

MODIFICATION PROPOSAL FORM			
Proposer <i>(Company)</i>	Date of receipt <i>(assigned by Secretariat)</i>	Type of Proposal <i>(delete as appropriate)</i>	Modification Proposal ID <i>(assigned by Secretariat)</i>
SSE	24 th August 2022	Standard	Mod_06_22 v2
Contact Details for Modification Proposal Originator			
Name	Telephone number	Email address	
Stacy Feldmann		Stacy.Feldmann@sse.com	
Modification Proposal Title			
Housekeeping Alignment Modification			
Documents affected <i>(delete as appropriate)</i>	Section(s) Affected	Version number of T&SC or AP used in Drafting	
T&SC Part B		Version 25.0	
Explanation of Proposed Change <i>(mandatory by originator)</i>			
<p>Mod_01_20 sought to address the systems logic that only required a single energy action to be present in the stack in order to set the PMEAs, by ensuring that PMEAs are set to price cap/floor when there are no energy actions in the same direction as the NIV. However, this modification increased the periods when PMEAs are not set by an energy action and the likelihood of a SO Action setting cashout price. Since Mod 01_20 approval, high volume TSO redispatch of the Interconnectors in the BM has become a more frequent system event. Mod 02_21 (approved in August/2021) sought to mitigate this effect, by introducing a flag for Cross Zonal Actions by setting the System Operator Flag to zero for Interconnector Residual Capacity Units. However, this action is being affected by Mod 01_20 since this unintended interaction with an existing and active modification was not assessed beforehand.</p> <p>Both modifications have value in the market, however, the effect of both mods together, has given rise to an unintended consequence relating to system actions. NIV tagging under Mod 01_20 would have been expected to moderate the impact of SO actions setting the imbalance, but it is clear that the large physical volume behind IC actions would make NIV tagging ineffectual, potentially allowing for System IC actions to inappropriately trigger RO obligation - as was experienced in September 2021 and in July 2022 (see example below). Mod 02_21 on the other hand is seeking to ensure that SO actions are flagged out on the principle that system actions should not be allowed to affect cashout.</p> <p>To ensure alignment between these two modifications and that cashout continues to be unaffected by non-energy actions as intended by Mod 02_21, we are proposing a straightforward modification to the calculation of the PMEAs to reflect the Strike Price rather than PCAP. We consider this would be in keeping with the intent of Mod_01_20 whilst preventing unintended consequences. The proposal in the legal drafting is only to target the use of PCAP which was used in cases of system/non-energy actions in the algebra below. This is the only target of the modification. Not on price formation or depressing of true price.</p> <p><u>Instance of market events:</u></p> <p>On 12th July and 13th July, we can see the evidence of the impact arising from the interaction of Mod 02_21 and Mod 01_20, with system IC actions triggering the RO as detailed below:</p> <p>The RO was triggered between 15:30 to 17:30 local time on the 12/07/22 by system IC actions over EWIC. The sheer volume of IC trades means they will flip the system in their direction and are extremely</p>			

likely to form the entire PAR stack (as NIV tagging becomes ineffectual handling large IC actions). On the 13/07/22, the same thing occurred though the Interconnector Price was lower.

You can see below an example from 17:25:

- Below over 800MW of actions have been taken over EWIC at €839/MWh with no system offers. The bid stack was around 100MW meaning the full PAR stack was consisted of this IC action
- Pre-Mod 01_20 this IC action would have been repriced to the highest priced energy bid or offer which here was €173, as below. This would have set cash-out in this example below.
- As PMEA was set to PCEILING or €11.5k, the IC action kept its price, and this set cash-out.
- The BOA's stacks below are relevant for one 5-minute period but the same thing happened in 19 of 24 five minute periods in the 2 hours when the RO was called.

This is a material risk during low wind into Q3 and over W-22.

StartTime	System	Jurisdiction	Unit ID	Unit Name	PBOA	QBOA	SO Flag	NIV Tag	Filtered PBOAs	Filtered QBOAs	PMEA	BOA	StartTime	System	Jurisdiction	Unit ID	Unit Name	PBOA	QBOA	SO Flag	NIV Tag	Filtered PBOAs	Filtered QBOAs	PMEA	BOA	
12/07/2022 18:25:00	Short	NI	LRI016VC	ErGrid Interconnector Designated Activity Company Roman Converter Station	839.99	104.00	SO Flag					11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420163	ESB TH	80.00	-8.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	NI	LRI016VC	ErGrid Interconnector Designated Activity Company Roman Converter Station	839.99	710.00	SO Flag	839.99	839.99		120.70	11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420163	ESB TH	70.00	-19.94	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0166	Powerhouse Generation Limited SAL	610.63	3.00	SO Flag	610.63				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420324	ESB P8A	100.00	-31.99	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0146	Veolia Alternative Energy Ireland Limited SIC1	580.00	2.87	SO Flag	580.00				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420325	ESB P8B	100.00	-31.99	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	GU_A01010	Cumshingaig Power Limited ED 3	500.24	20.00	SO Flag	500.24				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420930	Bord Gas Energy Limited GU_420930	110.00	-20.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0218	Enveco - Viratite Sensors Limited SAL	500.00	8.99	SO Flag	500.00				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420930	Bord Gas Energy Limited GU_420930	140.40	-27.74	Energy				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0193	Enveco - Viratite Sensors Limited SAL	500.00	13.00	SO Flag	500.00				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420950	ESB A02	179.27	-45.94	Energy				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	GU_A01011	Cumshingaig Power Limited ED 5	499.96	20.00	SO Flag	499.96				11.581.37	Offr	12/07/2022 18:25:00	Short	NI	GU_520130	NIE Power Procurement Business B31	143.07	-30.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	GU_A02700	SSE Generation Ireland Ltd	498.50	12.00	SO Flag	498.50				11.581.37	Offr	12/07/2022 18:25:00	Short	NI	GU_520131	NIE Power Procurement Business B32	143.07	-30.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	GU_A02770	SSE Generation Ireland Ltd Rhode1	498.00	12.00	SO Flag	498.00				11.581.37	Offr	12/07/2022 18:25:00	Short	NI	GU_520130	NIE Power Procurement Business B31	143.08	-4.71	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0352	Electricity Exchange Limited LTD DSU4	492.30	2.80	SO Flag	492.30				11.581.37	Offr	12/07/2022 18:25:00	Short	NI	GU_520131	NIE Power Procurement Business B32	143.08	-4.71	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0352	Electricity Exchange Limited LTD DSU4	492.30	8.10	SO Flag	492.30				11.581.37	Offr	12/07/2022 18:25:00	Short	NI	GU_520140	NIE Power Procurement Business B10	192.69	-12.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0140	Electricity Exchange Limited LTD DSU4	492.15	30.00	SO Flag	492.15				11.581.37	Offr	12/07/2022 18:25:00	Short	NI	GU_520140	NIE Power Procurement Business B10	192.69	-12.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	GU_A03060	ESB TH	404.00	5.00	SO Flag	404.00				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0127	EnerHCC Ireland Limited GU_A04050	393.32	16.00	SO Flag	393.32				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0193	ESB ARWP	350.00	7.91	SO Flag	350.00				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0162	EnerHCC Ireland Limited GU_A04050	307.88	9.00	SO Flag	307.88				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	GU_A03168	ESB ART4	306.00	35.00	SO Flag	306.00				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0312	EnerHCC Ireland Limited EN5	266.63	5.00	SO Flag	266.63				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	NI	GU_520044	ESB OT8	244.95	30.00	SO Flag	244.95				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	GU_A02163	ESB ART4	246.73	40.00	SO Flag	246.73				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	GU_A03162	ESB ART12	233.44	39.98	SO Flag	233.44				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	DSU_A0347	EnerHCC Ireland Limited EN5	149.32	14.83	SO Flag	149.32				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	GU_A02210	ESB ER1	120.00	10.00	SO Flag	120.00				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	GU_A03200	ESB AA1	120.00	12.00	SO Flag	120.00				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:25:00	Short	RI	GU_A03251	ESB LZ2	120.00	15.00	SO Flag	120.00				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid
12/07/2022 18:19:00	Short	RI	GU_A03200	ESB ER3	120.00	23.00	SO Flag	120.00				11.581.37	Offr	12/07/2022 18:25:00	Short	RI	GU_420640	Energia Power Generation Limited NIQ	222.45	-31.00	SO Flag				11.581.37	Bid

Legal Drafting Change

(Clearly show proposed code change using **tracked** changes, if proposer fails to identify changes, please indicate best estimate of potential changes)

Original text from Mod_01_20:

E.3.4.2 For each Imbalance Pricing Period, φ , the Market Operator shall calculate the

Marginal Energy Action Price (PMEA φ) as follows:

If $QNIV\varphi > 0$ and there are no PBOuk φ in the same direction as the NIV where $FIPuk\varphi = 1$, $PMEA\varphi = PCAP$;

Where, PCAP is the Market Price Cap

Proposed updated legal drafting:

E.3.4.2 For each Imbalance Pricing Period, φ , the Market Operator shall calculate the

Marginal Energy Action Price (PMEA φ) as follows:

If $QNIV_{\varphi} > 0$ and there are no $PBOuk_{\varphi}$ in the same direction as the NIV where $FIPuk_{\varphi} = 1$, $PMEA_{\varphi} = PSTR_m$;

Where:

- (a) $QNIV_{\varphi}$ is the Net Imbalance Volume Quantity;
- (b) $PBOuk_{\varphi}$ is the Bid Offer Price for Generator Unit, u, and rank, k;
- (c) $FIPuk_{\varphi}$ is the Imbalance Price Flag for Generator Unit, u, and rank, k;
- (d) $PSTR_m$ is the Strike Price for Month, m, which contains Imbalance Settlement Period, y

Modification Proposal Justification

(Clearly state the reason for the Modification)

This change will address and unintended consequence of the proposed change under Mod_01_20 whilst preserving the intent of this previous proposal to change the systems logic. This also aligns with the logic of ensuring that constraint actions taken by the TSO do not trigger the Reliability Option, in the same way as 02_21 will do.

Code Objectives Furthered

(State the Code Objectives the Proposal furthers, see Section 1.3 of Part A and/or Section A.2.1.4 of Part B of the T&SC for Code Objectives)

- (b) to facilitate the efficient, economic and coordinated operation, administration and development of the Single Electricity Market in a financially secure manner;
- (c) to facilitate the participation of electricity undertakings engaged in the generation, supply or sale of electricity in the trading arrangements under the Single Electricity Market;

Implication of not implementing the Modification Proposal

(State the possible outcomes should the Modification Proposal not be implemented)

Failure to implement this proposal will risk Reliability Options being triggered in instances of SO Actions.

<p>Working Group <i>(State if Working Group considered necessary to develop proposal)</i></p>	<p>Impacts <i>(Indicate the impacts on systems, resources, processes and/or procedures; also indicate impacts on any other Market Code such as Capacity Market Code, Grid Code, Exchange Rules etc.)</i></p>
	<p>We would propose that this is a change in mapping with no new parameters being created. Therefore, we consider the change to be potentially minor.</p>

Please return this form to Secretariat by email to balancingmodifications@sem-o.com

Notes on completing Modification Proposal Form:

1. If a person submits a Modification Proposal on behalf of another person, that person who proposes the material of the change should be identified on the Modification Proposal Form as the Modification Proposal Originator.
2. Any person raising a Modification Proposal shall ensure that their proposal is clear and substantiated with the appropriate detail including the way in which it furthers the Code Objectives to enable it to be fully considered by the Modifications Committee.
3. Each Modification Proposal will include a draft text of the proposed Modification to the Code unless, if raising a Provisional Modification Proposal whereby legal drafting text is not imperative.
4. For the purposes of this Modification Proposal Form, the following terms shall have the following meanings:

Agreed Procedure(s):	means the detailed procedures to be followed by Parties in performing their obligations and functions under the Code as listed in either Part A or Part B Appendix D "List of Agreed Procedures". The Proposer will need to specify whether the Agreed Procedure to modify refers to Part A, Part B or both.
T&SC / Code:	means the Trading and Settlement Code for the Single Electricity Market. The Proposer will also need to specify whether all Part A, Part B, Part C of the Code or a subset of these, are affected by the proposed Modification;
Modification Proposal:	means the proposal to modify the Code as set out in the attached form
Derivative Work:	means any text or work which incorporates or contains all or part of the Modification Proposal or any adaptation, abridgement, expansion or other modification of the Modification Proposal

The terms "Market Operator", "Modifications Committee" and "Regulatory Authorities" shall have the meanings assigned to those terms in the Code.

In consideration for the right to submit, and have the Modification Proposal assessed in accordance with the terms of Section 2 of Part A or Chapter B of Part B of the Code (and Part A Agreed Procedure 12 or Part B Agreed Procedure 12) , which I have read and understand, I agree as follows:

1. I hereby grant a worldwide, perpetual, royalty-free, non-exclusive licence:
 - 1.1 to the Market Operator and the Regulatory Authorities to publish and/or distribute the Modification Proposal for free and unrestricted access;
 - 1.2 to the Regulatory Authorities, the Modifications Committee and each member of the Modifications Committee to amend, adapt, combine, abridge, expand or otherwise modify the Modification Proposal at their sole discretion for the purpose of developing the Modification Proposal in accordance with the Code;
 - 1.3 to the Market Operator and the Regulatory Authorities to incorporate the Modification Proposal into the Code;
 - 1.4 to all Parties to the Code and the Regulatory Authorities to use, reproduce and distribute the Modification Proposal, whether as part of the Code or otherwise, for any purpose arising out of or in connection with the Code.
2. The licences set out in clause 1 shall equally apply to any Derivative Works.
3. I hereby waive in favour of the Parties to the Code and the Regulatory Authorities any and all moral rights I may have arising out of or in connection with the Modification Proposal or any Derivative Works.
4. I hereby warrant that, except where expressly indicated otherwise, I am the owner of the copyright and any other intellectual property and proprietary rights in the Modification Proposal and, where not the owner, I have the requisite permissions to grant the rights set out in this form.
5. I hereby acknowledge that the Modification Proposal may be rejected by the Modifications Committee and/or the Regulatory Authorities and that there is no guarantee that my Modification Proposal will be incorporated into the Code.