



Single Electricity Market

FINAL RECOMMENDATION REPORT

**MOD_16_21 TEMPORARY USE OF THE MARKET BACK UP PRICE
WHERE AN INTERCONNECTOR TRADE QUANTITY AND PRICE
ARE SUBMITTED**

21 SEPTEMBER 2021

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Document History

Version	Date	Author	Comment
1.0	23 rd Sept 2021	Modifications Committee Secretariat	Issued to Modifications Committee for review and approval
2.0	27 th Sept 2021	Modifications Committee Secretariat	Issued to Regulatory Authorities for final decision

Reference Documents

Document Name
Trading and Settlement Code Proposal

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1. MODIFICATIONS COMMITTEE RECOMMENDATION

RECOMMENDED FOR APPROVAL– MAJORITY VOTE

Recommended for Rejection by Majority Vote		
Andrew Burke	Renewable Generator Member	Approve
Ian Mullins	Supplier Member	Approve
Paraic Higgins (Chair)	Generator Member	Approve
Kevin Hannafin	Generator Member	Approve
Philip Carson	Supplier Member	Approve
Nick Heyward	Flexible Participant Alternate	Approve
David Gascon	Generator Alternate	Approve
Robert McCarthy	DSU Member	Approve
Stacy Feldmann	Generator Member	Approve
Patrick Larkin	Assetless Member	Reject

2. BACKGROUND

This Urgent Modification Proposal was raised by CRU & Uregni and was received by the Secretariat on 17th September 2021. The Proposal was raised and voted on at Meeting 106B on 21st September 2021.

Mod_02_21 V2 was approved by the SEM Committee on 12 August 2021, which introduces a flag for Cross Zonal Actions by setting the System Operator Flag to zero for Interconnector Residual Capacity Units when an Interconnector Trade Quantity and Price is submitted. This was on the basis that such actions should be flagged where taken for system security reasons or to facilitate priority dispatch.

In the Decision Letter, it states, in terms of the implementation date that: *'the SEM Committee direct that Mod_02_21 is implemented and should be made effective on the first available date following the delivery of the required system changes'*

Mod_02_21 is therefore due to be made effective in Release I, which is scheduled for April 2022. No alternative option for earlier implementation of this Modification in advance of system changes could be identified. During the week of the 6th of September 2021, a number of Cross Zonal Actions resulted in high prices which have impacted on Credit Cover requirements and Difference Charges in the market.

As it remains the case that there is no option for **early** implementation of Mod_02_21 **before the end of November 2021 at the earliest**, the Regulatory Authorities are raising a temporary Modification to the TSC to implement the intent of Mod_02_21, insofar as possible, without system changes, until such time as it becomes effective.

The mechanism ~~we have~~ identified to do this is to set the Balancing Market Price to the Market Back Up Price for each Imbalance Pricing Period for which an SO Interconnector Trade Quantity and Price is submitted. The Market Back Up Price is a quantity-weighted average of the prices associated with each Day-ahead Trade Quantity (qTDAxuh, qTDAxvh) and Intraday Trade Quantity (qTIDxuh, qTIDxvh) for all Generator Units and Supplier Units.

We propose to implement this as a temporary Modification until such date as Mod_02_21 is implemented.

3. PURPOSE OF PROPOSED MODIFICATION

3A.) JUSTIFICATION OF MODIFICATION

This Modification aims to implement the intent of Mod_02_21, insofar as possible, for an interim period until the required system changes can be made to implement Mod_02_21.

3B.) IMPACT OF NOT IMPLEMENTING A SOLUTION

If this Modification is not implemented, the events of the 8, 9, 10 and 14 September may occur frequently over the winter period with associated impacts on the Balancing Market Price, despite the approval of Mod_02_21, which is not due to take effect until it is implemented in systems.

3C.) IMPACT ON CODE OBJECTIVES

- (a) to facilitate the efficient, economic and coordinated operation, administration and development of the Single Electricity Market in a financially secure manner;

This Modification aims to implement the effect of Mod_02_21 whereby Cross-Zonal Actions taken for system security reasons or to facilitate priority dispatch do not feed into the price.

- (b) to promote the short-term and long-term interests of consumers of electricity on the island of Ireland with respect to price, quality, reliability, and security of supply of electricity.

This Modification aims to implement the effect of Mod_02_21 as soon as possible to ensure for example that Credit Cover Requirements are not unduly burdensome due to prices set by Cross-Zonal Actions.

4. WORKING GROUP AND/OR CONSULTATION

N/A

5. IMPACT ON SYSTEMS AND RESOURCES

N/A

6. IMPACT ON OTHER CODES/DOCUMENTS

N/A

7. MODIFICATION COMMITTEE VIEWS

EXTRAORDINARY MEETING 106B – 21 SEPTEMBER 2021

Before giving a background to this Modification, the Proposer made a statement in relation to the events that had occurred in recent weeks, acknowledging the significance of these events to members of the Committee and to wider industry, but requesting the Committee to focus on the modification proposal at hand. A reference was made to dates and charges in the past and assurance

was given that discussions are still ongoing in relation to these, but priority must be given to upcoming events and to the proposal for discussion at the meeting.

SO Observer gave an update on Mod_02_21 and confirmed the possibility of an emergency release to fast track the Modification. Assurance was given that following discussions with the vendor, Release H would go through as normal followed by an emergency patch to put through Mod_02_21. This will take place after the required testing has been completed with the expectation that the Modification could be deployed at the end of November.

The Proposer proceeded to give an overview of this Modification noting that it was a temporary fix and would be in place for a shorter period than anticipated due to the potential emergency patch. It was advised that this Modification would aim to achieve the same intent as Mod_02_21 by using Market Back Up Price for cases when SO-SO trades happen until Mod_02_21 becomes effective.

The Proposer noted that some analysis was done on SO-SO trades to date and it was identified in 2021 that in 14% of all half hour trading periods SO-SO trades took place but in over 90% of the cases the prices of those SO-SO trades were below the Strike Price, so there was a possibility of making this modification more targeted, to only capture trades above the Strike Price and the Proposer welcomed feedback from the Committee on each option.

A Generator Member queried if the analysis referred to 5 minutes periods or the settlement period and if the counter party was GB would it affect both counter party trades and cross zonal actions? SO Observer responded stating that it would apply to both type of trades and the process that was being proposed would use part of the business process that is already in place for when the system fails. It was advised that if TSO informs of relevant trades occurring then SEMO will advise Participants that the Day Ahead Market Back Up Price will be used for settlement purposes.

SEMO was asked if the Modification was approved today how quickly it could be implemented and if it would influence how people trade? SEMO responded that this could be achieved quickly as there were no system changes and an existing system process was already being used. SO observer advised that this proposal would be better if confined to prices above €500/MWh (current level of Strike Price) to avoid issues at night when units could be kept on and trades could occur to maintain those baseload units on in anticipation of the morning peak.

A Generator Member noted that further thought may be needed on whether prices should be confined only to those above €500/MWh as this was discussed at the Working Group in relation to Mod_02_21. A DSU Member agreed that the Working Group discussion still stand however this Modification is implementing something different from Mod_02_21 and voiced concerns about the issue being material enough to go that route; the triggers for the urgent Modification were quite different and as an interim approach it is preferable to be as targeted as possible..

SO observer added that in the interim period before deployment of Mod_02_21, the market would be switching between pricing methodologies and it would be preferable to limit these occurrences which would make it harder for PTs, traders and the MO as well.

SEMO advised that in the RAs introduction they mentioned the analysis showing that SO-SO prices were below the strike price in 90% of the trades. If Mod_16_21 was implemented without the price limitation it would apply to all periods going well beyond the intent of Mod_02_21. A Generator Member questioned if the strike price could move away from the €500/MWh filter. SEMO noted it could but the process would not be affected by that change.

DSU Member continued the discussion about the strike price filter and queried if the issue at hand was material enough to put in another Modification and should there be a big change to the imbalance price with only 15% of all trades being discussed and less than 5% coming in at material prices?

The Chair noted that most of the comments made were in support of a strike price filter. An Assetless Member expressed his strong concerns if the price limit was not introduced, stating that according to figures analysed, 52% of pricing periods would be affected by the Mod in its current form and even

with the price limit there would be issues with balance responsibility if high interconnector prices are removed and it may also increase the burden on SO actions to be taken.

There was a large consensus that the early release of Mod_02_21 was very welcomed.

A Generator Member accepted that something needed to be done urgently in the interim while other issues could be addressed going forward. A need for a strike price filter was also supported and assurance was given by SO observer that operationally this will make things easier and quicker to process.

There was further support given for implementing this Modification as it was alleged that a number of participants were running the risk of bankruptcy. There was a concern that if a revised Modification was needed it would delay the overall process. SEMO provided assurance that the changes were minor enough that if voted through could be incorporated into the FRR.

A Flexible Participant Alternate stated that the view in his constituency was polarised and there were concerns that the Modification in the current form would be too far reaching; the Strike Price filter was a very welcomed addition.

An Observer expressed satisfaction with the update on the effective date for Mod_02_21. It was advised that a filter had not been considered for Mod_16_21 but if it was more targeted and practical then it should be looked at. It was questioned if the application of the Modification would be retrospective to the 12th August 2021 given that was the date that the RAs approved MOD_02_21 (under their decision letter) and the date the RAs determined it was “implemented” from (as per the decision letter). The issue of retrospectivity here related to a retrospective *effecting* of rules that had been implemented from the date of implementation of those rules, as opposed to retrospective application of rules to a date before the rules were approved and implemented at all (the latter not being permitted). Their view was legally there were a number of options that could be considered to ensure the new rules under Mod_02_21 apply from their date of implementation (12th August). One option proposed was a re-issue of the RAs’ decision letter of the 12th of August to clarify the effective date of Mod_02_21 as the date of the RAs’ decision letter of 12th August. A second option suggested by the Observer was that the Modification raised today if approved could be issued as an addendum to Mod_02_21 by way of clarification that the effective date of the rules implemented under MOD_02_21 was 12th August and the solution in MOD_16_21 would be the method under which the intent of MOD_02_21 could be given effect in the interim. The third option suggested was that legally the RAs could consider raising another modification regarding section B.17.24 stipulating that for example where considered prudent and reasonable by the RAs retrospective application of Mods can be applied in certain circumstances. It was suggested that these options may be considered if there was a concern around a limit to applying a modification retrospectively. The Observer suggested the Modification itself was in recognition that those charges calculated in the previous weeks contravene the correct interpretation of the rules and market design, the charges were not intended to be incurred and therefore those should also be addressed.

RA Member noted the points raised above but advised that, after a review of the market results in the last few weeks they believed it was important to concentrate first in looking forward to prevent those events from occurring and review what can be done for the past at a later date.

A Supplier Member reiterated his support for an earlier implementation of Mod_02_21 and for a Strike Price filter. The question was raised if the costs of those SO-SO trades would ultimately be recovered via Imperfections. SO Observer replied that the current recovery mechanism still applies; the end consumer will ultimately end up paying for SO-SO trades, should they arise, and unless system conditions change substantially with favourable wind and generator outages is being completed, such high prices for SO-SO trades will still occur.

A Supplier Member offered support for this modification as the current situation needed to be addressed before the start of the winter season. The Supplier Member pointed out though that this modification still does not address the core issue that is causing the general problem with SO-SO trades and Imbalance pricing. This is an on-going problem and it needs to be reviewed urgently to effect the intent of the SEM market design.

A Flexible Participant Member believed Modifications such as this reduce incentives for Generators to be available in a Market with generation shortages and observed that prices already do not rise as much as in GB causing exports to be scheduled in times of shortages. The Flexible Participant Member suggested that a review of the functioning of the market is preferable to piecemeal changes. Assurance was given by a Generator Member that Generators are currently highly incentivised to be available and that will not change with this Mod.

SEMO summarised that this interim measure could be in place within a week subject to Minutes and FRR being issued in the coming days and prompt approval from SEMC, noting that the RAs were cognisant of the underlying issues that should be considered in the future.

Chair summarised the views predominantly in favour of a Strike Price filter and asked the Proposer to highlight the areas of changes for the Final Recommendation Report.

Discussion on Legal Drafting

The Proposer noted there would be a number of minor elements that would be updated in the legal drafting of this Modification to reflect the discussion:

1. Include Strike Price threshold to the drafting to reflect application of change where above strike price.
2. Change the text in Section H.16, paragraph introduction to “*replace with*”
3. In section E.3.6.B change point (b) and then add a point (c) for “price associated Day-Ahead Trade Quantities” instead of Market Back Up Price
4. Add an update in E.5.1.3 to reflect the same change in the calculation

8. PROPOSED LEGAL DRAFTING

As per discussion at Meeting 106B, the following form, submitted by the proposer on the 22nd September following directions from the Panel, will supersede any previous submission of the Modification.

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>
CRU and UR	22nd September 2021	Urgent	Mod_16_21 updated

Contact Details for Modification Proposal Originator		
Name	Telephone number	Email address
Gina Kelly	01 4000 8000	gkelly@cru.ie
Modification Proposal Title		
Temporary use of the Market Backup Price where an Interconnector Trade Quantity and Price are submitted		
Documents affected <i>(delete as appropriate)</i>	Section(s) Affected	Version number of T&SC or AP used in Drafting
T&SC Part B	Temporary changes to sections E.3.6 and E.3.5 via Section H	23.0 baseline + Mod_03_19
Explanation of Proposed Change <i>(mandatory by originator)</i>		
<p>Mod_02_21 V2 was approved by the SEM Committee on 12 August 2021, which introduces a flag for Cross Zonal Actions by setting the System Operator Flag to zero for Interconnector Residual Capacity Units when an Interconnector Trade Quantity and Price is submitted. This was on the basis that such actions should be flagged where taken for system security reasons or to facilitate priority dispatch.</p> <p>In the Decision Letter, it states, in terms of the implementation date that: <i>'the SEM Committee direct that Mod_02_21 is implemented and should be made effective on the first available date following the delivery of the required system changes'</i></p> <p>Mod_02_21 is therefore due to be made effective in Release I, which is scheduled for April 2022. No alternative option for earlier implementation of this Modification in advance of system changes could be identified. During the week of the 6th of September 2021, a number of Cross Zonal Actions resulted in high prices which have impacted on Credit Cover requirements and Difference Charges in the market.</p> <p>As it remains the case that there is no option for immediate implementation of Mod_02_21, the Regulatory Authorities are raising a temporary Modification to the TSC to implement the intent of Mod_02_21, insofar as possible, without system changes, until such time as it becomes effective.</p> <p>The mechanism we have identified to do this is to set the 30 minute Balancing Market Price to the Market Back Up Price based on the price associated with the Day-Ahead Trade Quantities for the relevant Imbalance Settlement Period, where an SO Interconnector Trade Quantity and Price is submitted with a price above the Strike Price. A broader Modification which applies to all periods where such a trade occurs has been considered with the Modifications Committee and it has been agreed that a more targeted approach is</p>		

appropriate for this interim change.

The Market Back Up Price is a quantity-weighted average of the prices associated with each Day-ahead Trade Quantity (qTDAXuh, qTDAXvh) and Intraday Trade Quantity (qTIDxuh, qTIDxvh) for all Generator Units and Supplier Units. Under Section E.5.1.3 of the Code, where this cannot be calculated in accordance with Section E.5.1.1 and E.5.1.2, the Market Back Up Price is set equal to the price associated with the Day-Ahead Trade Quantities for an Imbalance Settlement Period. In discussions with SEMO on the most appropriate mechanism to implement this temporary change, SEMO has noted that it will be more straightforward to use the approach set out in Section E.5.1.3 rather than the real time calculation described in Section E.5.1.1. This is reflected in changes to the legal drafting below.

We propose to implement this as a temporary Modification until such date as Mod_02_21 is implemented.

Legal Drafting Change

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

These legal drafting changes will be added to Section H 'Interim Arrangements' from the date the Modification is made effective until such time as Mod_02_21 is implemented.

The text in red below shows the additional text to be added to Section H including a temporary addition to Section E.3.6 and E.5.1.3.

H.16.1 Until the date that is the Mod_02_21 Deployment Date, paragraph E.3.6.2 will be replaced with;

E.3.6 Determination of Imbalance Price

E.3.6.2 For each Imbalance Pricing Period, ϕ , the Market Operator shall calculate the Initial Imbalance Price (PIIMB $_{\phi}$) as follows:

- (c) Except where QNIV $_{\phi}$ is equal to zero **or where an SO Interconnector Trade Quantity and Price is submitted which exceeds the Strike Price:**

$$PIIMB_{\phi} = \frac{\sum_k (PRBO_{uk\phi} \times QAO_{uk\phi} \times TIP_{uk\phi} - PRBO_{uk\phi} \times QAB_{uk\phi} \times TIP_{uk\phi})}{\sum_k (QAO_{uk\phi} \times TIP_{uk\phi} - QAB_{uk\phi} \times TIP_{uk\phi})}$$

where:

- (i) \sum_k is the sum of values over all ranks, k;
(ii) PRBO $_{uk\phi}$ is the Replaced Bid Offer Price for Generator Unit, u, and rank, k;

- (iii) $QAO_{uk\phi}$ is the Accepted Offer Quantity for Generator Unit, u, and rank, k;
 - (iv) $QAB_{uk\phi}$ is the Accepted Bid Quantity for Generator Unit, u, and rank, k; and
 - (v) $TIP_{uk\phi}$ is the Imbalance Price Tag for Generator Unit, u, and rank, k.
- (d) Where $QNIV\phi$ is equal to zero, $PIIMB\phi$ is set equal to the Market Back Up Price as determined in accordance with section E.5.
- (e) For each Imbalance Settlement Period, γ , in which an SO Interconnector Trade Quantity and Price is submitted which exceeds the Strike Price, the Imbalance Settlement Price is set equal to the price associated with the Day-Ahead Trade Quantities for the Imbalance Settlement Period, determined in accordance with section E.5.1.3.

H.16.2 Until the date that is the Mod_02_21 Deployment Date, paragraph E.5.1.3 will be replaced with;

E.5.1.3 Where the Market Operator:

(a) is unable to calculate the Market Back Up Price in accordance with paragraphs E.5.1.1 and E.5.1.2 by the time it is required to publish the Imbalance Settlement Price in accordance with paragraphs E.2.2.2 and E.2.2.3; or

(b) is notified of an SO Interconnector Trade which exceeds the Strike Price

the Market Back-Up Price will be set equal to the price associated with the Day-Ahead Trade Quantities for that Imbalance Settlement Period and the Imbalance Settlement Price will be set equal to the Market Back Up Price. Where this value is not available for the Imbalance Settlement Period, the most recent available price associated with the Day-Ahead Trade Quantities for the Imbalance Settlement Period which occurs at the same time on a previous Trading Day, which is the same day of the week and is not a Week Day which is a Non-Working Day, shall be used.

The following definition will also be added to the Glossary:

Mod_02_21 Deployment Date	means the date proposed by the Market Operator following discussion with the Modifications Committee, and approved by the Regulatory Authorities for the purpose of H.16, such date to be published on the Market Operator web site at least three Working Days in advance of the date concerned.
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Modification Proposal Justification

(Clearly state the reason for the Modification)

This Modification aims to implement the intent of Mod_02_21, insofar as possible, for an interim period until the required system changes can be made to implement Mod_02_21.

Code Objectives Furthered	
<i>(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)</i>	
<p>(f) to facilitate the efficient, economic and coordinated operation, administration and development of the Single Electricity Market in a financially secure manner;</p> <p>This Modification aims to implement the effect of Mod_02_21 whereby Cross-Zonal Actions taken for system security reasons or to facilitate priority dispatch do not feed into the price.</p> <p>(g) to promote the short-term and long-term interests of consumers of electricity on the island of Ireland with respect to price, quality, reliability, and security of supply of electricity.</p> <p>This Modification aims to implement the effect of Mod_02_21 as soon as possible to ensure for example that Credit Cover Requirements are not unduly burdensome due to prices set by Cross-Zonal Actions.</p>	
Implication of not implementing the Modification Proposal	
<i>(State the possible outcomes should the Modification Proposal not be implemented)</i>	
<p style="text-align: center;">Working Group</p> <p style="text-align: center;"><i>(State if Working Group considered necessary to develop proposal)</i></p>	<p style="text-align: center;">Impacts</p> <p style="text-align: center;"><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>
N/A	If this Modification is not implemented, the events of the 8, 9, 10 and 14 September may occur frequently in the coming weeks with associated impacts on the Balancing Market Price, despite the approval of Mod_02_21, which is not due to take effect until it is implemented in systems.
<p>Please return this form to Secretariat by email to balancingmodifications@sem-o.com</p>	

9. LEGAL REVIEW

N/A

10. IMPLEMENTATION TIMESCALE

It is recommended that this Modification is implemented on a Trading Day basis on the first practicable Trading Period within trading operational hours (between 07:00am and 19:00) after publication of RAs decision.

1 APPENDIX 1: MOD_16_21 TEMPORARY USE OF THE MARKET BACK UP PRICE WHEN AN INTERCONNECTOR TRADE QUANTITY AND PRICE ARE SUBMITTED

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>
CRU and UR	17 th September 2021	Urgent	Mod_16_21
Contact Details for Modification Proposal Originator			
Name	Telephone number	Email address	
Gina Kelly		gkelly@cru.ie	
Modification Proposal Title			
Temporary use of the Market Backup Price where an Interconnector Trade Quantity and Price are submitted			
Documents affected <i>(delete as appropriate)</i>	Section(s) Affected	Version number of T&SC or AP used in Drafting	
T&SC Part B	Temporary addition to section E.3.6 via Section H	23.0	
Explanation of Proposed Change <i>(mandatory by originator)</i>			
<p>Mod_02_21 V2 was approved by the SEM Committee on 12 August 2021, which introduces a flag for Cross Zonal Actions by setting the System Operator Flag to zero for Interconnector Residual Capacity Units when an Interconnector Trade Quantity and Price is submitted. This was on the basis that such actions should be flagged where taken for system security reasons or to facilitate priority dispatch.</p> <p>In the Decision Letter, it states, in terms of the implementation date that: <i>'the SEM Committee direct that Mod_02_21 is implemented and should be made effective on the first available date following the delivery of the required system changes'</i></p> <p>Mod_02_21 is therefore due to be made effective in Release I, which is scheduled for April 2022. No alternative option for earlier implementation of this Modification in advance of system changes could be identified. During the</p>			

week of the 6th of September 2021, a number of Cross Zonal Actions resulted in high prices which have impacted on Credit Cover requirements and Difference Charges in the market.

As it remains the case that there is no option for early implementation of Mod_02_21, the Regulatory Authorities are raising a temporary Modification to the TSC to implement the intent of Mod_02_21, insofar as possible, without system changes, until such time as it becomes effective.

The mechanism we have identified to do this is to set the Balancing Market Price to the Market Back Up Price for each Imbalance Pricing Period for which an SO Interconnector Trade Quantity and Price is submitted. The Market Back Up Price is a quantity-weighted average of the prices associated with each Day-ahead Trade Quantity (qTDxuh, qTDxvh) and Intraday Trade Quantity (qTIDxuh, qTIDxvh) for all Generator Units and Supplier Units.

We propose to implement this as a temporary Modification until such date as Mod_02_21 is implemented.

Legal Drafting Change

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

These legal drafting changes will be added to Section H 'Interim Arrangements' from the date the Modification is made effective until such time as Mod_02_21 is implemented.

The text in red below shows the additional text to be added to Section H including a temporary addition to Section E.3.6.

H.16.1 Until the date that is the Mod_02_21 Deployment Date, the following will be added to paragraph E.3.6.2;

E.3.6 Determination of Imbalance Price

E.3.6.2 For each Imbalance Pricing Period, ϕ , the Market Operator shall calculate the Initial Imbalance Price (PIIMB $_{\phi}$) as follows:

- (h) Except where QNIV $_{\phi}$ is equal to zero **or where an SO Interconnector Trade Quantity and Price is submitted for an Imbalance Pricing Period, ϕ :**

$$PIIMB_{\phi} = \frac{\sum_k (PRBO_{uk\phi} \times QAO_{uk\phi} \times TIP_{uk\phi} - PRBO_{uk\phi} \times QAB_{uk\phi} \times TIP_{uk\phi})}{\sum_k (QAO_{uk\phi} \times TIP_{uk\phi} - QAB_{uk\phi} \times TIP_{uk\phi})}$$

where:

- (i) \sum_k is the sum of values over all ranks, k;
(ii) PRBO $_{uk\phi}$ is the Replaced Bid Offer Price for Generator Unit, u, and rank, k;

- (iii) $QAO_{uk\phi}$ is the Accepted Offer Quantity for Generator Unit, u, and rank, k;
 - (iv) $QAB_{uk\phi}$ is the Accepted Bid Quantity for Generator Unit, u, and rank, k; and
 - (v) $TIP_{uk\phi}$ is the Imbalance Price Tag for Generator Unit, u, and rank, k.
- (i) Where $QNIV_{\phi}$ is equal to zero, **or where an SO Interconnector Trade Quantity and Price is submitted for an Imbalance Pricing Period, ϕ** , $PIIMB_{\phi}$ is set equal to the Market Back Up Price as determined in accordance with section E.5.

The following definition will also be added to the Glossary:

Mod_02_21 Deployment Date	means the date proposed by the Market Operator following discussion with the Modifications Committee, and approved by the Regulatory Authorities for the purpose of H.16, such date to be published on the Market Operator web site at least three Working Days in advance of the date concerned.
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Modification Proposal Justification

(Clearly state the reason for the Modification)

This Modification aims to implement the intent of Mod_02_21, insofar as possible, for an interim period until the required system changes can be made to implement Mod_02_21.

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)

- (j) to facilitate the efficient, economic and coordinated operation, administration and development of the Single Electricity Market in a financially secure manner;

This Modification aims to implement the effect of Mod_02_21 whereby Cross-Zonal Actions taken for system security reasons or to facilitate priority dispatch do not feed into the price.

- (k) to promote the short-term and long-term interests of consumers of electricity on the island of Ireland with respect to price, quality, reliability, and security of supply of electricity.

This Modification aims to implement the effect of Mod_02_21 as soon as possible to ensure for example that Credit Cover Requirements are not unduly burdensome due to prices set by Cross-Zonal Actions.

Implication of not implementing the Modification Proposal

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

<p style="text-align: center;">Working Group</p> <p style="text-align: center;"><i>(State if Working Group considered necessary to develop proposal)</i></p>	<p style="text-align: center;">Impacts</p> <p style="text-align: center;"><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>
N/A	<p>If this Modification is not implemented, the events of the 8, 9, 10 and 14 September may occur frequently over the winter period with associated impacts on the Balancing Market Price, despite the approval of Mod_02_21, which is not due to take effect until it is implemented in systems.</p>
<p>Please return this form to Secretariat by email to balancingmodifications@sem-o.com</p>	