

Single Electricity Market

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| Final REcommendation Report  Mod\_16\_12: Inconsistent Technical Capabilities when Higher Operating Limit is zero and less than Lower Operating Limit |

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Document History

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| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Comment** |
| 0.1 | 07 September 2012 | Modifications Committee Secretariat | Issued to Modifications Committee for review and approval |
| 1.0 | 17 September | Modifications Committee Secretariat | Issued to Regulatory Authorities for final decision |

Reference Documents

|  |
| --- |
| **Document Name** |
| [Trading and Settlement Code](http://semopub/MarketDevelopment/MarketRules/TSC.doc) |
| [Mod\_16\_12: Inconsistent Technical Capabilities when Higher Operating Limit is zero and less than Lower Operating Limit](http://semopub/MarketDevelopment/ModificationDocuments/Mod_16_12%20-%20Inconsistent%20Technical%20Capabilities.docx) |

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# MODIFICATIONS COMMITTEE RECOMMENDATION

## Recommended for Approval – unanimous Vote

|  |  |  |
| --- | --- | --- |
| **Mod\_16\_12: Recommended for Approval** | | |
| Brian Mongan | Generator Alternate | Approve |
| Iain Wright -Chair | Supplier Member | Approve |
| Julie-Anne Hannon | Supplier Alternate | Approve |
| Kevin Hannafin | Generator Member | Approve |
| Mary Doorly | Generator Alternate | Approve |
| Niamh Quinn | Generator Member | Approve |
| Patrick Liddy | DSU Member | Approve |
| William Carr | Supplier Member | Approve |

# Background

This Modification Proposal was raised by SEMO and received by the Secretariat on 17 July 2012. It proposes to document more fully the treatment of inconsistent higher and lower operating limits.The Modification Proposal was presented and discussed at Meeting 43 on 31 July 2012 where it was voted on.

# PURPOSE OF PROPOSED MODIFICATION

## 3A.) justification of Modification

The Code contains rules to resolve situations where there are inconsistent or infeasible technical constraints. According to Appendix N.17.2.e, a Generator Unit’s Output must be not less than its Lower Operating Limit (LOL) and not greater than its Higher Operating Limit (HOL). If a Generator Unit’s HOL is less than its LOL, it follows that there is no value of Output that would satisfy the above condition and the schedule would be infeasible.

To resolve this infeasibility, N.29 specifies that one of the conflicting constraints will be disregarded. In the case where the HOL of a Generator Unit is less than its LOL, the HOL is reset to equal the LOL (see Table 1 for an example). In this case, if the Generator Unit is committed, the only value of Output that it can feasibly run at is its LOL (which equals its HOL).

Table - Example of inconsistent LOL and HOL under current Code provisions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Example | T&SC paragraph | Inconsistent | | Revised | |
|  |  | LOL | HOL | LOL | HOL |
| A | Current N.29.4 | 200 | 100 | 200 | 200 |
| B | Current N.29.4 | 200 | 0 | 200 | 200 |

In example B, where a Generator Unit declares itself unavailable and their HOL is calculated as 0MW, if their LOL is non-zero, it is not desirable for the HOL to be reset to the LOL as the Generator Unit is not available.

This Modification Proposal includes an additional provision in N.29 for the case where HOL = 0MW and LOL > 0MW. In this case, it is proposed that the LOL be reset to equal zero (see Table 2 for the revised example).

Table - Example of inconsistent LOL and HOL under proposed provisions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Example | T&SC paragraph | Inconsistent | | Revised | |
|  |  | LOL | HOL | LOL | HOL |
| A | Current N.29.4 | 200 | 100 | 200 | 200 |
| B | New N.29.5 | 200 | 0 | 0 | 0 |

This was included in the original design of the MSP Software; however, it was not implemented as specified. It was raised as a defect to the MSP Software and has been implemented as of Feb 2012. During the formulation review of MSP Software as part of the certification process conducted in early 2012, it was raised that the TSC does not specify this rule and it should be updated to include it.

## 3B.) Impact of not Implementing a Solution

If this Modification Proposal is not approved, the MSP Software will not be operating strictly in line with the Code in the circumstance where HOL = 0MW and LOL > 0MW.

## 3c.) Impact on Code Objectives

The aim of this Code is to facilitate the achievement of the following objective:

to facilitate the efficient discharge by the Market Operator of the obligations imposed upon it by its Market Operator Licences;

# Assessment of Alternatives

No alternatives assessed.

# Working Group and/or Consultation

N/A

# impact on systems and resources

No impacts if RA Decision approved. If the change is rejected, the MSP Software may need to be modified to align with the existing provisions of the Code and this would be a CMS change.

# Impact on other Codes/Documents

N/A

# MODIFICATION COMMITTEE VIEWS

## Meeting 43 - 31 July 2012

SEMO Member outlined the proposal which seeks to correct an inconsistency between the systems and the Code. DSU Member raised a query regarding the second table outlined in the explanation section of the proposal, questioning the reason why, if the Higher Operating Limit (HOL) is moved to 50, the system still increases it up to 100. SEMO Member advised that ideally quantities submitted should reflect actual capability and the clauses in N.29 cover cases where there are conflicting characteristics.

Chair queried as to whether this issue would become evident during bid validation? SEMO Member clarified that it is not a validation of bids as such, it is more so a submission of Minimum Stable Generation and Forecast Availability. Chair queried as to whether there are Capacity Payments impacts. SEMO Member advised that as Capacity Payments are based on Eligible Availability, there should not be any impacts.

# Proposed Legal Drafting

As set out in Appendix 1.

# LEGAL REVIEW

Complete

# IMPLEMENTATION TIMESCALE

It is proposed that this Modification is implemented on a Settlement Day basis with effect from one Working Day after an RA Decision.

# Appendix 1: Mod\_16\_12

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MODIFICATION PROPOSAL FORM** | | | | | | |
| **Proposer** | **Date of receipt** | | **Type of Proposal** | | **Modification Proposal ID** | |
| **SEMO** | **17 July 2012** | | **Standard** | | **Mod\_16\_12** | |
| **Contact Details for Modification Proposal Originator** | | | | | | |
| **Name** | | **Telephone number** | | **Email address** | | |
| **Aodhagan Downey** | | **01-2370124** | | **aodhagan.downey@sem-o.com** | | |
| **Modification Proposal Title** | | | | | | |
| **Inconsistent Technical Capabilities when Higher Operating Limit is zero and less than Lower Operating Limit** | | | | | | |
| **Documents affected** | | **Section(s) Affected** | | **Version number of T&SC or AP used in Drafting** | | |
| **T&SC** | | **Appendix N** | | **V10 + Mod\_18\_10v2** | | |
| **Explanation of Proposed Change**  *(mandatory by originator)* | | | | | | |
| The Code contains rules to resolve situations where there are inconsistent or infeasible technical constraints. According to Appendix N.17.2.e, a Generator Unit’s Output must be not less than its Lower Operating Limit (LOL) and not greater than its Higher Operating Limit (HOL). If a Generator Unit’s HOL is less than its LOL, it follows that there is no value of Output that would satisfy the above condition and the schedule would be infeasible.  To resolve this infeasibility, N.29 specifies that one of the conflicting constraints will be disregarded. In the case where the HOL of a Generator Unit is less than its LOL, the HOL is reset to equal the LOL (see Table 1 for an example). In this case, if the Generator Unit is committed, the only value of Output that it can feasibly run at is its LOL (which equals its HOL).  Table - Example of inconsistent LOL and HOL under current Code provisions   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Example | T&SC paragraph | Inconsistent | | Revised | | |  |  | LOL | HOL | LOL | HOL | | A | Current N.29.4 | 200 | 100 | 200 | 200 | | B | Current N.29.4 | 200 | 0 | 200 | 200 |   In example B, where a Generator Unit declares itself unavailable and their HOL is calculated as 0MW, if their LOL is non-zero, it is not desirable for the HOL to be reset to the LOL as the Generator Unit is not available.  This Modification Proposal includes an additional provision in N.29 for the case where HOL = 0MW and LOL > 0MW. In this case, it is proposed that the LOL be reset to equal zero (see Table 2 for the revised example).  Table - Example of inconsistent LOL and HOL under proposed provisions   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Example | T&SC paragraph | Inconsistent | | Revised | | |  |  | LOL | HOL | LOL | HOL | | A | Current N.29.4 | 200 | 100 | 200 | 200 | | B | New N.29.5 | 200 | 0 | 0 | 0 |   This was included in the original design of the MSP Software; however, it was not implemented as specified. It was raised as a defect to the MSP Software and has been implemented as of Feb 2012. During the formulation review of MSP Software as part of the certification process conducted in early 2012, it was raised that the TSC does not specify this rule and it should be updated to include it. | | | | | | |
| **Legal Drafting Change**  *(Clearly show proposed code change using* ***tracked*** *changes, if proposer fails to identify changes, please indicate best estimate of potential changes)* | | | | | | |
| Pre-processing of Data inputs for the MSP Software  Inconsistent Technical Capabilities  N.29 If Technical Capabilities applying to a Generator Unit within a run of the MSP Software are internally inconsistent so as to allow no solution for that Generator Unit within its Technical Capabilities, then the MSP Software shall disregard one or more Technical Capability limits as required to allow a solution to be found for that Generator Unit, subject to the limits that:   1. the Generator Unit shall not be scheduled to operate at a level in excess of the greatest Higher Operating Limit (see Appendix N.37) implied by any of the inconsistent Technical Capability limits, or zero where no such limit can be inferred; 2. the Generator Unit shall not be scheduled to operate at a level less than the lowest level implied by the lowest allowable level implied by any of the inconsistent Technical Capability limits, or zero where no such limit can be inferred; 3. the Generator Unit shall not be scheduled to operate for a period of time beyond the greatest operating time limit implied by any of the inconsistent Technical Capability limits; 4. if the Higher Operating Limit of a Generator Unit is greater than zero and less than the relevant Lower Operating Limit (see Appendix N.40), then its Higher Operating Limit shall be reset to equal its Lower Operating Limit; and 5. if the Higher Operating Limit of a Generator Unit is equal to zero and the relevant Lower Operating Limit is greater than zero, then its Lower Operating Limit shall be reset to zero. | | | | | |
| **Modification Proposal Justification**  *(Clearly state the reason for the Modification)* | | | | | |
| To document more fully the treatment of inconsistent higher and lower operating limits. | | | | | |
| **Code Objectives Furthered**  *(State the Code Objectives the Proposal furthers, see Section 1.3 of T&SC for Code Objectives)* | | | | | |
| 1.3 The aim of this Code is to facilitate the achievement of the following objectives:  1. to facilitate the efficient discharge by the Market Operator of the obligations imposed upon it by its Market Operator Licences; | | | | | |
| **Implication of not implementing the Modification Proposal**  *(State the possible outcomes should the Modification Proposal not be implemented)* | | | | | |
| If this Modification Proposal is not Approved, the MSP Software will not be operating strictly in line with the Code in the circumstance where HOL = 0MW and LOL > 0MW. | | | | | |
| **Working Group**  *(State if Working Group considered necessary to develop proposal)* | | | | **Impacts**  *(Indicate the impacts on systems, resources, processes and/or procedures)* | |
| Not required | | | | No impacts if approved. If the change is rejected, the MSP Software may need to be modified to align with the existing provisions of the Code and this would be a CMS change. | |
| ***Please return this form to Secretariat by email to*** [*modifications@sem-o.com*](mailto:modifications@sem-o.com) | | | | | |