

RESOLUTION 18¹

Implementing Decision relating to the Risk management procedures of the Clearing System for Transactions on the Natural Gas Trading Platform of HEnEx and other related issues

as approved by the Regulatory Authority for Energy (Decision 90/2022)

PART 1. Scope of Application & Definitions

1.1. Scope of Application

1. This Resolution determines the Risk management procedures of the Clearing System in implementation of the Clearing Rulebook for Transactions on HEnEx's Natural Gas Trading Platform (henceforth the "Clearing Rulebook") and other relevant issues.
2. In particular, the Resolution specifies the following matters:
 - a) Methodology of the Margin Requirements and Intraday Risk Calculation of sections 2.38 and 2.39 of Chapter 2 of the Clearing Rulebook.
 - b) Definition of Acceptable Collaterals for the cover of Margin Requirement of sections 2.21, 2.22 and 2.23 of Chapter 2 of the Clearing Rulebook.
 - c) Rules for Default Fund's Calculation of sections 2.25, 2.26 and sub-sections 2.27.1, 2.27.2 of Chapter 2 of the Clearing Rulebook.

1.2. Definitions

1. The terms and definitions used in this Resolution, shall have the same meaning as the one assigned to them by Law 4425/2016, Law 4001/2011 or other related National or Union Law

¹ Unofficial translation from the Greek language, as of 04/02/2022. In case of any discrepancy between the Greek and the English version, the Greek version prevails.

and in the Clearing Rulebook, as well as any Resolutions issued in its implementation, unless otherwise expressly stipulated.

2. In every case, the provisions of this Resolution are interpreted in accordance with the rules and principles provisioned in paragraph 5 of the Scope of Application of the Clearing Rulebook.

PART 2. Calculation of the Margin Requirement of section 2.38 and Intraday Risk of section 2.39 of Chapter 2 of the Clearing Rulebook

2.1. Calculation of Margin Requirement of section 2.38 of Chapter 2 of the Clearing Rulebook

1. The Margin Requirement is calculated per Clearing Account during the clearing day and after the finalization of positions (at specific hour T as specified by EnExClear's Decision in respect to the tasks' time schedule) for the purpose of the Collaterals' adequacy verification of the respective Account and Credit Limits' attribution of section 2.39 of Chapter 2 of the Clearing Rulebook.
2. The Margin Requirement is calculated according to the provisions of section 2.38 of Chapter 2 of the Clearing Rulebook, as specified by this Resolution, and is based on the calculation of the loss that would be caused by non-fulfilment of the Clearing Member's obligations arising from the Clearing Account.
3. The calculation of Margin is carried out, based on the net position (obligation/claim) of the Clearing Account, arising from the finalized transactions, which have been notified to the Clearing System during the clearing day. Specifically:
 - a. If an obligation arises for the Clearing Member to pay a cash amount, which has not been settled yet, this amount is set as Margin.
 - b. If a claim arises for the Clearing Member to receive a cash amount, then the Margin equals to zero.
4. All exceptionally and in case of extraordinary circumstances, EnExClear may modify the Margin calculation method for market protection reasons. EnExClear may as well change the Margin requirements for all Clearing Accounts as well as for individual Accounts, and set a deadline for their cover, particularly taking into consideration any imminent risks. In both cases, EnExClear is obliged to inform RAE immediately for the extraordinary application of the measures as well as the reasons that led to them. By way of exception, the application of

the measures is strictly limited to the time period which the extraordinary circumstances that occur, justify them and is subject to the approval of RAE.

2.2. Calculation Methodology of Intraday Risk of section 2.39 of Chapter 2 of the Clearing Rulebook

1. During the trading session of the Natural Gas Trading Platform of HEnEx, the Intraday Risk is subtracted from the Credit Limit of each Clearing Account, based on the unexecuted orders entered by the Participant and the transactions concluded by the latter and not registered in the Clearing System.
2. The Intraday Risk ($R_{intraday}$) is calculated as the sum of the Risk arising from active orders (R_{orders}) and the Risk from the trades already concluded (R_{trades}), in accordance with the respective paragraphs 2.2.1 & 2.2.3 of this Resolution.

$$R_{intraday} = R_{orders} + R_{trades}$$

3. More specifically:
 - a) By entering each order, the new Order Risk is calculated (R_{orders}), by adding to the existing Risk the risk that arises from the new order. If the total Intraday Risk ($R_{intraday}$) is covered by the Clearing Member's Credit Limit for the Clearing Account and the Participant, the order will be registered in the order book.
 - b) After each order's cancellation, the new Order Risk (R_{orders}), is calculated by subtracting the Risk that has been added by the cancelled order.
 - c) When an order is executed, the new Order Risk (R_{orders}), is calculated by subtracting the Risk which had been added by the executed order, while the new Trades Risk (R_{trades}), is calculated by adding the Risk from the new trade.

2.2.1. Calculation of Order's Risk

1. Order Risk (R_{orders}) is the risk undertaken by the Clearing Member from orders that remain active during the trading session. It is calculated at the entry of each order, per Clearing Account held by the Clearing Member to which the Credit Limit has been assigned, as:

$$R_{orders} = \sum_j [\max(V_{order j}, 0)].$$

where,

j = order

$V_{order,j}$ = value of order j

2. For the calculation of the value of buy or sell order, the following apply:
 - a) For Limit Orders, the maximum potential cash obligation or claim of the Participant is calculated. If the execution of the order leads to an obligation for the Participant to EnExClear, the sign of the order's value is positive and in the opposite case the sign of the order's value is negative.
 - b) For Market Orders the calculation of the order's value is the same as a) for which as price a Reference Price is used, which is calculated according to the paragraph 2.2.2 of this Resolution.

2.2.2. Risk Calculation for Reference Price

1. For the calculation of the value of each Market Order as a Risk Calculation Reference Price it is used the price of the last trade in the same product or if there are no trades before the entry of the order the starting price of the product, as it is defined in the relevant Decision of HEnEx multiplied with a factor a that it is defined to be 200%.
2. The above calculation methodology for the Risk Calculation Reference Price or the multiplication factor a may be readjusted ad hoc by EnExClear, due to special conditions which are formed, for the purpose of protecting the market. In such cases, EnExClear is obliged to inform RAE immediately for the extraordinary application of the measure as well as the reasons that led to it. By way of exception, the application of the measure is strictly limited to the time period which the special conditions that occur, justify them and is subject to the approval of RAE.

2.2.3. Calculation of the Trades' Risk

1. The Trades' Risk (R_{trades}) is the Risk which the Clearing Member undertakes for the trades which have been executed during the trading session. It is calculated after the execution of each trade per Clearing Account and per Participant, to whom the Credit Limit has been assigned as follows:

$$R_{trades} = \sum_i V_i$$

where,

i = trade

V_i = value of trade i

2. The value of the trade is calculated as the cash obligation or claim of the Participant due to the trade. If the trade leads to a claim for the Participant, the sign of the trade's value is negative.

PART 3. Definition of Acceptable Collaterals for the coverage of Margin Requirement of section 2.21 of Chapter 2 of the Clearing Rulebook

3.1. Acceptance of Collaterals

1. As acceptable collaterals of section 2.21 of Chapter 2 of the Clearing Rulebook are defined:
 - a) Cash in Euro,
 - b) Letters of Guarantee, which comply with the requirements of section 2.21 of Chapter 2 of the Clearing Rulebook, carried out based on a standard template of Annex I of this Resolution. For the extension of Letter of Guarantee's duration, the submission to EnExClear of a standard letter is required, according to Annex II of this Resolution. In order to reduce credit risk, the Letter of Guarantee's issuer is required to be included in the list of systemically important credit institutions where the ECB has the direct prudential supervision, or evaluated by rating agencies with at least BBB- and Baa3 on the rating scale of S&P or Fitch and Moody's, respectively. EnExClear's competent department may request from the Clearing Member, who submits the Letter of Guarantee, a legal opinion confirming the letter's compliance with the requirements of the Clearing Rulebook, as well as the compatibility of the issuer's legal framework with the Greek law. The registration of the Letter of guarantee as collateral for the Clearing Rulebook's purposes requires the completion of the above evaluation process.
2. The Letters of Guarantee shall be deemed as acceptable collaterals and they are evaluated as such, until the fifth working day prior to their expiration.
3. For the acceptance of the collateral by EnExClear, according to section 2.37 of Chapter 2 of the Clearing Rulebook, the Clearing Member must declare the way of the allocation of the collateral per Clearing Account, as follows:
 - a) For the acceptance of collateral in the form of cash, the declaration is transmitted to EnExClear electronically through the System.

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- b) For the acceptance of collateral in the form of Letter of Guarantee from EnExClear, the Clearing Member is required to declare the way of its allocation, in writing, according to the standard form «Collateral in the form of Letter of Guarantee», which is posted on EnExClear's website.
4. For unpledging the received collateral from EnExClear according to sections 2.21 and 2.23 of Chapter 2 of the Clearing Rulebook the following apply:
- a) To unpledge collaterals in the form of cash, the unpledging declaration is transmitted to EnExClear electronically through the System.
- b) To unpledge the collateral in the form of Letter of Guarantee before its expiry, a writing declaration by the Clearing Member is required, transmitted via email to EnExClear, according to the standard form «Collateral unpledge in the form of a Letter of Guarantee before its expiry», which is posted on EnExClear's website.
5. The return of collateral is carried out:
- a) if the collateral has been provided in the form of cash, on the day following the next working day of the return's request, unless the competent department of EnExClear deem necessary the return at an earlier time point for covering obligations relating to the System,
- b) if collateral has been provided in the form of Letter of Guarantee, on the day following the next working day of the return's request or on the next working day of expiry along with the submission of the standard authorization form «Authorization to Receive a Letter of Guarantee from EnExClear», posted on EnExClear's website.

3.2. Collaterals Concentration Limits

1. In implementation of section 2.21 of Chapter 2 of the Clearing Rulebook, the following are defined:
- a) The percentage of required Margin per Clearing Account which should be covered in cash on a daily basis at 40%.
- b) The maximum concentration limit of collaterals in the form of Letters of Guarantee by an issuer is set at 20.000.000 € as a total of all Clearing Accounts. By depositing a Letter of Guarantee, if this limit is violated, the Letter of Guarantee is accepted only upon decision of EnExClear.

PART 4. Rules of Default Fund Calculation of sections 2.25, 2.26, and sub-sections 2.27.1 2.27.2 of the Chapter 2 of the Clearing Rulebook

4.1. Initial and minimum contribution of section 2.26 of the Chapter 2 of the Clearing Rulebook

1. The amount of the initial contribution of the Direct Clearing Members is set at fifteen thousand euros (15.000€) and of General Clearing Members at two hundred fifty thousand euros (250.000€).

4.2. Time Period of Default Fund Calculation of sub-section 2.27.1 and sub-section 2.27.2 of the Chapter 2 of the Clearing Rulebook

1. The size of Default Fund is calculated on a monthly basis and for the purposes hereof the term “calculation period” refers to the periods from the first day to the last day of each month in a calendar year.

4.3. Contribution Rate of sub-section 2.27.1 of the Chapter 2 of the Clearing Rulebook

1. The Contribution Rate (a) of sub-section 2.27.1 of Chapter 2 of the Clearing Rulebook is set to 100%.

4.4. Adjustment of share account of Default Fund as a result of corporate actions or other events with respect to the Clearing Members of section 2.25 of the Chapter 2 of the Clearing Rulebook

1. In the event of a merger of Clearing Members or other relevant corporate actions the share account of the Default Fund of the Member which maintains the capacity will be set equal to the sum of the share accounts of all the merging members until the next regular or extraordinary readjustment of the Default Fund. At the next regular or extraordinary readjustment of the Default Fund, for defining the share account of the Member which maintains the capacity, at first the share account of the Member which holds the capacity for the calculation time period before the merger, will be calculated, considering the Margins of Clearing Accounts of all merging Members and then the share account of the Member which holds the capacity for the calculation time period after the merger, will be calculated, considering only the Margins of Clearing Accounts of the Member which maintains the capacity. For the final determination of the Default Fund share account of the Member which maintains the capacity, the share accounts that result from the above calculations will be weighted based on the number of days of the above time period.

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2. In the event of transferring the Clearing Account to other Clearing Member, at the next regular or extraordinary readjustment of the Default Fund, for the determination of the Default Fund share account of the Member to which the Account is transferred, its share account will be calculated, for the time of the calculation period before the transfer, considering the Margin of the Account which is transferred, and its share account will also be calculated for the time of the calculation period after the transfer. For the final determination of the Default Fund share account of the Member to which the Account is transferred, the share accounts that result from the above calculations will be weighted based on the number of days of the above time periods.
 3. In the event of deletion of a Clearing Account, or its transfer to other Member, for the determination of the Default Fund share account of the Clearing Member from which the Clearing Account is deleted, its share account will be calculated during the next regular or extraordinary readjustment of the Default Fund, without taking into account the Margin of the deleted Clearing Account.

PART 5. Initial Default Fund Share Accounts and Reference Prices

1. With the initiation of the Natural Gas trading platform of HEnEx operation, the initial calculation of the Default Fund share accounts for every Clearing Member, will be the initial contribution according to paragraph 4.1 of this Resolution.

ANNEX I. TEMPLATE OF FIXED TERM GUARANTEE LETTER

_____ **NAME OF BANK**
 _____ **BRANCH**
 _____ **(Place - Date)**

To:
EnEx Clearing House S.A. (EnExClear)
110, Athinon Ave.
104 42 Athens, Greece

LETTER OF GUARANTEE No. FOR EUROS

We hereby expressly, unconditionally, irrevocably and unreservedly guarantee to you, as principal debtors severally, waiving all rights of objection and excursion (beneficium excussionis) and any other of our rights under Articles 853 and subsequent articles of the Greek Civil Code in favor of the Company under the business name,
 (.....) with Tax Registration Number....., General Commercial Registry Number having its Registered Office at (hereinafter “the Company”), up to the amount of EUR (€.....), where to our guarantee is limited, for the prompt, accurate, adequate and timely fulfilment of the obligations undertaken by the Company towards you as a Clearing House of the Law 4425/2016, according to the provisions of the «Clearing Rulebook for Transactions on HEnEx’s Natural Gas Trading Platform» and the more specific requirements of the par. 2 of its section 2.21, which the present fulfills, as it is in force from time to time.

In the event that due to the hereabove guarantee, you decide, as per your free, absolute, and unfettered discretion, disclosed to us, that the Company breached any of its above obligations to you as Clearing House, we hereby declare that by virtue of the present we assume the obligation and undertake to pay to you, within three (3) business days upon receipt of your first written demand for partial or full forfeiture of the present guarantee, all or part of the amount of the present guarantee free and released from any claim, charge or levy of whatsoever nature, as per your instructions, and without contesting or examining or verifying, if your demand is valid or grounded, or raising any objection, or demanding the Company’s prior authorization or consent

or any other action from the Company, and without having the right to take into consideration any opposition, objection, complaint, reservation raised or any recourse to arbitration or dispute brought before any court of competent jurisdiction by the Company or of any third party. In the event of any partial forfeiture of the present guarantee, this letter shall remain valid for the rest of the amount covered by the subject guarantee and under the same terms and conditions hereof.

We furthermore declare that our guarantee is granted only as regards the causa described herein and shall remain valid until the complete and full compliance of the Company with all its above obligations to you as Clearing House.

This guarantee **starts from X (Day) Month 20... (of the year two thousand)** and remains in force the latest until **Y (Day) Month 20... (of the year two thousand)**, and in any case until this guarantee is returned to us with your attached written declaration releasing us from all our obligations under the present guarantee. In case that the Company requests the replacement of the present Letter of Guarantee, the present guarantee shall remain in full force and effect until the full and complete compliance with/fulfillment of all of the Company's obligations, which arose at the time that the present guarantee is in force.

Our obligations/liabilities arising by this present guarantee shall remain in full force and effect and we will not be released from our obligations arising from the present guarantee and indemnity, by virtue of any act, omission or fact, which, in lack of this provision, could release us from our obligations/liabilities under the present guarantee, in part or in full, including but not limited to, and irrespectively to our or your knowledge of the following:

- a) the Company is declared bankrupt, or under compulsory administration or dissolution or liquidation,
- b) the Company or any third party is granted any extension, waiver or benefit,
- c) the Company or any third party is granted any right to set off or retention by virtue of whatsoever right raised against you.

This present guarantee and all matters arising from it are subject to Greek law and by the present our bank unconditionally, irrevocably and unreservedly submits to the Athens Courts' exclusive jurisdiction.

In witness whereof, the present letter of guarantee is signed on:, 20...

For the guarantor Bank

ANNEX II. TEMPLATE OF EXTENSION OF LETTER OF GUARANTEE

_____ **NAME OF BANK**

_____ **BRANCH**

_____ **(Place - Date)**

To:
EnEx Clearing House S.A. (EnExClear)
110, Athinon Ave.
104 42 Athens, Greece

EXTENSION OF LETTER OF GUARANTEE No.:

Following a timely request by the Company under the name (.....), with Tax Registration Number and having its Registered Office at we hereby irrevocably and unreservedly guarantee to you that the above Letter of Guarantee is extended to fulfil the obligations of clearing and cash settlement of the Company to you as Clearing House of the Law 4425/2016 according to the provisions of the “Clearing Rulebook for Transactions on HEnEx’s Natural Gas Trading Platform”, as in force respectively, **and remains in force the later until the Y (Day) Month 20.. (of the year of two thousand**), and in any case until this guarantee is returned to us with your attached written declaration releasing us from all our obligations under the present guarantee.

For the rest all the other terms of the above letter of guarantee, which remain unchanged, are in force.

This is an integral part of the No. Letter of Guarantee of the amount EURO issued on <<date>>.

For the guarantor Bank