

INDUSTRY COMMENTS ON DRAFT DETERMINATION PAPER AND FE’S REVISED REPORT

Keppel Merlimau Cogen’s (Keppel) Comments

S/N	Section/Paragraph in Draft Determination Paper/Report	Keppel’s Comments
1	Draft Determination Paper Paragraph 17(c)	<p>Keppel disagrees that the current VC Allocation method should be retained. Instead, we are appealing that the VC Allocation method be adjusted equitably according to the gencos’ CCGT capacity on the following grounds.</p> <ol style="list-style-type: none"> 1) Vesting contract aims to “promote <u>efficiency</u> and competition in the electricity market for the benefit of consumers” in Singapore. The current VC allocation method is inequitable and outdated as it rewards gencos for fuel oil-fired plants that are inefficient as compared to CCGT plants. Due to the surplus of CCGT plants to meet Singapore’s electricity demand today, these inefficient plants are not operated currently and do not even contribute to providing energy and reserves in the system. Continuing with current VC allocation will only allow such inefficient generation capacities to continue to exist, impeding the renewal of generation technologies. Hence, changing the allocation of VCL to be based on effective CCGT capacity improves resource adequacy relative to status quo. This will encourage planting of efficient generation capacities and retiring older and inefficient units in the system which is beneficial to the market; 2) Based on Frontier Economics review, changing the allocation of VCL such that the vesting contract quantities are allocated based on effective CCGT capacity does not have any material impact on price outcomes, concluding that there is little drawback in making the changes; 3) Given that the exercise of market power by large gencos is no longer an issue, we

S/N	Section/Paragraph in Draft Determination Paper/Report	Keppel's Comments
		<p>are appealing that EMA implements a change in VC allocation methodology for a fairer and more equitable allocation of vesting quantities to <u>ALL</u> gencos. It is evident from Frontier Economics review that changing the VC allocation based on effective CCGT capacity is more superior to the status quo and there is little drawback or administrative burden in implementing the change. EMA should thus take a more balanced and objective stance in being equitable to all gencos given that all gencos are under tremendous stress with the current market conditions, not just the larger gencos.</p>
2	Draft Determination Paper Paragraph 17(c) and 15	<p>We note that EMA intends to adopt the Balanced Market regime where vesting contract is to be rolled back progressively.</p> <p>Based on the proposed timeline, VCL will be maintained at 25% (same as current level) from 1 Jan 2017 till 30 Jun 2018, only reducing to 22.5% in 2H 2018 and 20% in 1H 2019.</p> <p>Maintaining VCL at 25% till 30 Jun 2018 is preserving the status quo for longer than what is justifiable especially with the absence of market power rather than representing a gradual reduction. The market does not need more than 6-9 months to rebalance their portfolios. As such, we propose that the roll back of VCL be as follows:</p> <p>1 Jan 17 to 31 Dec 17 – 25% 1 Jan 18 to 31 Dec 18 – 20% 1 Jan 19 onwards – LNG Vesting level</p> <p>Based on the above proposed rollback schedule, we also appeal to EMA to modify the VC allocation method based on CCGT capacity from 1 July 2017. Changing the allocation</p>

S/N	Section/Paragraph in Draft Determination Paper/Report	Keppel's Comments
		methodology will not create changes to <u>aggregate</u> contract positions in the market. This is also aligned with EMA's view to ensure market participants are able to adjust their portfolios accordingly.
3	Draft Determination Paper Paragraph 17(c)	<p>We note that the rationale of not changing the VC allocation method is due to the fact the VC will be phased out and there is little benefit to implement such change during the short transition period.</p> <p>Vesting Contract Regime is reviewed on a biennial basis. The objective of such review is to ensure that vesting contracts are still relevant and serve its aim of promoting efficiency and competition in the electricity market and at the same time curb market power. EMA's proposed transition of roll back is more than 2 years. This cannot be construed as a short period and therefore used to substantiate that it is not beneficial to introduce VC allocation changes that promote resource efficiency to the vesting contract regime for the benefit of the market. Unless EMA decides to roll back vesting contract level to LNG Vesting immediately, we are of the view that the VC allocation method should be changed in 2017.</p> <p>With biennial review, it is possible that in the 2019-2020 review, EMA decides to further delay the roll back of VC level (due to unexpected changes in market conditions). When we revisit the allocation methodology again in 2 years, will it still be viewed that 2 years is short and hence no substantial economic benefit is derived? We cannot agree that the VC allocation changes are not implemented simply on grounds that the transition period is short.</p> <p>Given that there is no material administrative burden in changing the VC allocation method</p>

S/N	Section/Paragraph in Draft Determination Paper/Report	Keppel's Comments
		and gencos require 6-9 months to re-balance their contractual positions, we believe that implementing a change in allocation method from 1 July 2017 is beneficial to the development of the market both in the short run and the long run.
4	Draft Determination Paper Paragraph 17 (b)	<p>For the unvested MSSL load, for MSSL to procure such load from the electricity futures market on behalf of non-contestable consumers, we urge that a robust framework, methodology and procedures be developed and rigorously tested, and be subjected to formal industry consultation prior to implementation.</p> <p>We propose that these unvested MSSL load be allocated to the gencos through bilateral trades based on their CCGT capacity starting from 1 Jan 2017.</p> <p>Applying allocation method based on CCGT capacities for the unvested MSSL load instead of EMA's earlier tender approach would give gencos a more level playing field to compete in, which is especially important in today's challenging electricity market.</p>
5	Draft Determination Paper Paragraph 16	<p>We are still concerned with the significant negative financial impact to constrained gencos with the exercise of locational market power due to the transmission network constraints.</p> <p>The transmission constraints in the network are no fault of the constrained gencos and yet they are made to "pay" for huge price separation and suffer heavy negative financial impact.</p> <p>Frontier Economic's assessment that the occurrence of nodal price separation is not frequent may be flawed as there were many instances that constrained gencos had to reduce their scheduled dispatch deliberately to avoid the threat of financial losses due to price separation. Consequently, the market is not dispatching the more efficient generating</p>

S/N	Section/Paragraph in Draft Determination Paper/Report	Keppel's Comments
		<p>units and the constrained gencos are unfairly penalized for transmission network constraints.</p> <p>Though the constraints are likely to be removed over time, it is still critical that immediate measures be implemented to curb the exercise of transient market power. We are proposing to adopt weighted MNN pricing for the constrained gencos in the event that localized market power is being exercised for the next 2 years prior to the constraints being removed.</p>

PacificLight Power's (PacificLight) Comments

S/N	Section/Paragraph in Draft Determination Paper/Report	PacificLight's Comments
1	FE Report Section 6.4.1 (Balanced Market) EMA Draft Determination Paragraph 17 (c)	As the rollback of the vesting to LNG vesting level is meant to be transitory, PLP therefore advocates a shorter period than the proposed two and half year rollback schedule of 25% till 30 June 2018, 22.5% in 2H of Dec 2018, 20% in 1H 2019 and LNG vesting from July 2019 onwards.
	FE Report Section 4.2.7 (Sculpting of Vesting Contracts) EMA Draft Determination Paragraph 7 (VCL for	At the inception of the Vesting regime peak weighting factors were applied to mitigate any market power over peak periods. Given that the EMA have stated in the Draft Determination Paper that there is "limited evidence of the likely exercise of market power in the near-term", the requirement for peak weighting factors to be used in the current vesting arrangements has diminished.

S/N	Section/Paragraph in Draft Determination Paper/Report	PacificLight's Comments
	2017 & 2018)	PLP would therefore propose that the peak weighting factors are removed and that vesting levels are evenly allocated across each of the three period-types (i.e. peak, off-peak, shoulder).

SembCorp Cogen's (Sembcorp) Comments

S/N	Section/Paragraph in Draft Determination Paper/Report	Sembcorp's Comments
1	FE Report Section 4.5.1 (Effectiveness)	<p>Frontier Economics (FE) has pointed out both in its report as well as in its response to Sembcorp Cogen Pte Ltd's previous comments that the current approach of allocating Balance Vesting Quantities (BVQ) according to licensed capacity (which includes steam units) causes market inefficiencies for two reasons:</p> <ul style="list-style-type: none"> • <u>Firstly</u>, in the current over-supplied market, the steam units are seldom run and require <i>"at least 24-48 hours to return to operation"</i>. Hence there is less basis to allocate vesting quantities to such capacity to limit market power. • <u>Secondly</u>, the current scheme impedes the retirement of these inefficient plants. <p>FE concluded that there were <i>"grounds to improve the effectiveness of the vesting contracts regime through alternative contract allocations"</i>, mentioning that an allocation method based on CCGT and OCGT capacity (excluding the steam units) would be more appropriate for the market.</p>

S/N	Section/Paragraph in Draft Determination Paper/Report	Sembcorp's Comments
		<p>Based on the current Vesting Contract Level (VCL) and vesting contract allocation methodology which includes the inefficient steam units, only the three big gencos (namely Senoko Energy, YTL PowerSeraya and Tuas Power Generation) receive BVQ whereas the other, smaller gencos do not. This is clearly inequitable and tilts the playing field in the big gencos' favour at the expense of the smaller gencos.</p> <p>The situation is all the more inappropriate because it is widely acknowledged that market power is no longer an issue. Indeed, FE mentioned in its report that they "<i>observe little evidence of the persistent exercise of market power</i>" in the current market.</p> <p>To maintain the VCL at 25% with the current allocation mechanism is to retain what is clearly an inefficient relic of the market at the expense of consumers and the small gencos.</p> <p>At the briefing for EMA's Draft Determination on 9 September 2016, FE had expressed the view that, while it agreed that the current allocation methodology of vesting contracts is flawed, it would be impractical to change the allocation methodology since it would be a relatively short period of time before the BVQ is set to zero. If the decision is to keep the BVQ longer than necessary to ease the transition into the arrangement where BVQ is set to zero, then we urge EMA to also distribute the BVQ in a manner that is fair and equitable to all gencos rather than choose to maintain the status quo on the basis that it is the less laborious and more "practical" option.</p> <p>We do not understand why it would be "impractical" to change the allocation methodology and are happy to work with FE and EMA on the more effective and equitable BVQ allocation</p>

S/N	Section/Paragraph in Draft Determination Paper/Report	Sembcorp's Comments
		based on CCGT capacity.

Senoko Energy's (Senoko) Comments

S/N	Section/Paragraph in Draft Determination Paper/Report	Senoko's Comments
1	Vesting Contract Level	<ol style="list-style-type: none"> 1. As expressed in our previous submissions, Senoko continues to believe that the comprehensive review of the vesting contracts (VC)s should give consideration to the impact that the VC regime (or alternatives) will have on market sustainability and the role that vesting has had in providing de facto stability of costs and revenue in the industry over time. Market sustainability is an important consideration given the current market cycle, which EMA has acknowledged is challenging for gencos. 2. The Vesting Contract Level (VCL) would need to be well in excess of 25% to mitigate the impact of the issues that are affecting our business now and for a number of years to follow. While we recognise the limitations of using the VCL as a mechanism to provide support we believe that the transition from the current vesting configuration is too short and should be extended before a more gradual reduction to LNG vesting levels occurs. 3. Based on the VCL proposed in the Draft Determination we request that EMA gives consideration to other measures outside of the VC regime to assist affected businesses with key infrastructure to move through the transition period. Such initiatives are

S/N	Section/Paragraph in Draft Determination Paper/Report	Senoko's Comments
		important to help avoid potential disruption to stakeholders and ensure assets remain in good order to support the system for when they are needed in the future.
2	Capacity Concentration Caps	<p>4. The Draft Determination proposes to “[i]mpose a capacity market share cap of 25% on each generation licensee. The existing capacity cap imposed on each of the three large gencos will remain until their respective capacity market share has fallen below the 25% threshold”. We believe that it is important that current licenced capacity allocations are respected even if there is retirement of older generation capacity. We have the following comments and suggestions on the concentration cap proposal:</p> <ul style="list-style-type: none"> A. We believe that it is important for EMA to specify and document the input parameters that will be used to calculate the concentration caps and, in particular, indicate whether denominator includes all forms of electricity production in Singapore (such as embedded generation and small scale facilities). B. We suggest that EMA consider excluding non-dispatchable generation (e.g., solar) from the numerator of the calculation because such generation sources, often intermittent, have a very limited role in the potential exercise of market power. C. We propose that the current licenced capacities for each genco be set as a lower limit so as to clearly enable decommissioning and subsequent replacement of capacity. If this is not adopted, then we suggest that the denominator of the calculation be set at a value no lower than the current installed generation capacity. These measures would reduce uncertainty that potential retirement of generation capacity may create for capacity addition plans.

S/N	Section/Paragraph in Draft Determination Paper/Report	Senoko's Comments
		<p>D. Furthermore, we suggest that EMA consider issues relating to how the cap would be applied with respect to the timing of approval for the addition of new capacity. Given that capacity expansions may have significant lead times, it may be necessary for the cap to be considered in a “prospective” way to avoid unnecessary delays to economically feasible projects.</p> <p>E. EMA's Guidelines on Evaluation of Merger and Acquisition Proposals in the Electricity Industry (September 2004), contains references to market concentration. If the capacity concentration caps are implemented, we suggest that EMA consider reviewing the Guidelines to ensure alignment and to potentially relax the restriction on cross ownership of the three large gencos subject to the cap test being met.</p>
3	Comments on FE Report and Responses to Industry	<p>5. We note the analysis in the Frontier Economics (FE) Report of August 2016 (page 83 and Appendix E), regarding their concerns that the current wholesale market price cap of \$4,500/MWh does not enable efficient marginal peaking plant to recover their fixed costs. We suggest the EMA review this finding and consider increasing the wholesale market price cap to provide a reasonable opportunity for the market to recognise and send price signals reflecting the value of peaking capacity. We think creating this environment is important for ongoing system resource adequacy.</p> <p>6. In our comments on the Consultation Paper, Senoko provided a number of reasons why hedging unvested MSSL load is unlikely to be as effective in mitigating market power as the current vesting contracts. FE responded that as there is limited scope for gencos to</p>

S/N	Section/Paragraph in Draft Determination Paper/Report	Senoko's Comments
		<p>exercise market power under current market conditions, hedging the unvested MSSL load is as effective at mitigating market power as an equivalent vesting level. If FE's analysis is to be accepted, then we suggest that EMA revise the peak vesting period weighting factor to 1 so that the profile of the AVQ is essentially baseload.</p> <p>7. We note that FE's responses to a number of Senoko's specific comments on the modelling analysis contained in their Draft Report is a generic statement that "the modelling analysis is based on reasonable assumptions developed in discussion with the EMA, and that the modelling results are robust to a range of sensitivities". We continue to contend that has not been demonstrated to be the case, in particular for the following examples:</p> <ul style="list-style-type: none"> A. The retail contract level assumed for each genco is based on historic retail market shares. FE acknowledge that contract distribution can be expected to be dynamic when discussing hedging of NCC load. Therefore, retail contract levels should similarly be treated as dynamic as the VCL evolves. B. Both the base case and the bidding sensitivity case underestimate the offer structure of peaking plant relative to what would be required to achieve positive economic outcomes for such plant. At minimum, we would expect that the bidding sensitivity case assumption to be incorporated in the base case, as this is a closer (albeit lower) approximation of the prices observed when peaking capacity is dispatched under current market conditions.

YTL PowerSeraya's (Seraya) Comments

S/N	Section/Paragraph in Draft Determination Paper/Report	Seraya's Comments
1	FE Report Section 6.1.2	<p>Agree that it is unlikely to be beneficial to incur the disruption associated with reallocating BVQ based on effective capacity. Changing the allocation methodology would be an unwarranted changing of the goalposts. An increase in the allocation of Vesting Contract Quantities to gencos for whom the control of market power was and is not a concern cannot be justified on the basis of the control of market power.</p>
2	Draft Determination Paragraph 10b	<p>YTL PowerSeraya disagrees with the imposition of a capacity market share cap of 25%. The purchase of PowerSeraya was with the understanding that the company and its successors would be allowed to have a total generation capacity of up to 3,100MW. With a capacity market share cap of 25%, if YTL PowerSeraya were to retire generation capacity and enough generation capacity was retired by other generation companies, YTL PowerSeraya would be prevented from fully replacing the retired generation capacity to get back to a total generation capacity of 3,100MW.</p> <p>Even with a company with a capacity market share above 25%, markets can still be highly competitive.</p>
3	Draft Determination Paragraph 14	<p>Vesting has not been used just to control market power. It has also been used to encourage the uptake of LNG through LNG Vesting as well as cap regulated tariffs paid by non-contestable consumers as evidenced by tendering out non-contestable load with only discounts to Vesting Price being accepted and the tender quantities being taken from Vesting Quantities with unsuccessful tender quantities reallocated back to Vesting Quantities. It is reasonable for the scope of the Vesting Contract Regime to be expanded to cater for electricity market sustainability in the absence of other measures being implemented to cater for electricity market sustainability. YTL PowerSeraya reiterates its request for the Vesting Contract Level to be set at a minimum of 40% up to 2023 for investor certainty.</p> <p>Sufficient certainty of a reasonable return on capital is needed for investors to invest in new</p>

S/N	Section/Paragraph in Draft Determination Paper/Report	Seraya's Comments
		<p>plant and maintain existing plant. It is noted that there is a proposed Capacity Assurance Scheme to prevent Singapore's reserve margin falling below a set threshold. The activation of the proposed Capacity Assurance Scheme would however mean that investors have insufficient confidence in Singapore's electricity market with a regression from a pool market towards a Power Purchase Agreement market. The proposed Capacity Assurance Scheme uses a five year contract and if investors lack confidence in the returns outside of the five year contract, the pricing of the five year contract could be at a very high price as investors would want to recover most if not all of the investment costs plus a reasonable rate of return from the contract instead of over a longer period of around twenty years when there is sufficient certainty of a reasonable return on capital from the electricity market.</p> <p>The policy to encourage the contracting of LNG needed to make Singapore's LNG Terminal viable and an LNG hub which gencos supported has caused market distortions in the form of excess generation capacity accompanied by heavy Take-or-Pay risks. It is therefore reasonable for investors to expect certain revenue support in the form of a sufficiently high Vesting Contract Level to tide over the difficult situation brought about by policy implementation.</p>
4	Draft Determination Para 17b	The hedging of unvested MSSL load should not be through a tender. The practice of either tendering MSSL load at a discount to Vesting Price or hedging MSSL load through Vesting is not consistent with a sustainable, non-discriminatory market.
5	Draft Determination Para 17c	Though EMA is proposing to determine the Vesting Contract Level not just for 2017 and 2018 but beyond to 2023, the biennial review for setting of the Vesting Contract Level should continue. This would mean that the Vesting Contract Level beyond 2018 determined through this current review would be indicative and for 2019-2020 would be finalised through a separate review conducted in 2018 with additional separate reviews at later dates to finalise the setting of the Vesting Contract Level for later years.

Tuas Power Generation's (Tuas) Comments

S/N	Section/Paragraph in Draft Determination Paper/Report	Tuas' Comments
1	FE Report Section 4.3.2 (Capacity Caps)	We would like to clarify the statement "As at the end of December 2015, Tuas was only 224MW short of its limit." For Tuas Power group, we understand we were 93.1MW short of our 2,670MW licensed capacity.
2	Draft Determination Paper, Paragraph 17a	<p>By proposing to adopt a balanced market regime, it signifies a relatively "hands-off" approach to manage market power.</p> <p>In Tuas Power's perspective, it is not necessary to continue to impose the 2,670MW hard cap in our electricity generation licence given that our capacity market share is well below 25% threshold.</p>

Tuaspring's Comments

S/N	Section/Paragraph in Draft Determination Paper/Report	Tuaspring's Comments
1	Draft Determination, Paragraph 17 (c)	The proposed VCL rollback schedule departs significantly from EMA's earlier decision in September 2014 to systematically rollback VCL to 20% by 2016, and is also not in line with the Consultant's recommendations. This only serves to prolong the adoption of VCR in the SWEM while benefiting selected Gencos to the detriment of others. There are avenues

S/N	Section/Paragraph in Draft Determination Paper/Report	Tuaspring's Comments
		available for MSSL to "prudently hedge" unvested load through tenders or EFM. Accordingly, Tuaspring proposes that the VCL is immediately reduced to LNG Vesting level effective 2017.