MODIFICATION PROPOSAL FORM			
Proposer *(Company)*	**Date of receipt** *(assigned by Secretariat)*	**Type of Proposal** *(delete as appropriate)*	**Modification Proposal ID** *(assigned by Secretariat)*
EP UK Investments	**9th April 2024**	**Standard**	**Mod_01_24**
Contact Details for Modification Proposal Originator			
Name	**Telephone number**		**Email address**
Harry Molloy			**h.molloy@tynaghenergy.ie**
Modification Proposal Title			
Inclusion of Difference Charges in Calculation of Make Whole Payment Revenue			
Documents affected *(delete as appropriate)*	**Section(s) Affected**		**Version number of T&SC or Agreed Procedure used in Drafting**
T&SC Part B	**F.11**		**v28.0**
Explanation of Proposed Change *(mandatory by originator)*			

This modification proposes to include Difference Charges for energy sold over the Strike Price in the calculation of Make-Whole Payment Revenue (CREVMWP) where a unit has submitted bids below the Strike Price. Under the current calculation CREVMWP assumes that a unit receives the higher of its bid offer price or the imbalance price. This means that the CREVMWP calculation will assume that a unit has received revenue in excess of the Strike Price, even where it is required to payback the difference between the imbalance price and the Strike Price as per its Reliability Option.

Because CREVMWP is calculated on the basis of contiguous operating periods this means that a unit can incur significant losses if it is constrained on during a period which experiences a spike in the imbalance price. This is because the calculated CREVMWP will be high enough to offset subsequent periods where operating costs are greater than revenue.

This modification will cap the calculated revenue at the higher of the bid offer price and the Strike Price where the bid offer price is below the Strike Price. Where a unit's bid offer price is above the Strike Price, revenue will be the higher of the bid offer price and the imbalance price.

Under F.11.4.3 of the Trading and Settlement Code a unit only receives a Make Whole Payment where CREVWMP is less than operating costs during the running period (COCMWP). This clause will prevent a unit from receiving revenues in excess of the Strike Price.

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

The following amendment is proposed to section F.11.4.2 of the Trading and Settlement Code:

F.11.4.2 The Market Operator shall calculate the Make-Whole Payment Revenue ($CREVMWP_{uk}$) for each Generator Unit, u, for each Contiguous Operating Period, k, in each Billing Period, b, as follows:

$$CREVMWP_{uk}$$

$$= \sum_{\gamma \in k} \left(\sum_{o} \sum_{i} \left(Max\left(PBO_{uoi\gamma}, PIMB_{\gamma} - MAX(PIMB_{\gamma} - PSTR_{\gamma}, 0)\right) \right.\right.$$

$$\times \left(QAOLF_{uoi\gamma} - Max\left(QAOOPOLF_{uoi\gamma}, QAOBIAS_{uoi\gamma}, QAOUNDEL_{uoi\gamma}, QAOTOTSOLF_{uoi\gamma}\right)\right)\right)$$

$$+ \sum_{o} \sum_{i} \left(Min\left(PBO_{uoi\gamma}, PIMB_{\gamma}\right) \right.$$

$$\times \left(QABLF_{uoi\gamma} \right.$$

$$- Min\left(QABBPOLF_{uoi\gamma}, QABBIAS_{uoi\gamma}, QABUNDEL_{uoi\gamma}, QABNFLF_{uoi\gamma}, QABCURLLF_{uoi\gamma}, \right.$$

$$\left. QABTOTSOLF_{uoi\gamma}\right)\right) + \sum_{o} \sum_{i} \left(PBO_{uoi\gamma} \times Max\left(QAOOPOLF_{uoi\gamma} - QAOUNDEL_{uoi\gamma}, 0\right)\right)$$

$$+ \sum_{o} \sum_{i} \left(PBO_{uoi\gamma} \times Min\left(QABBPOLF_{uoi\gamma} - Min\left(QABCURLLF_{uoi\gamma}, QABUNDEL_{uoi\gamma}\right), 0\right)\right)$$

$$+ \sum_{o} \sum_{i} \left(PCURL_{u\gamma} \times Min\left(QABCURLLF_{uoi\gamma} - Min\left(QABBIAS_{uoi\gamma}, QABUNDEL_{uoi\gamma}\right), 0\right)\right)\right)$$

where:

(a) $\sum_{\gamma \in k}$ is a summation over all Imbalance Settlement Periods, γ, within the Contiguous Operating Period, k;

(b) PBO$_{uoi\gamma}$ is the Bid Offer Price for each Accepted Bid Quantity and Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(c) QAOLF$_{uoi\gamma}$ is the Loss-Adjusted Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(d) QABLF$_{uoi\gamma}$ is the Loss-Adjusted Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ;

(e) CAOOPO$_{u\gamma}$ is the Offer Price Only Accepted Offer Payment or Offer Price Only Accepted Offer Charge for Generator Unit, u, in Imbalance Settlement Period, γ;

(f) CABBPO$_{u\gamma}$ is the Bid Price Only Accepted Bid Payment or Bid Price Only Accepted Bid Charge, γ;

(g) CCURL$_{u\gamma}$ is the Curtailment Payment or Charge for Generator Unit, u, in Imbalance Settlement Period, γ;

(h) PIMB$_{\gamma}$ is the Imbalance Settlement Price in Imbalance Settlement Period, γ, calculated in accordance with Chapter E (Imbalance Pricing);

(i) QAOTOTSOLF$_{uoi\gamma}$ is the Loss-Adjusted Trade Opposite TSO Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(j) QABTOTSOLF$_{uoi\gamma}$ is the Loss-Adjusted Trade Opposite TSO Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(k) QABNFLF$_{uoi\gamma}$ is the Loss-Adjusted Non-Firm Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;

(l)	QAOUNDEL$_{uoi\gamma}$	is the Undelivered Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;
(m)	QABUNDEL$_{uoi\gamma}$	is the Undelivered Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;
(n)	QAOBIAS$_{uoi\gamma}$	is the Biased Accepted Offer Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;
(o)	QABBIAS$_{uoi\gamma}$	is the Biased Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;
(p)	QABCURLLF$_{uoi\gamma}$	is the Loss-Adjusted Curtailment Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;
(q)	QAOOPOLF$_{uoi\gamma}$	is the Loss-Adjusted Offer Price Only Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;
(r)	QABBPOLF$_{uoi\gamma}$	is the Loss-Adjusted Bid Price Only Accepted Bid Quantity for Generator Unit, u, for Bid Offer Acceptance, o, for Band, i, in Imbalance Settlement Period, γ, calculated in accordance with section **Error! Reference source not found.**;
(s)	$\sum_o$	is a summation over all Bid Offer Acceptances, o; and
(t)	$\sum_i$	is a summation over all Bands, i.
(u)	*$PSTR_\gamma$ is the Strike Price during settlement period, γ.*	

This change will ensure that where a unit bids below the Strike Price the calculated revenue for the purpose of the Make Whole Payment will be capped at the Strike Price.

Modification Proposal Justification
(Clearly state the reason for the Modification)
This modification is proposed to address the risk of a unit being constrained on at a loss. EPUKI believes that this is consistent with the intended purpose of the Make Whole Payment. EPUKI has experienced instances where a price spike has subsequently resulted in a unit being constrained on at a loss. There is a risk of exposure in the event of future price spikes unless this calculation is updated. Where a unit is constrained on for a period it receives a Make Whole Payment if its combined revenue for the period (CREVMWP) is less than its operating costs for the period (COCMWP). Under the current drafting, CREVMWP does not reflect Difference Charges when the imbalance price exceeds the Strike Price. This means that where a Price Spike occurs and the imbalance price exceeds the Strike Price, CREVMWP will be calculated at a level which is too high and inaccurate of the actual revenues received by a unit. This means that for the duration of the contiguous operating period, a unit can be constrained on at a loss and will not receive a Make Whole Payment as CREVMWP will be greater than COCMWP. This proposed modification will not have any impact on the level of protection offered to Supplier's by the Reliability Option Strike Price. Units will not receive revenue in excess of the Strike Price and this amendment will only be applicable where bids are submitted below the Strike Price. The Make Whole Payment is only applicable where operating costs exceed revenues for the period covered.

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)
A.2.1.4 The aim of this Code is to facilitate the achievement of the following objectives:

(b) to facilitate the efficient, economic, and coordinated operation, administration and development of the Single Electricity Market in a financially secure manner.	
Implication of not implementing the Modification Proposal *(State the possible outcomes should the Modification Proposal not be implemented)*	
Failure to implement this modification will result in potential exposure to constrained on running at a loss for generators with RO obligations.	
Working Group *(State if Working Group considered necessary to develop proposal)*	**Impacts** *(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.)*
	Assessment required pending Mods Committee decision on proposal.
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.