



**Single Electricity Market
(SEM)**

Trading and Settlement Code

**SEM Operational Parameters
Credit Cover and Imbalance Settlement 2021**

**SEM-20-065
17 September 2020**

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1. Introduction

Under the terms of the SEM Trading and Settlement Code (TSC) Part B, the Regulatory Authorities (RAs) shall determine certain parameters proposed by the Market Operator (MO) in relation to the calculation and treatment of participants Required Credit Cover and matters related to Imbalance Settlement.

In May 2020, the RAs requested the MO to review the following parameters utilised in

1. The calculation of Required Credit Cover; and,
2. Imbalance Settlement.
3. Price Materiality Threshold

On 21st August 2020, the RAs received reports from the MO outlining their recommendations for the proposed values for the above parameters. The purpose of this consultation paper is to invite comments on the MO proposals as summarised in this paper and detailed within the MO reports which accompany this paper.

Comments should be sent in electronic form, to:

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All comments received will be provided to SEMO or the TSOs as appropriate and may be published unless the respondent clearly indicates that the relevant comment is confidential.

2. Parameters for the Determination of Required Credit Cover

The TSC sets out the rules for the calculation of Required Credit Cover for Participants. The calculation recognises that the Required Credit Cover for each Participant is made up of known and unknown exposures. The known exposure is based on invoiced amounts and published Settlement values. The unknown exposure, called the Undefined Exposure, is based on statistical analysis of known historical values of Settlement or Pricing. New or adjusted participants – those whose historical values of Settlement are unknown or not reflective of current levels of trade, have Required Credit Cover calculated using forecast volumes against prices calculated from known prices, while Standard Parameters have Required Credit Cover calculated using known Settlement values.

In each of these calculations, and in the day-to-day Credit Risk assessment process, a number of parameters are used. SEMO's report reviews the values that have applied since the revised SEM arrangements arising from I-SEM implementation and proposes no change to be made to any of the Required Credit Cover parameters. Table 1 summarises these parameters.

- I. **Fixed Credit Requirement Parameter (FCRyp):** this sets out the value of the Required Credit Cover that must be in place for each registered Supplier Unit or Generator Unit. A value will be required for all trading unit types, including Assetless Traders.
- II. **Undefined Exposure Period:** The number of days in the Undefined Exposure Period, *g* (known as the parameter UEPBD_g in the TSC) is the period for which settlement periods are not known, but where participants are, or have the ability of, incurring further liability until they are removed from the market.
- III. **Historical Assessment Period:** The number of days in the Historical Assessment Period (known as the parameter DINHAP in the TSC) is the number of days prior to the day of the issue of the latest relevant Settlement Document over which a statistical analysis of a Participant's incurred liabilities shall be undertaken in order to support the forecasting of undefined liabilities for that Participant. This will be the number of historical days over which the analysis quantities, prices, or settlement values will be carried out for the purposes of forecasting values for the calculation of exposure over the Undefined Exposure Period, eventually used to determine the level of Required Credit Cover for each participant.
- IV. **Analysis Percentile Parameter:** This is the factor that determines the expected probability that the Actual Exposure for each Participant, once determined, will fall below the estimate of the Undefined Potential Exposure. The Undefined Exposure Variance will be used to assess the value to be proposed for the number of days in the Historical Assessment Period. The RAs note SEMO's proposal to keep the Analysis Percentile Parameter at 1.96 which, according to the SEMO recommendations paper

attached, represents 95% confidence. The RAs are of the view this 1.96 value represents a confidence interval of 97.5% as the aim of this parameter is to calculate the upper value and not a lower to upper range.

- V. **Credit Cover Adjustment Trigger:** this is the expected percentage change in future generation or demand which leads a participant to report to SEMO that it should become an Adjusted Participant, rather than a Standard Participant and have its Credit Cover requirements on the basis of its forecasts of future demand or generation.
- VI. **Level of Warning Limit:** To take account of changes to the Credit Cover policies for the new market arrangements, particularly with respect to the interaction between different markets, the Warning Limit has become a parameter.
- VII. **Level of Breach Limit:** means a predefined level which if the ratio of a Participants Required Credit Cover to its Posted Credit Cover exceeds will result in a Credit Cover Increase Notice which will require remedy by the Participants including by posting additional Credit Cover.

Parameters	Approved Value for 2020	SEMO's Proposed Value for 2021
Fixed Credit Cover Requirement for Generator Units	€5,000	€5,000
Fixed Credit Cover Requirement for Supplier Units	Based on a rate of €8.77/MWh of average daily demand subject to a minimum value of €1,000 and a maximum of €15,000	Based on a rate of €8.77/MWh of average daily demand subject to a minimum value of €1,000 and a maximum of €15,000
Historical Assessment Period	100 Days	100 Days
Undefined Exposure Period	9 Days	9 Days
Analysis Percentile Parameter	1.96	1.96

Credit Cover Adjustment Trigger	30%	30%
Warning Limit	80%	80%
Breach Limit	100%	100%

Table 1: Proposed 2021 values for the determination of required credit cover

3. Imbalance Settlement Parameters

Uninstructed Imbalances apply in the SEM when the Actual Output of a Generator Unit deviates from its Dispatch Quantity in a Trading Period. The SEMO paper reviews a number of parameters that are used in the calculation of Uninstructed Imbalance Quantities and Charges. These parameters are:

- I. **Engineering Tolerance, (TOLENG) and MW Tolerance (TOLMEG).** These parameters set a tolerance between a unit's Dispatch Quantity and Metered Quantity within which a unit is deemed to be complying with Dispatch Instructions. Output within this tolerance band does not give rise to Uninstructed Imbalance Charges. At nominal system frequency, the tolerance band which is used in the calculation of Uninstructed Imbalances is the maximum of:
 - a. the Engineering Tolerance (where $0 \leq \text{TOLENG} \leq 1$) multiplied by the Dispatch Quantity; and
 - b. the MW Tolerance for each Trading Day, t , (where $0 \leq \text{TOLMWt}$).

- II. **The Discount for Over Generation Factor (FDOGuy) and the Premium for Under Generation (FPUGuy)** are the parameters which form the basis for the Uninstructed Imbalance Charges. The basis for the charges is a fraction of the price at which the unit would be settled for the volume which was outside of the tolerance band around their instructed dispatch level. The Discount for Over Generation and the Premium for Under Generator Factors are the fractions which are applied to the price to determine the additional charge for this volume.

- III. **System per Unit Regulation Factor (FUREG)** is the parameter that reflects the response rate of a generator resulting from its governor droop settings as it varies with system frequency, which is used to calculate the Tolerance for Under Generation and the Tolerance for Over Generation in the calculation of Uninstructed imbalances. Settlement is based on the Imbalance Settlement Price in each Settlement Period.

SEMO proposes to make no changes to these values for 2021. This is summarised in Table 2 below.

Parameter	Approved Value for 2020	Proposed Value for 2021
Engineering Tolerance	0.01	0.01
MW Tolerance for each Trading Day	1	1
System per Unit Regulation Factor	0.04	0.04
Discount for Over Generation Factor for each Generator Unit	0.2	0.2
Discount for Over Generation Factor for each Interconnector Error Unit	0	0
Premium for Under Generation Factor for each Generation Unit	0.2	0.2
Premium for Under Generation Factor for each Interconnector Error Unit	0	0

Table 2: Proposed 2021 values for Uninstructed Imbalance Settlement Parameters

4. Price Materiality Threshold

The Price Materiality Threshold refers to the threshold which is approved from time to time by the Regulatory Authorities under paragraph B19.3.1(b) of the Trading and Settlement Code, which is applied in the event of a Pricing Dispute or where a manifest error is identified by the Market Operator for the purpose of Repricing.

The Price Materiality Threshold tests when a change to input data as a result of an upheld dispute causes a change in the price greater than a certain threshold. If the threshold is exceeded, the price is recalculated and included in a Settlement re-run. SEMO proposes to make no changes to these values for 2021. This is summarised in Table 3 below

Parameter	Approved Value for 2020	Proposed Value for 2021
Price Materiality Threshold	5%	5%

Table 3: Proposed 2021 values for Price Materiality Threshold.

5. Next Steps

All comments received will be provided to SEMO or the TSO's as appropriate and may be published unless the respondent clearly indicates that the relevant comment is confidential.

All comments should be received by the close of business on 16th October 2020. A final decision on the operational parameters consulted on in this paper is due to be published in November 2020.