

Rule modification title	Temporary Price Cap Mechanism
Submitted By: Date:	Energy Market Authority (EMA) 16 June 2023
Rules Version/ Chapter/ Section	<p><u>Market Rules</u> (Version 1 Jan 2023):</p> <ul style="list-style-type: none"> • Chapter 3 section 3.11B • Appendix 6D section D.24 • Appendix 6J section J.1 • Appendix 6L section L.4 • Appendix 6N (new) • Chapter 7 section 4.1 • Chapter 8
Description of Market Rules	Please refer to Annex 1 for the proposed modifications to the market rules.
Reasons for amendment	The proposed modifications to the market rules are to reflect the necessary rule changes according to the “Temporary Price Cap Mechanism” final determination paper published by EMA on 16 June 2023.
Impact of proposed amendment on MPs, MO, PSO and general public	<p>There will be a temporary price cap (TPC) mechanism put in place, which will subject nodal prices and the uniform Singapore energy price (USEP) to a lower cap when it is activated. The price caps for primary reserve, contingency reserve, and regulation will also be adjusted appropriately to ensure that the priority for dispatch for the various products remains consistent when the TPC is activated.</p> <p>Compensation will be allowed for market participants of generation registered facilities or import registered facilities that were dispatched and failed to recover its actual costs of supply from payments received in real-time markets during periods of TPC activation. As a result, the Monthly Energy Uplift Charge (MEUC) may increase.</p>
EMC’s Comments	<p>Comments on the proposed rule modifications have been addressed in the “Temporary Price Cap Mechanism” final determination paper published by EMA on 16 June 2023.</p> <p>The proposed modifications are made pursuant to the EMA’s directive made under Section 46(3)(b) of the Electricity Act.</p> <p>The EMA approved the proposed modifications on 16 June 2023.</p> <p>The modifications will take effect on 1 July 2023.</p>

Annex 1 – Market Rule Amendments

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
<u>CHAPTER 3</u>	<u>CHAPTER 3</u>	
[New section]	<p><u>3.11B COMPENSATION IN RELATION TO THE TEMPORARY PRICE CAP MECHANISM</u></p> <p><u>3.11B.1</u> <u>Where a market participant makes a request for compensation under section N.3.5 of Appendix 6N, the market participant shall (i) set out the market participant’s proposed amount of compensation together with the requisite supporting documents, and (ii) make such request no later than 8 weeks after the dispatch period where the temporary price cap has ceased to apply as communicated by the EMC by means of electronic communications. The Authority will take into consideration the market participant’s proposal to determine the final compensation. The EMC shall pay the market participant the final compensation amount according to section 3.12.</u></p>	To allow for compensation when the temporary price cap is active and market participants are unable to recover their actual costs of supply in those periods.

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
<u>CHAPTER 6</u>	<u>CHAPTER 6</u>	
APPENDIX 6D – SECTION C: LINEAR PROGRAM	APPENDIX 6D – SECTION C: LINEAR PROGRAM	
<p>D.24 <u>PRICE FORMATION</u></p> <p>D.24.1.1 For <i>generation registered facilities</i> that are not <i>multi-unit facilities</i>, and for <i>generation settlement facilities</i> that are not <i>pseudo generation settlement facilities</i>, represented as <i>synchronised</i> in the <i>dispatch network data</i> or connected to the dispatch network in accordance with section D.6.5 in the <i>dispatch period</i>, the <i>market energy price</i> shall be calculated as follows:</p> <p style="text-align: center;">...</p> <p>The price MEP^m shall then be further modified in accordance with section D.24.5.</p>	<p>D.24 <u>PRICE FORMATION</u></p> <p>D.24.1.1 For <i>generation registered facilities</i> that are not <i>multi-unit facilities</i>, and for <i>generation settlement facilities</i> that are not <i>pseudo generation settlement facilities</i>, represented as <i>synchronised</i> in the <i>dispatch network data</i> or connected to the dispatch network in accordance with section D.6.5 in the <i>dispatch period</i>, the <i>market energy price</i> shall be calculated as follows:</p> <p style="text-align: center;">...</p> <p>The price MEP^m shall then be further modified in accordance with section D.24.5 <u>for <i>dispatch periods</i> where the <i>temporary price cap</i> is not in effect, or in accordance with section D.24.5A for <i>dispatch periods</i> where the <i>temporary price cap</i> is in effect.</u></p>	<p>To establish how the USEP and respective prices will be calculated with respect to whether the temporary price cap is in effect or otherwise.</p>

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
<p>D.24.1.2 For <i>generation registered facilities</i> that are <i>multi-unit facilities</i> represented as <i>synchronised</i> in the <i>dispatch network data</i> or connected to the dispatch network in accordance with section D.6.5 in the <i>dispatch period</i>, the <i>market energy prices</i> shall be calculated as follows:</p> $MEP^{m(g)} = \frac{\sum_{u \in \text{CONNECTED UNITS}_g} (\text{Proportion}_u \times \text{EnergyPrice}_{n(u)})}{\sum_{u \in \text{CONNECTED UNITS}_g} \text{Proportion}_u}$ <p>...</p> <p>The price MEP^m shall then be further modified in accordance with section D.24.5.</p>	<p>D.24.1.2 For <i>generation registered facilities</i> that are <i>multi-unit facilities</i> represented as <i>synchronised</i> in the <i>dispatch network data</i> or connected to the dispatch network in accordance with section D.6.5 in the <i>dispatch period</i>, the <i>market energy prices</i> shall be calculated as follows:</p> $MEP^{m(g)} = \frac{\sum_{u \in \text{CONNECTED UNITS}_g} (\text{Proportion}_u \times \text{EnergyPrice}_{n(u)})}{\sum_{u \in \text{CONNECTED UNITS}_g} \text{Proportion}_u}$ <p>...</p> <p>The price MEP^m shall then be further modified in accordance with section D.24.5 <u>for <i>dispatch periods</i> where the <i>temporary price cap</i> is not in effect, or in accordance with section D.24.5A for <i>dispatch periods</i> where the <i>temporary price cap</i> is in effect.</u></p>	

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
<p>D.24.1.3 For <i>pseudo generation settlement facilities</i>, the <i>market energy price</i> shall be calculated as follows:</p> <p>...</p> <p>where:</p> <p>MEP^{m(g)} is the <i>market energy price</i> for <i>market network node m</i> corresponding to the <i>generation registered facility</i> that <i>energy offer g</i> is for calculated in sections D.24.1.1 or D.24.1.2 after it has been modified in accordance with section D.24.5.</p>	<p>D.24.1.3 For <i>pseudo generation settlement facilities</i>, the <i>market energy price</i> shall be calculated as follows:</p> <p>...</p> <p>where:</p> <p>MEP^{m(g)} is the <i>market energy price</i> for <i>market network node m</i> corresponding to the <i>generation registered facility</i> that <i>energy offer g</i> is for calculated in sections D.24.1.1 or D.24.1.2 after it has been modified in accordance with section D.24.5 <u>for dispatch periods where the temporary price cap is not in effect, or in accordance with section D.24.5A for dispatch periods where the temporary price cap is in effect.</u></p>	
<p>D.24.2 Nodal spot prices for <i>dispatch network nodes</i> or NSP_n shall be calculated from the values of EnergyPrice_n, the dual variables corresponding to constraint D.16.1.2 for the relevant <i>dispatch network node</i>, and then further modified in accordance with section D.24.5.</p>	<p>D.24.2 Nodal spot prices for <i>dispatch network nodes</i> or NSP_n shall be calculated from the values of EnergyPrice_n, the dual variables corresponding to constraint D.16.1.2 for the relevant <i>dispatch network node</i>, and then further modified in accordance with section D.24.5 <u>for dispatch periods where the temporary price cap is not in effect, or in accordance with section D.24.5A for dispatch periods where the temporary price cap is in effect.</u></p>	

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
[New Section]	<u>D.24.2A Reference nodal spot prices for <i>dispatch network nodes</i> or $RNSP_n$ shall be calculated from the values of $EnergyPrice_n$, the dual variables corresponding to constraint D.16.1.2 for the relevant <i>dispatch network node</i>, and then further modified in accordance with section D.24.5.</u>	
D.24.3 <i>Reserve</i> prices for each <i>reserve</i> class shall be calculated from the values of $ReservePrice_c$, the dual variables corresponding to constraint D.17.3.4, and then further modified in accordance with section D.24.5.	D.24.3 <i>Reserve</i> prices for each <i>reserve</i> class shall be calculated from the values of $ReservePrice_c$, the dual variables corresponding to constraint D.17.3.4, and then further modified in accordance with section D.24.5 <u>for <i>dispatch periods</i> where the <i>temporary price cap</i> is not in effect, or in accordance with section D.24.5A for <i>dispatch periods</i> where the <i>temporary price cap</i> is in effect.</u>	
D.24.4 The <i>market regulation price</i> or <i>MFP</i> shall be calculated from the values of $RegulationPrice$, the dual variable corresponding to constraint D.18.2.1, and then further modified in accordance with section D.24.5.	D.24.4 The <i>market regulation price</i> or <i>MFP</i> shall be calculated from the values of $RegulationPrice$, the dual variable corresponding to constraint D.18.2.1, and then further modified in accordance with section D.24.5 <u>for <i>dispatch periods</i> where the <i>temporary price cap</i> is not in effect, or in accordance with section D.24.5A for <i>dispatch periods</i> where the <i>temporary price cap</i> is in effect.</u>	

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
<p>D.24.5 The market clearing engine shall produce the following modified prices corresponding to the prices referred to in sections D.24.1 to D.24.4 for each dispatch period:</p> <p>D.24.5.1 if the price referred to any of sections D.24.1 to D.24.4 is between the applicable upper and lower limits specified in Appendix 6J section J.1, then the modified price shall equal that price;</p> <p>D.24.5.2 if the price referred to any of sections D.24.1 to D.24.4 exceeds the applicable upper limit specified in Appendix 6J section J.1, then the modified price shall be set to that upper limit; and</p> <p>D.24.5.3 if the price referred to any of sections D.24.1 to D.24.4 is below the applicable lower limit specified in Appendix 6J section J.1, then the modified price shall be set to that lower limit.</p>	<p>D.24.5 The market clearing engine shall produce the following modified prices corresponding to the prices referred to in sections D.24.1 to D.24.4 for each dispatch period:</p> <p>D.24.5.1 if the price referred to any of sections D.24.1 to D.24.4 is between the applicable upper and lower limits specified in Appendix 6J section J.1 <u>J.1.7</u>, then the modified price shall equal that price;</p> <p>D.24.5.2 if the price referred to any of sections D.24.1 to D.24.4 exceeds the applicable upper limit specified in Appendix 6J section J.1 <u>J.1.7</u>, then the modified price shall be set to that upper limit; and</p> <p>D.24.5.3 if the price referred to any of sections D.24.1 to D.24.4 is below the applicable lower limit specified in Appendix 6J section J.1 <u>J.1.7</u>, then the modified price shall be set to that lower limit.</p>	

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
[New Section]	<p><u>D.24.5A</u> If the <i>temporary price cap</i> as referred to in section N.3.1 of <u>Appendix 6N</u> is activated, notwithstanding section D.24.5, the <i>market clearing engine</i> shall apply the upper and lower limits under <u>Appendix 6J</u>, section J.1.7A in its determination of <u>modified prices as referred to in D.24.1 to D.24.4 for each dispatch period</u> the <i>temporary price cap</i> is active for. For the avoidance of doubt, the upper limits under section J.1.7A of <u>Appendix 6J</u> shall not be applied in the determination of the <u>RNSP_n</u> as referred to in D.24.2A.</p>	

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
<p>D.24.6 The <i>market clearing engine</i> shall, for each <i>dispatch period</i>, determine the <i>uniform Singapore energy price</i> for the <i>settlement interval</i> corresponding to that <i>dispatch period</i> in accordance with the following formula:</p> <p>USE = <i>uniform Singapore energy price</i> P = $\sum_n (W^n \times NSP^n) / \sum_n W^n$ where: {n n∈NODES}</p> $W^n = \sum_{\substack{p \in \text{ENERGYBIDS}_n, \\ p \notin \text{INTERTIEENERGYBIDS}}} \text{Purchase}_p - \sum_{j \in \text{DEFICITGENERATIONBLOCKS}_n} \text{DeficitGenerationBlock}_{n,j}$ <p>NSPⁿ = the nodal spot price for <i>DMN n</i> referred to in section D.24.2 after it has been modified in accordance with section D.24.5.</p>	<p>D.24.6 The <i>market clearing engine</i> shall, for each <i>dispatch period</i>, determine the <i>uniform Singapore energy price</i> for the <i>settlement interval</i> corresponding to that <i>dispatch period</i> in accordance with the following formula:</p> <p>USE = <i>uniform Singapore energy price</i> P = $\sum_n (W^n \times NSP^n) / \sum_n W^n$ where: {n n∈NODES}</p> $W^n = \sum_{\substack{p \in \text{ENERGYBIDS}_n, \\ p \notin \text{INTERTIEENERGYBIDS}}} \text{Purchase}_p - \sum_{j \in \text{DEFICITGENERATIONBLOCKS}_n} \text{DeficitGenerationBlock}_{n,j}$ <p>NSPⁿ = the nodal spot price for <i>DMN n</i> referred to in section D.24.2 after it has been modified in accordance with section <u>D.24.5 or section D.24.5A where applicable.</u></p>	

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[New Section]	<p><u>D.24.6A The market clearing engine shall, for each dispatch period, determine the reference uniform Singapore energy price or RUSEP corresponding to that dispatch period in accordance with the following formula:</u></p> <p><u>RUS</u> \equiv <u>reference uniform Singapore energy price</u> <u>EP</u> \equiv <u>$\frac{\sum_n (W^n \times RNSP^n)}{\sum_n W^n}$</u></p> <p><u>where:</u></p> <p><u>$\{n n \in \text{NODES}\}$</u></p> $W^n = \frac{\sum_{\substack{p \in \text{ENERGYBIDS}_n, \\ p \in \text{INTERTIEENERGYBIDS}}} \text{Purchase}_p - \sum_{j \in \text{DEFICITGENERATIONBLOCKS}_n} \text{DeficitGenerationBlock}_{n,j}}{\quad}$ <p><u>RNSPⁿ = the nodal spot price for DNN n referred to in section D.24.2A after it has been modified in accordance with section D.24.5.</u></p>	

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
<p>D.24.7 The <i>market clearing engine</i> shall, for each <i>dispatch period</i>, determine the <i>market reserve price</i> or MRP_x for each <i>reserve provider group x</i>, in accordance with the following formula:</p> <p>...</p> <p>ReservePrice_c = the <i>reserve class</i> price referred to in section D.24.3 after it has been modified in accordance with section D.24.5.</p>	<p>D.24.7 The <i>market clearing engine</i> shall, for each <i>dispatch period</i>, determine the <i>market reserve price</i> or MRP_x for each <i>reserve provider group x</i>, in accordance with the following formula:</p> <p>...</p> <p>ReservePrice_c = the <i>reserve class</i> price referred to in section D.24.3 after it has been modified in accordance with section D.24.5 <u>or section D.24.5A where applicable.</u></p>	
<p>D.24.8 The <i>market clearing engine</i> shall, for each <i>dispatch period</i> for which the linear program was re-solved pursuant to section D.22A, determine the counterfactual <i>uniform Singapore energy price</i>, or CUSEP, for the <i>settlement interval</i> corresponding to that <i>dispatch period</i> in accordance with the formula in section D.24.6, subject to section D.24.9.</p>	<p>D.24.8 The <i>market clearing engine</i> shall, for each <i>dispatch period</i> for which the linear program was re-solved pursuant to section D.22A, determine the counterfactual <i>uniform Singapore energy price</i>, or CUSEP, for the <i>settlement interval</i> corresponding to that <i>dispatch period</i> in accordance with the formula in section D.24.6 <u>for <i>dispatch periods</i> where the <i>temporary price cap</i> is not in effect, or in accordance with section D.24.6A for <i>dispatch periods</i> where the <i>temporary price cap</i> is in effect,</u> subject to section D.24.9.</p>	
<p>D.24.9 If, for any <i>settlement interval</i>,</p> <p>D.24.9.1 CUSEP_h= USEP_h = 0.9×VoLL; and</p>	<p>D.24.9 If, for any <i>settlement interval</i> <u>where the <i>temporary price cap</i> is not in effect,</u></p> <p>D.24.9.1 CUSEP_h= USEP_h = 0.9×VoLL; and</p>	<p>To establish treatment of the CUSEP and hence the LCP</p>

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
<p>D.24.9.2 shortfalls in <i>energy</i> were scheduled in the counterfactual solution referred to in D.22A for the corresponding <i>dispatch period</i>,</p> <p>then the value of $CUSEP_h$ shall be further modified and set to $1 \times VoLL$.</p>	<p>D.24.9.2 shortfalls in <i>energy</i> were scheduled in the counterfactual solution referred to in D.22A for the corresponding <i>dispatch period</i>,</p> <p>then the value of $CUSEP_h$ shall be further modified and set to $1 \times VoLL$.</p>	<p>when the TPC is in effect.</p>
<p>Explanatory Note: The CUSEP is modified in an energy shortfall situation to better reflect the value of dispatchable load that was voluntarily curtailed by LRFs with REB.</p>		
<p>[New Section]</p>	<p><u>D.24.9A</u> <u>If, for any <i>settlement interval</i> where the <i>temporary price cap</i> is in effect,</u></p> <p><u>D.24.9A.1</u> <u>$CUSEP_h = RUSEP_h = 0.9 \times VoLL$; and</u></p> <p><u>D.24.9A.2</u> <u>shortfalls in <i>energy</i> were scheduled in the counterfactual solution referred to in D.22A for the corresponding <i>dispatch period</i>,</u></p> <p><u>then the value of $CUSEP_h$ shall be further modified and set to $1 \times VoLL$.</u></p> <p>Explanatory Note: The CUSEP is modified in an energy shortfall situation to better reflect the value of dispatchable load that was voluntarily curtailed by LRFs with REB.</p>	

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks																								
APPENDIX J – PRICE LIMITS AND CONSTRAINT VIOLATION PENALTIES	APPENDIX J – PRICE LIMITS AND CONSTRAINT VIOLATION PENALTIES																									
<p><u>J.1 MAXIMUM AND MINIMUM PRICES</u></p> <p>J.1.2 The upper limit on <i>energy</i> prices in <i>standing offers, offer variations</i> and <i>settlements</i>, and the upper limit on <i>load curtailment prices</i> shall be:</p> <p style="padding-left: 40px;">EnergyPriceMax</p> <p>...</p> <p>J.1.7 Price Bound Values:</p> <table border="1" data-bbox="356 798 960 1355"> <thead> <tr> <th>Parameter</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EnergyPriceMin</td> <td>0.9 *CDC</td> </tr> <tr> <td>REBPriceMin</td> <td>1.5 * BVP</td> </tr> <tr> <td>EnergyPriceMax</td> <td>0.9* VoLL</td> </tr> <tr> <td>REBPriceMax</td> <td>1.00 * VoLL</td> </tr> <tr> <td>RegPriceMax</td> <td>0.06 * VoLL</td> </tr> <tr> <td>ResPriPriceMax</td> <td>0.85 * VoLL</td> </tr> <tr> <td>ResConPriceMax</td> <td>0.65 * VoLL</td> </tr> </tbody> </table>	Parameter	Value	EnergyPriceMin	0.9 *CDC	REBPriceMin	1.5 * BVP	EnergyPriceMax	0.9* VoLL	REBPriceMax	1.00 * VoLL	RegPriceMax	0.06 * VoLL	ResPriPriceMax	0.85 * VoLL	ResConPriceMax	0.65 * VoLL	<p><u>J.1 MAXIMUM AND MINIMUM PRICES</u></p> <p>J.1.2 The upper limit on <i>energy</i> prices in <i>standing offers, offer variations and settlements</i>, and the upper limit on <i>load curtailment prices</i> shall be:</p> <p style="padding-left: 40px;">EnergyPriceMax</p> <p><u>J.1.2B</u> The upper limit on <i>load curtailment prices</i> shall be:</p> <p style="padding-left: 40px;"><u>LoadCurtailmentPriceMax</u></p> <p><u>J.1.2C</u> The upper limit on <i>energy prices in standing offers and offer variations</i> shall be:</p> <p style="padding-left: 40px;"><u>EnergyOfferMax</u></p> <p>...</p> <p>J.1.7 Price Bound Values:</p> <table border="1" data-bbox="1137 1037 1742 1319"> <thead> <tr> <th>Parameter</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>EnergyPriceMin</td> <td>0.9 * CDC</td> </tr> <tr> <td>REBPriceMin</td> <td>1.5 * BVP</td> </tr> <tr> <td>EnergyPriceMax</td> <td>0.9 * VoLL</td> </tr> </tbody> </table>	Parameter	Value	EnergyPriceMin	0.9 * CDC	REBPriceMin	1.5 * BVP	EnergyPriceMax	0.9 * VoLL	<p>To establish the price bound values when the temporary price cap is in effect, and make modifications to the price bound values when the temporary price cap is not in effect.</p>
Parameter	Value																									
EnergyPriceMin	0.9 *CDC																									
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	LoadCurtailmentPriceMax	<u>0.9 * VoLL</u>	
	EnergyOfferMax	<u>0.9 * VoLL</u>	
	REBPriceMax	1.00 * VoLL	
	RegPriceMax	0.06 * VoLL	
	ResPriPriceMax	0.85 * VoLL	
	ResConPriceMax	0.65 * VoLL	
	J.1.7A <u>Price Bound Values that will apply if the <i>temporary price cap</i> is in effect:</u>		
	<u>Parameter</u>	<u>Value</u>	
	EnergyPriceMin	<u>0.9*CDC</u>	
	REBPriceMin	<u>1.5 * BVP</u>	
	EnergyPriceMax	<u>Min [TPC Energy Multiplier* TPC Price Parameter, 0.9* VoLL]</u>	

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	<u>LoadCurtailmentPrice</u> <u>Max</u>	<u>0.9* VoLL</u>	<p>defined within the TPC Final Determination Paper.</p> <p>The TPC Regulation Multiplier, TPC Primary Reserve Multiplier and TPC Contingency Reserve Multiplier are variable ratios to ensure that the Regulation, Primary Reserves and Contingency Reserves Price Cap will be reduced in proportion when the TPC is applied, as</p>
<u>EnergyOfferMax</u>	<u>0.9 * VoLL</u>		
<u>REBPriceMax</u>	<u>1.00*VoLL</u>		
<u>RegPriceMax</u>	<u>TPC Regulation Multiplier * EnergyPriceMax</u>		
<u>ResPriPriceMax</u>	<u>TPC Primary Reserve Multiplier * EnergyPriceMax</u>		
<u>ResConPriceMax</u>	<u>TPC Contingency Reserve Multiplier * EnergyPriceMax</u>		

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		determined in the TPC Final Determination Paper.
APPENDIX L – CALCULATION OF LOAD CURTAILMENT QUANTITY AND LOAD CURTAILMENT PRICE	APPENDIX L – CALCULATION OF LOAD CURTAILMENT QUANTITY AND LOAD CURTAILMENT PRICE	
<p>L.4 <u>LOAD CURTAILMENT PRICE</u></p> <p>L.4.1 The <i>load curtailment price</i> (in \$/MWh) for a given <i>dispatch period</i> h shall be calculated as:</p> $LCP_h = \frac{\text{Max}\left[\left(CUSEP_h - USEP_h\right) \times \frac{1}{3} \times NRQ_h, 0\right]}{\sum_p LCQ_{p,h}}$ <p>where: \sum_p = sum over all <i>LRF</i> p</p> <p>[New Section]</p>	<p>L.4 <u>LOAD CURTAILMENT PRICE</u></p> <p>L.4.1 The <i>load curtailment price</i> (in \$/MWh) for a given <i>dispatch period</i> h <u>where the temporary price cap is not in effect</u> shall be calculated as:</p> $LCP_h = \frac{\text{Max}\left[\left(CUSEP_h - USEP_h\right) \times \frac{1}{3} \times NRQ_h, 0\right]}{\sum_p LCQ_{p,h}}$ <p>where: \sum_p = sum over all <i>LRF</i> p</p> <p><u>L.4.1A The load curtailment price (in \$/MWh) for a given dispatch period h where the temporary price cap is in effect shall be calculated as:</u></p>	<p>To establish how the LCP shall be calculated when the temporary price cap is in effect and when it is not in effect.</p>

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
<p>L.4.2 If the <i>load curtailment price</i> (in \$/MWh) referred to in section L.4.1 exceeds the applicable upper price limit for <i>energy</i> specified in section J.1.2 of Appendix 6J, then the <i>load curtailment price</i> shall be modified and set to that upper limit.</p> <div data-bbox="208 560 851 668" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Explanatory Note: The lower limit on the load curtailment price is zero.</p> </div>	$\underline{\underline{LCP_h}} \equiv \frac{\text{Max} \left[(CUSEP_h - RUSEP_h) \times \frac{1}{3} \times NRQ_h, 0 \right]}{\sum_p LCQ_{p,h}}$ <p style="text-align: center;"><u>where:</u> <u>\sum_p = sum over all LRF p</u></p> <p>L.4.2 If the <i>load curtailment price</i> (in \$/MWh) referred to in section L.4.1 and L.4.1A exceeds the applicable upper price limit for energy <u>the load curtailment price</u> specified in section J.1.2B of Appendix 6J, then the <i>load curtailment price</i> shall be modified and set to that upper limit.</p> <div data-bbox="987 868 1583 976" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Explanatory Note: The lower limit on the load curtailment price is zero.</p> </div>	
[New Section]	APPENDIX N – TEMPORARY PRICE CAP	
[New Section]	<p><u>N.1 PURPOSE</u></p> <p><u>N.1.1 This Appendix sets forth the rules relating to the application of the temporary price cap mechanism. This mechanism, when triggered, will result in the application of a temporary price</u></p>	To set forth the design of the TPC mechanism.

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
	cap, where prices will be modified as further described under section D.24.5A of Appendix 6D.	
[New Section]	<p><u>N.2 DETERMINATION OF THE MOVING AVERAGE PRICE AND MOVING AVERAGE PRICE THRESHOLD</u></p> <p><u>N.2.1 The moving average price or MAP for each dispatch period τ shall be the average of the RUSEP as referred to in section D.24.6A of Appendix 6D over the TPC Trigger Periods. The MAP is calculated as follows:</u></p> $\text{MAP}_{\tau} = \frac{\sum_{t=\tau-A+1}^{\tau} \text{RUSEP}_t}{A}$ <p><u>Where:</u></p> <p><u>$A = \text{TPC Trigger Period}$</u></p> <p><u>N.2.2 In the event the market clearing engine fails to produce any real-time price schedule used to determine the prices referred in N.2.1, the EMC shall not use the missing real-time price schedule for that dispatch period. Instead, the EMC shall decrease the number of dispatch periods in the denominator of the MAP by the number of missing dispatch periods.</u></p> <p><u>N.2.3 The moving average price threshold or MAPT for each dispatch period τ applied under this Appendix 6N shall be determined in accordance with the methodology approved by the Authority.</u></p>	To set forth the Moving Average Price and Moving Average Price Threshold parameters for the activation and de-activation of the temporary price cap mechanism.

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
	<p data-bbox="1084 352 1666 635"> Explanatory note: The methodology referred to in this section N.2.3 of Appendix 6N is as published in the Authority’s final determination paper titled “Temporary Price Cap Mechanism” dated 16 June 2023. </p> <p data-bbox="987 663 1818 911"> <u>N.2.4 The <i>TPC Price Parameter</i> and any such relevant information to determine the <i>MAPT</i> shall be provided to the <i>EMC</i> by the <i>Authority</i>. The <i>Authority</i> may revise the <i>TPC Price Parameter</i> and such relevant information from time to time, and such revision shall take effect 5 <i>business days</i> after the date of the <i>EMC</i>’s receipt of such revision from the <i>Authority</i> (or such longer period as may be prescribed by the <i>Authority</i>).</u> </p> <p data-bbox="1084 930 1666 1257"> Explanatory note: Further details on the relevant information to determine the MAPT as referred to in this section N.2.4 of Appendix 6N are published in the Authority’s final determination paper titled “Temporary Price Cap Mechanism” dated 16 June 2023. </p>	
[New Section]	<u>N.3 APPLICATION OF THE TEMPORARY PRICE CAP MECHANISM</u>	

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
	<p>N.3.1 <u>In the event the <i>moving average price</i> for a <i>dispatch period</i> determined in section N.2.1 exceeds the <i>moving average price threshold</i> referred to under section N.2.3 for any <i>dispatch period</i>, a <i>temporary price cap</i> will apply from the next <i>dispatch period</i> for at least the <i>Minimum Trigger Period</i>, where revised price limits as referred to under section D.24.5A of Appendix 6D will apply.</u></p> <p>N.3.2 <u>Upon the occurrence of the event described in section N.3.1, the <i>EMC</i> shall, as soon as practicable, issue a notice by means of electronic communications indicating the <i>dispatch period</i> from which the <i>temporary price cap</i> will take effect.</u></p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Explanatory note:</p> <p>For a given dispatch period, if the temporary price cap is in effect and the MCE fails to produce a real-time pricing schedule that is reflective of this temporary price cap, the temporary price cap shall be applied for the relevant settlement interval that corresponds to this dispatch period.</p> </div> <p>N.3.3 <u>The <i>temporary price cap</i> will cease to take effect for the <i>dispatch period</i> τ_{+1}, provided both the following conditions are met:</u></p> <p>(i) <u>The <i>MAP</i> for the <i>dispatch period</i> τ as referred to section N.2.1 is equal to or less than the <i>moving average price threshold</i>. This condition is calculated as follows.:</u></p>	<p>To set forth the on- and off-trigger conditions for the TPC mechanism, the TPC level and provisions for compensation.</p>

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
	$\frac{MAP_{\tau}}{MAPT_{\tau}} \leq 1$ <p><u>and</u></p> <p>(ii) <u>The temporary price cap has been in effect for at least the Minimum Trigger Period.</u></p> <p><u>N.3.4 If the conditions described in section N.3.3 are met, the EMC shall issue a notice, by means of electronic communications stating the dispatch period from which the temporary price cap will cease to take effect.</u></p> <p><u>N.3.5 Where the temporary price cap referred to in section N.3.1 is in effect, a market participant of a generation registered facility or an import registered facility that:</u></p> <p><u>(a) was issued dispatch instructions for dispatch periods during which the temporary price cap referred to in section N.3.1 was in effect; and</u></p> <p><u>(b) failed to recover its actual costs of supply from payments received from the real-time markets in respect of those dispatch periods,</u></p> <p><u>may make a request for compensation in accordance with section 3.11B.1 of Chapter 3.</u></p>	
<u>CHAPTER 7</u>	<u>CHAPTER 7</u>	

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
<p><u>4.1 THE MONTHLY ENERGY UPLIFT CHARGE</u></p> <p>4.1.1 Prior to the beginning of each calendar month, the EMC shall calculate for that calendar month the monthly amount for compensation and other payments (MACP), which shall be the sum of:</p> <p>...</p> <p>4.1.1.4E the compensation amount referred to under section 3.11A of Chapter 3;</p>	<p><u>4.1 THE MONTHLY ENERGY UPLIFT CHARGE</u></p> <p>4.1.1 Prior to the beginning of each calendar month, the EMC shall calculate for that calendar month the monthly amount for compensation and other payments (MACP), which shall be the sum of:</p> <p>...</p> <p>4.1.1.4E the compensation amount referred to under section 3.11A of Chapter 3;</p> <p>...</p> <p><u>4.1.1.4G the compensation amount referred to under section 3.11B of Chapter 3;</u></p>	<p>To establish that any compensation amount arising from the TPC mechanism will be collected under the Monthly Energy Uplift Charge.</p>
<p style="text-align: center;"><u>CHAPTER 8</u></p>	<p style="text-align: center;"><u>CHAPTER 8</u></p>	
<p>[New Section]</p>	<p><u>1. DEFINITIONS</u></p> <p><u>1.1.177 <i>Minimum Trigger Period</i> refers to the minimum number of <i>dispatch periods</i> the <i>temporary price cap</i> will be in effect for as determined by the <i>Authority</i>.</u></p> <p><u>1.1.181 <i>moving average price</i> or MAP refers to the average of <i>USEP</i> across the latest <i>TPC Trigger Period</i>, calculated under section N.2.1 of Appendix 6N.</u></p> <p><u>1.1.182 <i>moving average price threshold</i> refers to a value used in the assessment of the application of the <i>temporary price cap</i>.</u></p>	<p>To establish new definitions.</p>

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
	<p><u>determined by a methodology approved by the Authority in accordance with section N.2.3 of Appendix 6N.</u></p> <p>1.1.236 <u>reference uniform Singapore energy price or RUSEP means the uniform price of energy that applies for the calculation of the moving average price and the counterfactual uniform Singapore energy price when the temporary price cap is in effect.</u></p> <p>1.1.297 <u>temporary price cap or TPC refers to the value that is used to determine the upper limit of energy prices when the moving average price threshold is reached and is determined in accordance with section J.1.7A of Appendix 6J.</u></p> <p>1.1.300 <u>TPC Energy Multiplier refers to the multiplier used in the calculation of EnergyPriceMax in accordance with section J.1.7A of Appendix 6J, as determined by the Authority.</u></p> <p>1.1.301 <u>TPC Contingency Reserve Multiplier refers to the multiplier used in the calculation of ResConPriceMax in accordance with section J.1.7A. The multiplier is to ensure the ratio between EnergyPriceMax and ResConPriceMax remains consistent between sections J.1.7 and J.1.7A of Appendix 6J, accurate up to two decimal points.</u></p> <p>1.1.302 <u>TPC Price Parameter refers to a value as determined by the Authority, which is used for the calculation of the temporary price cap in accordance with section J.1.7A of Appendix 6J.</u></p>	

Existing Market Rules (1 Jan 2023)	Proposed Changes (Deletions represented by strikethrough text and additions represented by double-underlined text)	Remarks
	<p><u>1.1.303</u> TPC Primary Reserve Multiplier refers to the multiplier used in the calculation of ResPriPriceMax in accordance with section J.1.7A. The multiplier is to ensure the ratio between EnergyPriceMax and ResPriPriceMax remains consistent between sections J.1.7 and J.1.7A of Appendix 6J, accurate up to two decimal points.</p> <p><u>1.1.304</u> TPC Regulation Multiplier refers to the multiplier used in the calculation of RegPriceMax in accordance with section J.1.7A. The multiplier is to ensure the ratio between EnergyPriceMax and RegPriceMax in section J.1.7A of Appendix 6 J remains consistent with that in section J.1.7 of Appendix 6J, accurate up to two decimal points.</p> <p><u>1.1.305</u> TPC Trigger Period refers to a number of the most recent block of <i>dispatch periods</i> as determined by the <i>Authority</i> to be used in the calculation of the <i>moving average price</i> under section N.2.1 of Appendix 6N.</p>	