

MEDIA RELEASE

31 July 2023

Request for Proposal Launched for New Generation Capacity in 2028

To ensure we have sufficient power generation capacity going forward, the Energy Market Authority (EMA) has launched a Request for Proposal (RFP) for interested companies to build, own and operate a new Combined Cycle Gas-Turbine (CCGT) with a capacity of at least 600-megawatt (MW), by end-2027. The RFP is part of the new Centralised Process to guide and facilitate the development of new generation capacity.

Centralised Process for New Generation Capacity

2 Today, investments in new power generation technology and capacity are primarily driven by generation companies' (gencos) commercial considerations, which considered their individual business plans, their outlook on electricity demand, and price signals in the Singapore Wholesale Electricity Market (SWEM). While this approach incentivises innovation and efficiencies in the genco's operations, decision-making at the individual genco level may not always result in adequate generation capacity to meet the power system's overall demand.

3 To ensure we have sufficient generation capacity in time to come, in October 2022, the Ministry of Trade and Industry announced that the Energy Market Authority would be introducing a Centralised Process to facilitate and guide private investments in new generation capacity through a competitive tender. Under the Centralised Process, EMA will continue to forecast electricity demand on a rolling 10-year basis, along with the available generation capacity. If projections indicate insufficient generation capacity to meet the power system's requirements, EMA will conduct an RFP and invite the private sector to build, own, and operate the necessary new generation capacity. If there is insufficient or inadequate interest from the private sector to plant the new capacity, EMA will step in to provide the required new capacity.

4 Between 10 April and 8 May 2023, EMA conducted industry and public consultations on the Centralised Process. Industry players were generally supportive of EMA's plans to coordinate capacity building at the national level. A fuller account of the feedback received and EMA's responses is in the Final Determination Paper, which is available at <https://go.gov.sg/ema-consultation-centralised-process>.

Request for Proposal for New Capacity Required in 2028

5 Singapore's electricity demand has been steadily increasing over the years with economic growth, increasing electrification and digitalisation. Between 2013 – 2022, electricity demand has grown by a Compound Annual Growth Rate (CAGR) of 1.5%. During the pandemic years of 2020-2022, peak electricity demand grew by 2.8% CAGR. A new system peak demand of 7.9 gigawatt (GW) was reached in May this year, during one of the hottest months on record.

6 Based on EMA's projections, Singapore's system peak demand is expected to grow by ~3.4%-6.5% CAGR over the next five years, reaching between 9.3 GW and 11.6 GW by 2028. This is driven largely by the growth in existing electricity-intensive sectors as well as emerging electricity-intensive sectors. Specifically, industries within the advanced manufacturing, digital economy, food and transport sectors are likely to experience significant growth over the next few decades.

7 Looking at the total electricity supply projected in the coming years, EMA has assessed that additional generation capacity will be needed in 2028. EMA is launching a Request for Proposal for interested companies to build, own and operate one new Combined Cycle Gas Turbine (CCGT) of at least 600MW capacity, by end-2027. The plant should be operational by 2028.

8 Mr Ngiam Shih Chun, Chief Executive of EMA, said, "With the anticipated growth in energy demand, it is crucial that we establish measures to meet future needs while ensuring the resilience of our energy supply. The Centralised Process plays a vital role in guiding private investments in new generation capacity. Through this process, we can facilitate the development of the required new generation capacity, enabling us to meet Singapore's power system demands while embracing cleaner and more sustainable energy sources. We welcome industry participation in the RFP and look forward to working together to shape the future of Singapore's energy landscape."

9 Participants of the RFP are expected to develop hydrogen-ready and lower-carbon intensity solutions and technologies to contribute to the development of a greener and more resilient power system. Please visit <https://go.gov.sg/rfp-for-new-generation-capacity> for details of the RFP. Interested parties are invited to submit their proposals by 31 October, 3pm SGT.

10 Please refer to Annex A for an overview of the key changes introduced to ensure a dynamic yet resilient power market.

Annex A: Overview of Singapore's Power Sector

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About the Energy Market Authority

The Energy Market Authority (EMA) is a statutory board under the Singapore Ministry of Trade and Industry. Through our work, we seek to forge a progressive energy landscape for sustained growth. We aim to ensure a reliable and secure energy supply, promote effective competition in the energy market and develop a dynamic energy sector in Singapore. Visit www.ema.gov.sg for more information.

OVERVIEW OF SINGAPORE'S POWER SECTOR

Singapore has operated a liberalised energy market since 2001. This has served us well. Competition has driven investments in more efficient generation technologies, and consumers have enjoyed competitive electricity prices and a range of electricity retail options. Overall, our electricity and gas systems are competitive, reliable, and sustainable. Our electricity supply is one of the most reliable in the world.

2 As we import almost all our energy supply, developments in the global energy market will affect our power sector. The global energy landscape has changed significantly since 2020. Supply chains were tested as the world emerged from the pandemic, and this was compounded by the war in Ukraine. In addition, the energy transition has created significant shifts and uncertainties in global energy supply chains. During the global energy crisis, there was significant price volatility in the Singapore Wholesale Electricity Market (SWEM), which spilled over and affected the electricity retail market. In 4Q2021, 6 electricity retailers exited the market as they were not sufficiently prepared for the market volatilities.

3 While a market-based system remains relevant, the experience of the energy crisis has demonstrated the need to strengthen our market structure to ensure that the power sector is able to function well even under volatile conditions. At the Singapore International Energy Week in October 2022, Minister for Trade and Industry Gan Kim Yong announced that EMA would be introducing guardrails to manage the risks of volatility in our energy market. This year, EMA has introduced three of these guardrails to ensure a dynamic yet resilient power market.

Centralised Process for New Generation Capacity

4 Singapore has sufficient generation capacity to meet electricity demand. We expect new generation capacity to enter the market over the next few years to meet increasing electricity demand due to economic growth and new investments in energy intensive industries. This new capacity includes Combined Cycle Gas Turbines to be built by Keppel Energy and Sembcorp Cogen Pte Ltd. Meranti Power is also building two 340MW Open Cycle Gas Turbines that are expected to be commissioned in 2025.

5 To ensure that we continue to have sufficient generation capacity, EMA will introduce a **Centralised Process to better coordinate the planting of new generation capacity by the private sector.** EMA will call for Request for Proposals for new generation capacity that is required in 5 years' time. The first request has been launched in July 2023. If there is insufficient private sector interest, EMA will build the required capacity. This approach ensures that we have sufficient generation capacity to meet demand growth and that the private sector continues to play an important role in power generation.

Enhanced Regulatory Framework for Electricity Retailers

6 EMA has been gradually liberalising the electricity retail market since 2001, beginning with large consumers. Households were allowed to choose their own retailer in 2018, with the introduction of the Open Electricity Market. When the SWEM experienced high volatility in the fourth quarter of 2021, some retailers were not adequately hedged and were exposed to high wholesale electricity prices. This led to the exit of six retailers¹. Today, there are ten active retailers², including four independent retailers, providing choices to consumers. While the percentage of households on retail plans has fallen amidst rising retail prices, the percentage remains relatively high at ~40%.

7 EMA will **enhance the regulatory framework for electricity retailers to ensure that they are more resilient against market volatilities, and to strengthen consumer protection**. The regulatory enhancements include raising the qualifying criteria so that only credible industry participants with sufficient financial strength and sustainable business propositions will be allowed to retail electricity to consumers. EMA will be progressively rolling out these enhancements from August 2023.

Temporary Price Cap for Singapore Wholesale Electricity Market (SWEM)

8 When the global energy crunch began in 4Q 2021, the disruption of gas supplies and surge in global oil and natural gas prices led to greater volatility in the SWEM. EMA swiftly introduced measures to secure our energy supply and to stabilise the market. These included introducing a standby fuel facility, directing generation companies to contract sufficient fuel, as well as schemes such as the Temporary Electricity Contracting Support Scheme to help consumers obtain retail contracts. These measures, together with lower global gas prices, have stabilised the SWEM.

9 To further strengthen the SWEM, on 1 July 2023, EMA introduced a Temporary Price Cap (TPC) mechanism which acts as a “circuit breaker” during sustained periods of extreme price volatility in the SWEM. Similar mechanisms have been implemented in other jurisdictions, such as Australia, the Philippines, and Texas.

Gas Aggregation

10 EMA is also exploring ways to aggregate gas procurement and obtain longer term and more secure gas contracts. More details will be released in due course.

Conclusion

11 These guardrails will bring about a more secure yet competitive power system, so that consumers can continue receiving a reliable supply of electricity even as we embark on our energy transition.

¹ iSwitch, Best Electricity, Ohm Energy, UGS Energy, SilverCloud Energy, ValuEnergy

² 6 gentailers (Keppel Electric, Sembcorp Power, Tuas Power, PacificLight Energy, Senoko Energy, Geneco/Seraya Energy). 4 IRs (Diamond Electric, Union Power, Sunseap EDPR, Flo Energy)