



**Single Electricity Market  
(SEM)**

**Trading and Settlement Code Annual  
Operational Parameters for 2022**

**Decision Paper**

**SEM-21-087  
18 November 2021**

## Contents

1. Introduction .....	3
2. Parameters for the Determination of Required Credit Cover .....	4
2.1 Overview .....	4
2.2 Fixed Credit Requirement .....	4
2.3 Undefined Exposure Period .....	4
2.4 Historical Assessment Period .....	5
2.5 Analysis Percentile Parameter .....	5
2.6 Credit Cover Adjustment Trigger .....	6
2.7 Level of Warning Limit .....	7
2.8 Level of Breach Limit .....	7
2.9 Summary of SEM Committee Decisions .....	8
3. Imbalance Settlement Parameters .....	9
3.1 Overview .....	9
3.2 MW Tolerance, and Engineering Tolerance .....	9
3.3 Discount for Over Generation Factor and Premium for Under Generation Factor .....	10
4. SEM Price Materiality Threshold .....	12
4.1 Overview .....	12
5. Next Steps .....	12

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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) and the TSOs, as applicable, in relation to the calculation and treatment of participants' Required Credit Cover and matters related to Imbalance Settlement.

In June 2021 therefore, the RAs requested SEMO to review the parameters utilised in the calculation of Required Credit Cover and of the Price Materiality Threshold. The RAs also requested the TSOs to review the parameters utilised in the calculations related to Uninstructed Imbalances.

On 19 August 2021, the RAs received reports from SEMO and the TSOs (SEM-21-067a, SEM-21-067b and SEM-21-067c)<sup>1</sup> outlining their recommendations for the proposed values for the parameters referred to above. The RAs subsequently published a consultation paper (SEM-21-067) on the 20 August 2021, requesting the view of market participants on SEMO's and the TSOs' recommendations.

The RAs received two responses to the consultation paper (SEM-21-067). Having considered these responses, this paper presents the RAs' decision in relation to the operational parameters consulted on, and is structured as follows:

**Section 2:** identifies the Credit Cover parameters that were reviewed by SEMO, summarises stakeholder responses to the consultation and details the SEM Committee decision on the 2022 values for these parameters.

**Section 3:** identifies the Uninstructed Imbalances parameters that were reviewed by the TSOs, summarises stakeholder responses to the consultation and details the SEM Committee decision on the 2022 values for these parameters.

**Section 4:** identifies the SEM Price Materiality Threshold parameter that was reviewed by SEMO, summarises stakeholder responses to the consultation and details the SEM Committee decision on the 2022 value for this.

**Section 5:** outlines next steps.

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<sup>1</sup> SEM-21-067a was SEMO's Recommendation Report on Credit Cover Parameters; SEM-21-067b was the TSOs' Recommendation Report on Uninstructed Imbalances parameters; SEM-21-067c was SEMO's Recommendation Report on the SEM Price Materiality Threshold

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## 2. Parameters for the Determination of Required Credit Cover

### 2.1 Overview

The following Credit Cover parameters and their associated values were reviewed by SEMO for 2022:

- I. Fixed Credit Requirement.
- II. Undefined Exposure Period.
- III. Historical Assessment Period.
- IV. Analysis Percentile Parameter.
- V. Credit Cover Adjustment Trigger.
- VI. Level of Warning Limit.
- VII. Level of Breach Limit.

### 2.2 Fixed Credit Requirement

This parameter set out the Fixed Credit Requirement that must be in place for each registered Generator Unit and Supplier Unit. Table 2.1 below sets out the current values and SEMO's proposed values for 2022.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022
Fixed Credit Requirement for Generator Units	€5,000	€5,000
Fixed Credit 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

*Table 2.1: Proposed Values for Fixed Credit Requirements*

#### Respondents' Comments & SEM Committee Decision

The RAs did not receive any objections to the values proposed above, thus the SEM Committee has decided that the Fixed Credit Requirements for Generator Units and for Supplier Units will remain unchanged for 2022.

### 2.3 Undefined Exposure Period

SEMO's report proposed that the number of days in the Undefined Exposure Period remains as 9 days. The number of days in the Undefined Exposure Period (referred to as UEPBDg in the Trading and Settlement Code) is the period for which settlement amounts are not known, but where participants can incur further liability until they are removed from the market.

Table 2.2 below sets out the current and proposed value for the parameter related to the Undefined Exposure Period.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022
Number of days in the Undefined Exposure Period, g, (UEPBDg)	9 Days	9 Days

*Table 2.2: Proposed Value for Undefined Exposure Period*

#### Respondents' Comments & SEM Committee Decision

The SEM Committee is of the view that given that there are no objections to the proposed value, this value shall remain unchanged for 2022.

#### 2.4 Historical Assessment Period

The Historical Assessment Period (DINHAP) is the number of Settlement Days prior to the issue of the latest relevant Settlement Document over which a statistical analysis of a Participant's incurred liabilities shall be undertaken to support the forecasting of the future Undefined Potential Exposure for that Participant.

Table 2.3 below sets out the current and proposed value for the parameter related to Historical Assessment Period.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022
Number of days in the Historical Assessment Period (DINHAP)	100 Days	100 Days

*Table 2.3: Proposed Value for Historical Assessment Period*

#### Respondents' Comments & SEM Committee Decision

Given that there were no objections raised to the proposed value, the SEM Committee is of the view that this value shall remain unchanged for 2022.

#### 2.5 Analysis Percentile Parameter

The Analysis Percentile Parameter (AnPP) is the z-score value taken from the standard normal distribution that determines the percentile confidence value that the Actual Exposure for each Participant, once determined, will fall below the estimate of the Undefined Potential Exposure. In application, the AnPP is a multiplier used in the calculation of undefined exposures for all units and the Credit Assessment Price. The Credit Assessment Price is equal

to the mean value of imbalance settlement prices over a period, plus the AnPP multiplied by the standard deviation of imbalance prices over the same period.

Table 2.4 below sets out the current and proposed value for the parameter related to Analysis Percentile Parameter.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022
Analysis Percentile Parameter	1.960	1.645

*Table 2.4: Proposed Value for Analysis Percentile Parameter*

#### Respondents' Comments & SEM Committee Decision

One respondent requested that the impact of changing the Analysis Percentile Parameter be sufficiently monitored and considered when reviewing these parameters in future. No objections were raised by participants to the proposed change in the value of the Analysis Percentile Parameter, therefore, the SEM Committee is of the view that the value of this parameter shall be set at 1.645 for 2022.

### 2.6 Credit Cover Adjustment Trigger

The Credit Cover Adjustment Trigger 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 calculated from its forecasts of future demand or generation, rather than analysis of historical data.

Table 2.5 below sets out the current and proposed value for the parameter related to Credit Cover Adjustment Trigger.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022
Credit Cover Adjustment Trigger	30%	30%

*Table 2.5: Proposed Value for Credit Cover Adjustment Trigger*

#### Respondents' Comments & SEM Committee Decision

The SEM Committee is of the view that, given that there are no objections to the proposed value, this value shall remain unchanged for 2022.

## 2.7 Level of Warning Limit

The Level of the Warning Limit parameter is used to notify participants that they are above an identified ratio in relation to their required credit cover. If the ratio of a Participant's Required Credit Cover to its Posted Credit Cover exceeds the value of this parameter a Warning Notice will be sent to the Participant.

Table 2.6 below sets out the current and proposed value for the parameter related to Warning Limit.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022
Level of the Warning Limit	80%	80%

*Table 2.6: Proposed Value for Level of Warning Limit*

### Respondents' Comments & SEM Committee Decision

The SEM Committee is of the view that, given that there are no objections to the proposed value, this value shall remain unchanged for 2022.

## 2.8 Level of Breach Limit

The Level of the Breach Limit parameter is used to notify participants that they are above an identified ratio in relation to their required credit cover. If the ratio of a Participant's Required Credit Cover to its Posted Credit Cover exceeds this value a Credit Cover Increase Notice is issued, which will require remedy by the Participant, including by posting additional Credit Cover.

Table 2.7 below sets out the current and proposed value for the parameter related to Breach Limit.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022
Level of the Breach Limit	100%	100%

*Table 2.7: Proposed Value for Level of Breach Limit*

### Respondents' Comments & SEM Committee Decision

The SEM Committee is of the view that, given that there are no objections to the proposed value, this value shall remain unchanged for 2022.

## 2.9 Summary of SEM Committee Decisions

A summary of the decisions made by the SEM Committee in relation to the parameters relating to Credit Cover requirements are summarised in Table 2.8 below.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022	SEM Committee Decision for 2022
Fixed Credit Cover Requirement for Generator Units	€5,000	€5,000	<b>€5,000</b>
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	<b>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</b>
Historical Assessment Period	100 Days	100 Days	<b>100 Days</b>
Number of days in the Undefined Exposure Period, g, (UEPBDg)	9 Days	9 Days	<b>9 Days</b>
Analysis Percentile Parameter	1.96	1.645	<b>1.645</b>
Credit Cover Adjustment Trigger	30%	30%	<b>30%</b>
Warning Limit	80%	80%	<b>80%</b>
Breach Limit	100%	100%	<b>100%</b>

Table 2.8: Summary of Credit Cover Parameter values for 2022



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### 3. Uninstructed Imbalance Parameters

#### 3.1 Overview

Uninstructed Imbalances apply in the SEM when the Actual Output of a Generator Unit deviates from its Dispatch Quantity in a Trading Period. Under paragraph F.9.1.2 of the TSC, if requested by the Regulatory Authorities, the System Operators shall report to the Regulatory Authorities at least four months before the start of the Year, proposing values for the parameters to be used in the calculation of Uninstructed Imbalances for that Year. The TSO's report (SEM-21-067b) recommended values to be applied for a number of imbalance settlement parameters in the SEM.

- I. Engineering Tolerance, (TOLENG).
- II. MW Tolerance (TOLMWt).
- III. System per Unit Regulation Factor (FUREG).
- IV. The Discount for Over Generation Factor (FDOGuy).
- V. Premium for Under Generation (FPUGuy).

#### 3.2 Engineering Tolerance and MW Tolerance

SEMO proposed that the values for MW Tolerance, Engineering Tolerance, and System per Unit Regulation Factor are retained for 2022. Table 3.1 below sets out the current and proposed values for the MW Tolerance and Engineering Tolerance.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022
Engineering Tolerance	0.01 (1%)	0.01 (1%)
MW Tolerance	1 MW	1 MW
System per Unit Regulation Factor	0.04 (4%)	0.04 (4%)

*Table 3.1: Proposed values related to Imbalance Tolerance requirements*

#### Respondents' Comments & SEM Committee Decision

In respect of the Engineering Tolerance, MW Tolerance and System per Unit Regulation Factor, the SEM Committee note that no respondent objected to the proposed values. The SEM Committee has therefore decided that these parameter values should be retained for 2022.

### 3.3 Discount for Over Generation Factor and Premium for Under Generation Factor

Discount for Over Generation and Premium for Under Generation can, in principle, be based on the typical cost of replacement generation (in the case of under-generation) and the typical cost saving of displaced generation (in the event of over-generation). Table 3.2 below sets out the current and proposed values related to Over and Under Generation.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022
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 Generator Unit	0.2	0.2
Premium for Over Generation Factor for each Interconnector Error Unit	0	0

*Table 3.2: Proposed values related to Over and Under Generation*

#### Respondents' Comments & SEM Committee Decision

In respect of the Discount for Over Generation Factor and Premium for Under Generation Factor, the SEM Committee has decided that these parameters should be retained for 2022. No respondent objected to the proposed values. One respondent noted that continuation of the current Uninstructed Imbalance parameter values will help to provide certainty regarding the potential exposure to uninstructed imbalances during 2022.

### 3.4 Summary of SEM Committee Decisions

A summary of the decisions made by the SEM Committee in relation to the Uninstructed Imbalance Parameters are summarised in Table 3.3 below.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022	SEM Committee Decision for 2022
Engineering Tolerance	0.01 (1%)	0.01 (1%)	0.01 (1%)
MW Tolerance	1 MW	1 MW	1 MW
System per Unit Regulation Factor	0.04 (4%)	0.04 (4%)	0.04 (4%)
Discount for Over Generation Factor for each Generator Unit	0.2	0.2	0.2
Discount for Over Generation Factor for each Interconnector Error Unit	0	0	0
Premium for Under Generation Factor for each Generator Unit	0.2	0.2	0.2
Premium for Over Generation Factor for each Interconnector Error Unit	0	0	0

*Table 3.3: Summary of Uninstructed Imbalance Parameters values for 2022*

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## 4. SEM Price Materiality Threshold

### 4.1 Overview

The Price Materiality Threshold refers to the threshold, approved from time to time by the Regulatory Authorities under paragraph B.19.3.1(b) of the TSC, 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 the threshold. If the Price Materiality Threshold is exceeded, the price is recalculated and included in a Settlement re-run. Table 4.1 below sets out the current and proposed value of the Price Materiality Threshold.

Parameter	Current SEM Value	SEMO's Proposed Value for 2022
SEM Price Materiality Threshold	5%	5%

*Table 4.1: Proposed value for SEM Price Materiality Threshold*

### Respondent's Comments & SEM Committee Decision

One respondent noted that maintaining the Price Materiality Threshold at its existing value will continue to avoid any unnecessary complexity with the repricing process. No respondent objected to the proposed value for the SEM Price Materiality Threshold, therefore, the SEM Committee has decided that the current value should be retained for 2022.

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## 5. Next Steps

These parameters will apply from 1 January 2022 until 31 December 2022. A consultation will be carried out in 2022 to determine the values to apply from January 2023. The Trading and Settlement Code provides for the RAs amending the values of parameters where necessary outside the normal parameter-setting process. While this would only arise in exceptional circumstances, the RAs have an obligation to balance regulatory certainty with ensuring that no unnecessary consumer harm arises. On this basis, the RAs will keep all parameters under observation and may propose changes in the interim if necessary, via consultation.