to 31 March 2026

Contract Ancillary Services	Cost of Ancillary Services	Total MW Contracted
Black Start Capability Services	$12,057,536.64	103.248
Fast Start Services	$87,643,451.28	782.000*

* *Includes awarded Request for Proposal (RFP) for Fast Start Service.*

Market Performance: Market Fees

The costs associated with the wholesale functions of the NEMS are recovered directly from the wholesale market through fixed fees and variable fees that are proportionate to the quantity of energy that market participants (MPs) trade.

EMC Fees – 1 July 2025 to 30 June 2026

Market Participant (MP) Fee	$10,000 per MP (annual)
MP Registration Fee	$5,000 per registration (one-off)
RSA Hardware Token Fee	$350 per token (once every three years, from the sixth token onwards, per MP) $110 per token (replacement fee for lost or damaged tokens)
EMC Fee per MWh ($/MWh)	0.3711

PSO Fixed Fees – 1 July 2025 to 30 June 2026

MP Fee	$3,500 per MP (annual)
MP Registration Fee	$1,650 per legal entity registration (one-off)

PSO Net Fees – 1 April 2025 to 31 March 2026

PSO Net Fees ($'000)	43,193

Additional Information

Additional Information: Glossary

ancillary services
The additional services needed to ensure the security and reliability of the power system. The ancillary services traded competitively on the wholesale market are regulation and two classes of reserves: primary and contingency.

contracted ancillary services
Black-start and fast-start services are contracted by Energy Market Company (EMC) on behalf of the Power System Operator (PSO), on an annual basis.

base vesting quantity
The quantity (in MWh) used to hedge non-contestable consumer (NCC) load under the Base Vesting Scheme. Hedge quantities are underpinned by new vested gas to be supplied by Pavilion Energy Singapore Pte Ltd. The quantity is based on the equivalence between the Daily Contracted Quantity level and the Maximum Daily Contracted Quantity level under the new Vested Gas Sales Agreements approved by the Energy Market Authority and subject to NCC Load Profiling.

tender vesting quantity
The quantity (in MWh) used to hedge non-contestable consumer (NCC) load above the base vesting quantity, subject to NCC Load Profiling

battery energy storage system (BESS)
A Battery Energy Storage System (BESS) is an electrochemical energy storage system where stored chemical energy can be converted to electrical energy when required.

black-start capability service
A service that enables initial power generation, without using power from the grid, in order to restore systems following a complete blackout.

fast-start ancillary service
A service that can be activated by the Power System Operator (PSO) to deliver electricity supply within ten minutes, to balance the power system in the event of an unexpected increase in demand and/or forced or unplanned outages of generating units, and to sustain continuous operations for at least four hours.

co-optimisation
The process used by the market clearing engine (MCE) to ensure that the least-cost mix of energy, reserves and regulation is purchased from the market to meet electricity demand in each dispatch period.

demand response (DR)
A mechanism that enables contestable consumers to voluntarily reduce their electricity demand in response to market conditions, particularly during periods of high wholesale market prices or when system reliability is adversely affected.

dispatch schedule
A schedule produced by the market clearing engine (MCE) every half-hour. It is the basis for energy supply and consumption, as well as the provision of reserves and regulation in the market.

embedded generators (EG)
Generation units that generate electricity primarily for on-site load, for self-consumption.

event of default
The failure of a market participant (MP) to fulfil its payment obligations or other basic obligations under the market rules. An event of default, if not remedied, will trigger a suspension procedure on the defaulting MP. For a full list of events of default, please refer to the Market Rules (MR).

intermittent generation sources (IGS)
Sources of energy whose output depends on environmental factors and weather conditions, such as solar and wind energy. While there are IGS facilities connected to the grid in Singapore, IGS are not scheduled for dispatch by the Power System Operator (PSO) in the wholesale market because the power output cannot be controlled or varied at will.

interruptible load (IL)
The amount of electricity that a consumer makes available for interruption in the event of a system disturbance in exchange for reserve payments. The Power System Operator (PSO) controls the activation of interruptible loads.

licensed capacity
The capacity of a facility licensed by the Energy Market Authority (EMA).

market clearing engine (MCE)
The linear programme computer application used to calculate spot market quantities and prices.

market participant (MP)
A person or entity that has an electricity licence issued by the Energy Market Authority (EMA) and has been registered with Energy Market Company (EMC) as a market participant to trade in the wholesale electricity market.

metered demand
The electricity consumption measured using the withdrawal energy quantity (WEQ).

Additional Information: Glossary

nodal pricing
A market structure in which prices are calculated at specific locations, or nodes, in the power system to reflect the demand and supply characteristics of each location, taking into consideration transmission losses and congestion. Nodal pricing is also commonly referred to as locational marginal pricing. In the settlement reports, this is termed the market energy price.

open electricity market (OEM)
An initiative by the Energy Market Authority (EMA) to enable all business consumers and households to buy electricity from a retailer of their choice at a price plan that best meets their needs, or remain on the regulated tariff rate.

reference uniform Singapore energy price (RUSEP)
This refers to the uncapped counterfactual USEP when the Temporary Price Cap (TPC) is in effect. Similar to USEP, it is the weighted-average of the uncapped nodal prices at all off-take nodes.

registered capacity
This denotes the capacity of a facility registered with the National Electricity Market of Singapore (NEMS). Registered capacity may differ from licensed capacity.

regulation
Generation that is on standby to fine-tune or correct frequency variations or imbalances between demand and supply in the power system.

retail market
Transactions conducted between retail companies and end consumers.

retailer of last resort (RoLR)
The one or more retailers who will take responsibility for the customers of a retailer that is no longer able to, or has lost the right to, retail electricity to its customers.

supply cushion
This measures the percentage of total supply available after matching off demand.

uniform Singapore energy price (USEP)
The weighted-average of the nodal prices at all off-take nodes.

vesting contract
An instrument issued by the Energy Market Authority (EMA) to hedge the price of energy to be procured from the Singapore Wholesale Electricity Market (SWEM) for supply to non-contestable consumers. The vesting contracts are structured as bilateral two-way contract-for-differences between the Market Support Services Licensee (MSSL) and a holder, which is typically a commercial generation company. A vesting contract requires these generators to sell a specified quantity of electricity at a specified price.

vesting contract hedge price (VCHP)
The price used by Energy Market Company (EMC) to settle the vesting quantity between the Market Support Services Licensee (MSSL) and the generation companies. VCHP is determined using the long-run marginal cost of the most efficient generation technology in the Singapore power system, i.e., the combined-cycle gas turbine.

withdrawal energy quantity (WEQ)
Measured in megawatt hours, this refers to the amount of electricity withdrawn by load facilities. It is provided by the Market Support Services Licensee (MSSL), SP Services.

wholesale market
Transactions conducted between generation companies and retail companies.

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Notice and Disclaimer

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If you have any specific queries about this publication, you can write to info@emcsg.com.

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