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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** | **08/08/19** |  **Standard** | **Mod\_12\_19** |
| **Contact Details for Modification Proposal Originator** |
| **Name** | **Telephone number** | **Email address** |
| **Christopher Goodman** |  | **Christopher.Goodman@sem-o.com** |
| **Modification Proposal Title** |
| **System Service Flag for Demand Side Units** |
| **Documents affected***(delete as appropriate)* | **Section(s) Affected** | **Version number of T&SC or AP used in Drafting** |
| **T&SC Part B** | **Section F.18.6** | **Version 21** |
| **Explanation of Proposed Change***(mandatory by originator)* |
| This proposal seeks to remove the current exclusion on the calculation of System Service Flag for Demand Side Units. This flag is not currently used to determine Capacity Non Delivery Difference Quantities and Charges for Demand Side Units as the Demand Side Non Delivery Percentage (FNDDS) is used, which is calculated by the TSOs based on a methodology which is determined and published separately from the Trading and Settlement Code. It is therefore also not currently determined under the Code or otherwise.Discussions during the working group process for Mod\_32\_18 around the treatment of difference charges where a unit is bound by a constraint relating to system service provision led to an action to progress an approach whereby the System Service Flag could be used within the FNDDS methodology for DSUs so that any relief from difference charges where a unit is subject to a System Service Flag can be considered for DSUs. This is in the context both of the existing approach to System Service Flagging for units bound by the presence of an Operational Constraint relating to the provision of Replacement Reserve (see TSC Appendix N paragraph 2) and also any potential future change to System Service Flagging were any additional Operational Constraints to be included under this rule.Details of how System Service provision is treated in the context of delivery or non delivery of capacity obligations for DSUs could be separately provided for within the FNDDS methodology; however, introducing the determination of the System Service Flagging within the Trading and Settlement Code would appear to carry a number of benefits as follows. * Placing a Codified obligation on the TSOs to calculate FSS;
* the ability to easily ensure that the System Service Flagging approaches for DSUs and other units are equivalent or otherwise fair;
* ensuring that there is no ambiguity as to whether a Trading and Settlement Code default rule does or doesn’t apply prior to the determination of FSS under an outside methodology; and
* ensuring that FSS determination comes under Trading and Settlement Code governance in terms of how they are calculated and the process for their modification if required in future.

This proposal should not be considered to be assuming, fettering or pre-empting any particular changes to the FNDDS calculation methodology or methodology regarding the general determination of System Operator Flag by the System Operators. Rather, it is intended to allow for any subsequent changes to either or both of these as may be deemed appropriate as discussed during the working groups for Mod\_32\_18. At the working groups it was acknowledged by SEMO and the working group at large that this Modification Proposal is worthy of consideration regardless of whether or not additional Operational Constraints related to System Services are subsequently included in the determination of FSS. An extract from the working group recommendation report related to the discussion around a potential proposal to introduce other Operational Constraints to FSS determination and how this could be applied to DSUs is as below:*“SEMO confirmed that the proposed change is intended to apply equally across all Generator Units (including DSUs) and where required, an update could be made to the FNDDS calculation methodology to ensure this was the case. The Regulatory Authorities acknowledged this point and agreed that the solution should treat all Generator Units equally including DSUs.“* |
| **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. For any Capacity Market Unit:
				1. Which represents a Demand Side Unit, the provisions of paragraphs F.18.6.5 to F.18.6.7 do not apply; and
				2. Which represents an Interconnector, the following provisions of section F.18.6 do not apply.
			2. For each Imbalance Pricing Period, φ, the System Operators shall determine a System Service Flag (FSSuφ) for each Generator Unit, u, in respect of that Imbalance Pricing Period, φ, as set out in paragraph 2 of Appendix N: “Flagging and Tagging”.
			3. For each Imbalance Pricing Period, φ, the System Operators shall submit the System Service Flag (FSSuφ) for all Generator Units, u, for that Imbalance Pricing Period, φ, to the Market Operator in accordance with Appendix K: “Other Market Data Transactions”.
			4. If the System Service Flag (FSSuφ) for a Generator Unit has a value equal to zero for any Imbalance Pricing Period, φ, within the Imbalance Settlement Period, γ, the Market Operator shall set the System Service Flag (FSSuγ) for that Generator Unit, u, in that Imbalance Settlement Period, γ, to a value equal to zero. Otherwise, the Market Operator shall set the System Service Flag (FSSuγ) to a value equal to one for that Imbalance Settlement Period.
			5. The Market Operator shall calculate the System Service Difference Quantity (QDIFFCSSuγ) for each Generator Unit, u, in each Imbalance Settlement Period, γ, as follows:

$$QDIFFCSS\_{uγ}=Max\left(\left(qAA\_{uγ}×DISP\right)-Max\left(QEX\_{uγ},QD\_{uγ}\right), 0\right)×\left(1-FSS\_{uγ}\right)$$where:* + - * 1. qAAuγ is the Actual Availability Quantity for Generator Unit, u, in Imbalance Settlement Period, γ;
				2. QEXuγ is the Ex-Ante Quantity for Generator Unit, u, in Imbalance Settlement Period, γ;
				3. QDuγ is the Dispatch Quantity for Generator Unit, u, in Imbalance Settlement Period, γ;
				4. DISP is the Imbalance Settlement Period Duration; and
				5. FSSuγ is the System Service Flag for Generator Unit, u, in Imbalance Settlement Period, γ.
			1. The Market Operator shall recalculate the Tracked Difference Quantity (QDIFFTRACKΩγ) for each Capacity Market Unit, Ω, which does not represent an Autoproducer Unit, in each Imbalance Settlement Period, γ, as follows:

$$QDIFFTRACK\_{Ωγ}=Min\left(QCOB\_{Ωγ}, QDIFFTRACK'\_{Ωγ}+\sum\_{u \in Ω}^{}QDIFFCSS\_{uγ}\right)$$where:* + - * 1. QCOBΩγ is the Obligated Capacity Quantity for Capacity Market Unit, Ω, in Imbalance Settlement Period, γ;
				2. QDIFFTRACK’Ωγ is the Tracked Difference Quantity for Capacity Market Unit, Ω, in Imbalance Settlement Period, γ, calculated in accordance with section F.18.5;
				3. QDIFFCSSuγ is the System Service Difference Quantity for Generator Unit, u, in Imbalance Settlement Period, γ; and
				4. $\sum\_{u \in Ω}^{} $is a summation over all Generator Units, u, which comprise the Capacity Market Unit, Ω.
			1. The Market Operator shall recalculate the Tracked Difference Quantity (QDIFFTRACKsγ) for each Trading Site, s, which is associated with a Capacity Market Unit, Ω, which represents an Autoproducer Unit, in each Imbalance Settlement Period, γ, as follows:

$$QDIFFTRACK\_{sγ}=Min\left(QCOB\_{sγ}, QDIFFTRACK'\_{sγ}+\sum\_{u \in s}^{}QDIFFCSS\_{uγ}\right)$$where:* + - * 1. QCOBsγ is the Obligated Capacity Quantity for Trading Site, s, in Imbalance Settlement Period, γ;
				2. QDIFFTRACK’sγ is the Tracked Difference Quantity for Trading Site, s, in Imbalance Settlement Period, γ, calculated in accordance with section F.18.5;
				3. QDIFFCSSuγ is the System Service Difference Quantity for Generator Unit, u, in Imbalance Settlement Period, γ; and
				4. $\sum\_{u \in s}^{} $is a summation over all Generator Units, u, in the Trading Site, s.
 |
| **Modification Proposal Justification***(Clearly state the reason for the Modification)* |
| This proposal seeks to provide clarity and to facilitate appropriate treatment of DSUs in relation to the application of System Service Flags so that these are available to the FNDDS methodology as applied to the calculation of charges for non delivery on capacity obligations for the purpose of calculating difference charges for DSUs where they are bound by the presence of an Operational Constraint should this be deemed appropriate. This is to allow for fair treatment of DSUs and to ensure that the appropriate governance applies in relation to System Service Flagging.  |
| **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)* |
| * + - * 1. to provide transparency in the operation of the Single Electricity Market;

Provides transparency by placing the determination of System Service Flag for DSU under Trading and Settlement Code governance (as opposed to the potential alternative of capturing this within the FNDDS methodology).* + - * 1. to ensure no undue discrimination between persons who are parties to the Code;

Ensures no undue discrimination between parties to the Code by facilitating equitable, or otherwise fair treatment of Demand Side Units in relation to the treatment of exposure to charges for non delivery of capacity obligations where the unit is bound by certain defined Operational Constraints. |
| **Implication of not implementing the Modification Proposal***(State the possible outcomes should the Modification Proposal not be implemented)* |
| If this proposal is not implemented it will continue to be the case that no System Service Flag is calculated for DSUs under the Trading and Settlement Code so that the aforementioned facilitation of equitable treatment, in relation to non delivery of capacity obligations, under Trading and Settlement Code governance will remain absent.It could also be necessary to have a System Service Flag determined outside of the Trading and Settlement Code which would not carry Codified obligation on the TSOs to determine such flags for DSUs and it could also be unclear whether or not TSC default rules applied and could lead to unintended conflicts or ambiguities as to how the flags are determined. |
| **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.)* |
|  Not Required | No impact on Market systems anticipated since this functionality already exists but is not currently applied. Potential application of the FSS values is to the calculation of FNDDS which is carried out outside the Central Market Systems by the System Operators. As such, there is a potential subsequent impact on FNDDS methodology should it be considered appropriate to apply these flags therein. |
| ***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. **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.**