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| **MODIFICATION PROPOSAL FORM** |
| **Proposer***(Company)* | **Date of receipt***(assigned by Secretariat)* | **Type of Proposal***(delete as appropriate)* | **Modification Proposal ID***(assigned by Secretariat)* |
| **SEMO** | **30/08/18** | **Urgent** | **MOD\_27\_18** |
| **Contact Details for Modification Proposal Originator** |
| **Name** | **Telephone number** | **Email address** |
| **Martin Kerin** |  | **Martin.Kerin@eirgrid.com** |
| **Modification Proposal Title** |
| **Interim arrangements in Appendix O for Instruction Profiling and Bid Offer Acceptance Quantity Outcomes in a Subset of Undo Scenarios**  |
| **Documents affected***(delete as appropriate)* | **Section(s) Affected** | **Version number of T&SC or AP used in Drafting** |
| **T&SC Part B** | **Chapter H** | **20** |
| **Explanation of Proposed Change***(mandatory by originator)* |
| The Imbalance Pricing Certification Report (link [here](http://www.sem-o.com/ISEM/General/Notice%20of%20Certification%20on%20Imbalance%20Pricing%2013%20August%202018.pdf)) highlighted that there are a number of scenarios where there are “anomalous” outcomes. The scenarios where these are occurring are primarily in “undo” scenarios, e.g. where a unit receives a dispatch instruction to go to one output level, but before they reach that output level target they are issued with another instruction to go to a different output level to that stated in the first instruction. These would be expected to be relatively rare cases. In order to align the system implementation and rules for I-SEM go-live the following interim modifications are proposed which outline the differences in approach the system will take at that time. The main differences are that in some cases additional Pseudo Dispatch Instructions are created which result in more QBOAs than expected, and therefore impact on the quantities in each QBOA (the net volume is correct in these instances, but the allocation of the dispatch volume to individual QBOAs may deviate in some cases from what would theoretically be expected). These cases arise where there is multiple MWOF Dispatch Instructions which cross Imbalance Settlement Period or Imbalance Pricing Period boundaries, where following a DESY Dispatch Instruction a SYNC Dispatch Instruction is effective before the Minimum Off Time has been surpassed, and where following a SYNC Dispatch Instruction a DESY Dispatch Instruction is effective after the profile has reached Registered Minimum Stable Generation but before the Minimum On Time has been surpassed. In one particular case a SYNC Dispatch Instruction is ignored if a DESY Dispatch Instruction is effective before the target of the Registered Minimum Stable Generation Level is reached. In another particular case, the profile created for the MWOF instruction in these scenarios is seen as reaching the target output level at the same time as the Instruction Effective Time of the Dispatch Instruction, and the timing of the corresponding PMWO Pseudo Dispatch Instruction is also at this time. |
| **Legal Drafting Change***(Clearly show proposed code change using* ***tracked*** *changes, if proposer fails to identify changes, please indicate best estimate of potential changes)* |
| * 1. INTERIM RULES TO APPLY FOR A FIXED PERIOD OF TIME FOR APPENDIX O: INSTRUCTION PROFILING CALCULATIONS
		1. Instruction Profiling and Bid Offer Acceptance Quantity Outcomes in a Subset of Undo Scenarios
			1. Until the date that is six months after the Cutover Time, paragraph 16 of Appendix O shall be replaced with:

“16. A Pseudo Dispatch Instruction shall not be created for a corresponding Dispatch Instruction where the System Operator issues a subsequent Dispatch Instruction with Instruction Effective Time at or before the time at which the Pseudo Dispatch Instruction would nominally be created in accordance with , unless otherwise stated in this Appendix O.”* + - 1. Until the date that is [six months] after the Cutover Time, the row for the “MWOF” Instruction Code entry for Table 2 of Appendix O shall be replaced with:

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| MWOF | n/a | **Step 1**: Adjust the Generator Unit Output to the specified Target Instruction Level until a specified Effective Until Time or until the Target Instruction Level must be maintained in order to comply with the Generator Unit’s Accepted Technical Offer Data, whichever is later; If a subsequent MWOF Dispatch Instruction has an Instruction Effective Time which is between the Instruction Effective Time of another prior MWOF Dispatch Instruction and the Instruction Effective Time of that prior MWOF Dispatch Instruction’s corresponding PMWO Pseudo Dispatch Instruction that would nominally be created, and if the time the Target Instruction Level would be reached following the trajectory of either the prior or the subsequent MWOF Dispatch Instruction is in a different Imbalance Pricing Period or Imbalance Settlement Period, as applicable, to the Instruction Effective Time of the corresponding MWOF Dispatch Instruction, then Step 1 shall be changed for the prior MWOF Dispatch Instruction such that the time the trajectory for the Physical Notification Instruction Profile to reach the Target Instruction Level for the prior MWOF Dispatch Instruction shall be taken to be equal to the Instruction Effective Time of that prior MWOF Dispatch Instruction;**Step 2**: with the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in , then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction; however if a new Dispatch Instruction is issued by the System Operator with an Instruction Effective Time equal to or before the time Step 1 is achieved, profile the new Dispatch Instruction as per or as appropriate. |

”* + - 1. Until the date that is six months after the Cutover Time, the row for the “PSYN” Pseudo Dispatch Instruction Code entry for Table 3 of Appendix O shall be replaced with:

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| PSYN | n/a | SYNC | **Continuous open acceptance after SYNC.** At Instruction Effective Time set as the later of:* the time when the corresponding SYNC Instruction Profile reaches Registered Minimum Stable Generation if the time to ramp up is greater than the Minimum On Time; or
* the corresponding SYNC Instruction Effective Time plus Min On Time; or
* if the MW value of the Registered Minimum Stable Generation corresponds to the MW value of a Soak Time Trigger Point in the applicable Accepted Technical Offer Data, then the time when the corresponding SYNC Instruction Profile reaches Registered Minimum Stable Generation plus the applicable Soak Time,

**Step 1**: create a PSYN to maintain Generator Unit Output to the specified SYNC Target Instruction Level until next Dispatch Instruction or Pseudo Dispatch Instruction;**Step 2**: with an Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities.NOTE: PSYN is not created where the Target Instruction Level of the associated SYNC Dispatch Instruction is greater than the Registered Minimum Stable Generation, or where there is a MWOF Dispatch Instruction issued at the same Instruction Effective Time as the associated SYNC Dispatch Instruction with a Target Instruction Level which is not equal to the Registered Minimum Stable Generation.If a subsequent DESY Dispatch Instruction has an Instruction Effective Time which is between the Instruction Effective Time of a prior SYNC Dispatch Instruction and the Instruction Effective Time of the corresponding PSYN Pseudo Dispatch Instruction that would nominally be created, but after the time when the Physical Notification Instruction Profile for the SYNC Dispatch Instruction reaches the Registered Minimum Stable Generation, then the PSYN Pseudo Dispatch Instruction that would nominally be created for the corresponding SYNC Dispatch Instruction shall be created. |

”* + - 1. Until the date that is six months after the Cutover Time, the row for the “PMWO” Pseudo Dispatch Instruction Code entry for Table 3 of Appendix O shall be replaced with:

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| PMWO | n/a | MWOF | **Continuous open acceptance after MWOF**. At Instruction Effective Time set as:* the time when the corresponding MWOF Instruction Profile reaches the specified Target Instruction Level,

**Step 1**: create a PMWO to maintain the Generator Unit Output to the specified MWOF Target Instruction Level until next Dispatch Instruction or Pseudo Dispatch Instruction;**Step 2**: with the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in , then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction.If a subsequent MWOF Dispatch Instruction has an Instruction Effective Time which is between the Instruction Effective Time of another prior MWOF Dispatch Instruction and the Instruction Effective Time of that prior MWOF Dispatch Instruction’s corresponding PMWO Pseudo Dispatch Instruction that would nominally be created, and if the time the Target Instruction Level would be reached following the trajectory of either the prior or the subsequent MWOF Dispatch Instruction is in a different Imbalance Pricing Period or Imbalance Settlement Period, as applicable, to the Instruction Effective Time of the corresponding MWOF Dispatch Instruction, then a PMWO Pseudo Dispatch Instruction shall be created for each MWOF Dispatch Instruction considered in this scenario, with the Instruction Effective Time of the PMWO Pseudo Dispatch Instruction corresponding to the prior MWOF Dispatch Instruction being the same as the Instruction Effective Time of that prior MWOF Dispatch Instruction. |

”* + - 1. Until the date that is six months after the Cutover Time, the row for the “PSYN” Pseudo Dispatch Instruction Code entry for Table 3 of Appendix O shall be replaced with:

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| PDES | n/a | DESY | **Continuous open acceptance after DESY.** At Instruction Effective Time set as:* the time when the corresponding DESY Instruction Profile reaches the Target Instruction Level plus Min Off Time,

**Step 1**: create a PDES to maintain the Generator Unit Output to the specified DESY Target Instruction Level until next Dispatch Instruction or Pseudo Dispatch Instruction;**Step 2**: with the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in , then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction.If a subsequent SYNC Dispatch Instruction has an Instruction Effective Time which is between the Instruction Effective Time of a prior DESY Dispatch Instruction and the Instruction Effective Time for the corresponding PDES Pseudo Dispatch Instruction that would nominally be created, but after the time when the Physical Notification Instruction Profile for the DESY Dispatch Instruction reaches zero, then the PDES Pseudo Dispatch Instruction that would nominally be created for the corresponding DESY Dispatch Instruction shall be created. |

”* + - 1. Until the date that is six months after the Cutover Time, a new row shall exist for Table 5 of Appendix O containing the following:

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| SYNC | DESY | If a subsequent DESY Dispatch Instruction has an Instruction Effective Time which is between the Instruction Effective Time of a prior SYNC Dispatch Instruction and the time when the Physical Notification Instruction Profile for the SYNC Dispatch Instruction reaches the Generator Unit’s Registered Minimum Stable Generation, then the Dispatch Instruction having the preceding SYNC Instruction Code shall be ignored. |

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| **Modification Proposal Justification***(Clearly state the reason for the Modification)* |
| These cases would not be expected to happen often, as it is not often that the TSOs would issue instructions to a different target instruction level while a unit is still trying to reach a target instruction level from a previous instruction, and it is rare that units would be issued instructions to desynchronise while trying to reach Minimum Stable Generation or while their Minimum On Time is still active, or issued with an instruction to synchronise while their Minimum Off Time is still active. These cases can be reduced through issuing guidance to control centre operators for the TSOs about these situations. It is expected that the exposure in cases where they do occur would be relatively low. It primarily affects the “undo payment” a participant receives, i.e. the difference between the unit’s incremental and decremental prices for a positive and negative QBOA which covers the same output range. The net volumes in the majority of the cases considered would be the same. In some cases where the net volume would be different (such as the MWOF instruction profile reaching the target instruction level at the same time as its Instruction Effective Time, or the SYNC instructions being ignored), for MWOF instructions the amounts would be related to changing outputs and therefore could result in increased or decreased charges, increased or decreased payments, and could be over smaller or larger MW amounts depending on the details of the instructions. The SYNC instruction being ignored would mean the undo payment would not be calculated, but it would not result in an additional charge.The outcomes which differ to the main body of the rules have been raised as defects with the vendor and they are being progressed, however it is not anticipated that a fix for them will be available for deployment prior to go-live. Therefore in order to maintain alignment between the system and the rules to achieve substantive compliance in certification, these interim modifications are being proposed.When further details are known on the expected date of deploying a fix for these defects, a further modification will be raised to change the date for the ending of these interim provisions.In order to achieve substantive compliance in certification for the Imbalance Pricing systems by having compliance between the system and the rules, and because the areas considered in this proposed modification will not be fixed in time for I-SEM go-live, it is necessary to have interim arrangements which align the rules with the system implementation for a fixed period of time until the approach intended by the rules can be implemented in the systems. The approach taken is to maintain in the main body of the Code the intended approach, while having an interim arrangement in Chapter H which prevails over the period of time from market cutover until the fixed time stated on the clause. This should make it clear that the approach in the Code is intended to be implemented when it is possible to do so following priority items being fixed for I-SEM go-live. |
| **Code Objectives Furthered***(State the Code Objectives the Proposal furthers, see Section 1.3 of T&SC for Code Objectives)* |
| This Modification furthers Code Objectives A.2.1.4(a) and A.2.1.4(e):*(a) to facilitate the efficient discharge by the Market Operator of the obligations imposed upon it by its Market Operator Licences;* *(e) to provide transparency in the operation of the Single Electricity Market;* |
| **Implication of not implementing the Modification Proposal***(State the possible outcomes should the Modification Proposal not be implemented)* |
| There would not be substantive compliance between the systems and the rules in certification, and the outcomes in the scenarios included in the modification proposal would not be transparent to participants. |
| **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 Marker Code, Grid Code, Exchange Rules etc.)* |
|  | No impact on systems as they will exist for the Cutover Time, initial timeline indicated for work required to implement the system which would achieve the outcomes of the main body of the text which will require resources but this work would be happening in any case, in the absence of this modification then there is a possibility of additional resource requirements for settlement processes. |
| ***Please return this form to Secretariat by email to*** ***modifications@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. **to the Market Operator and the Regulatory Authorities to publish and/or distribute the Modification Proposal for free and unrestricted access;**
	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;**
	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.**