



ceegex
CENTRAL EASTERN EUROPEAN
GAS EXCHANGE



REFERENCE PRICE REGULATION

ANNEX IV

OF

CEEGEX MARKET RULES

Version 1.24

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1. GENERAL RULES

1.1. GOALS OF THE REFERENCE PRICE REGULATION

The Reference Price Regulation is set of rules applicable to calculation process and methodology for the Reference Price (also RP or CEEREP™) of CEEGEX including parameters and prescriptions.

CEEGEX shall publish the Reference Price Regulation on its website.

1.2. PERSONS BOUND BY THE REFERENCE PRICE REGULATION AND EFFECTIVE DATE

The present Reference Price Regulation is binding on CEEGEX and on persons bound by the CEEGEX Rules and Regulations.

The present Reference Price Regulation will become effective as defined in the Section 1.1.4.7 of CEEGEX Market Rules.

1.3. DEFINITION

The definitions used in the Reference Price Regulation shall have the meaning as defined in the CEEGEX Market Rules.

1.4. PROTECTION OF THE REFERENCE PRICE

The Reference Price Regulation is protected by copyright.

1.5. PUBLICATION

Reference Price related information (Reference Price values, composition of Reference Price, calculation parameters, decisions, releases, etc.) are published via the website of the CEEGEX (www.ceegex.hu).

1.6. UTILIZATION OF REFERENCE PRICE (CEEREP™)

Utilization of Reference Price – in accordance with the relevant legislation – is primarily subject to the laws on copyright protection. Usage of the Reference Price by service providers within the framework of products is subject to the conclusion of a license agreement.

Any index created or price calculated by CEEGEX Ltd. may be used freely and free of charge by anyone for internal calculations (not to be passed on or published) and for the settlement of contracts concluded outside of an organized or regulated market, in particular for the price determination of natural gas trading and supply contracts. If a user intends to use any index created by CEEGEX Ltd., in particular "CEEREP" and "CEENDEX", or intends to use a price calculated by CEEGEX Ltd. in any other way than the purposes expressly allowed above, in particular to incorporate them in products or services offered and/or traded on organized or regulated markets or similar platforms, he/she must conclude a contract with CEEGEX Ltd. for their use.

2. REFERENCE PRICE (CEEREP™) CALCULATION PRINCIPLES

2.1. BASIC PRINCIPLES

CEEREP™ is an index based on end-of-day (EOD) market price, which reflects the true value of the Hungarian Virtual Point (MGP) at the end of business days. CEEREP™ follows European best practices by applying well-known qualification parameters, standardized



algorithm and a definite reference window. CEEREP™ is comparable to European natural gas EOD indices, and increases usability compared to the previous MGP prices.

CEEGEX Reference Prices are established in line with the following principles:

- » the calculation is based on Market Data;
- » objectivity is ensured by a fully automated calculation.

The basic input of the Reference Price calculation is the CEEGEX Market Data for the relevant Reference Window (trading and bidding activity), specified in Section 2.2.1.

2.2. CALCULATION PROCESS

2.2.1. REFERENCE WINDOW (RW)

Reference Window is a timeframe when Trades and Orders are considered, which meet the qualification parameters. The reference windows indicate timeframes on business days according to the Trading Calendar.

The Primary Reference Window is between 5.15 p.m. and 5.30 p.m. on each business day.

The Secondary Reference Window is between 3.00 p.m. and 5.30 p.m. on each business day.

If the calculation of the CEEGEX technical price according to 2.2.2 fails in the Primary Reference Window, the calculation is repeated in the Secondary Reference Window.

If the calculation of CEEREP™ fails in the Secondary Reference Window, CEEREP™ is calculated based on the volume weighted arithmetic average price of Trades concluded between 8:00 a.m. and 6:00 p.m.

If the calculation of CEEREP™ fails in any reference windows or calculation step because no Trades or Offers fulfills the qualification parameters, the CEREP from the previous day will be applied as the value for the current day.



2.2.2. STEPS OF THE CALCULATION

The detailed steps of the calculations are the following.

No.	Calculation phase	Comment
	Primary inputs	CEEEX Trades, Orders
	Calculated CEEREP™	1, in absence 2, in absence 3, in absence 4, in absence 5, <u>in absence 6</u>
1	Calculated CEEREP™	At least 3 Trades fulfill the qualification parameters within the Primary Reference Window: 1 = volume-weighted arithmetic average price of Trades
2	Calculated CEEREP™	1 or 2 Trades and Orders fulfill qualification parameters within the Primary Reference Window: 2 = 0.75 x (volume-weighted arithmetic average price of Trades) + 0.25 x (time-weighted arithmetic average price of duration weighted best bid and duration weighted best ask Orders)
3	Calculated CEEREP™	No Trades, but Orders fulfill qualification parameters within the Primary Reference Window: 3 = arithmetic average price of duration weighted best bid and duration weighted best ask Orders Time-weighted arithmetic average price of the 3 best bid Orders and the 3 best ask Orders
4	Calculated CEEREP™	If the calculated CEEREP™ cannot be established on the basis of 1, 2, 3 steps in the Primary Reference Window: 4 = 1, 2, 3 steps are repeated in the Secondary Reference Window
5	Calculated CEEREP™	If no Trades or Orders fulfill the qualification parameters within either reference window: 5 = volume weighted arithmetic average price of Trades concluded between 8:00 a.m. and 6:00 p.m.
<u>6</u>	<u>Calculated CEEREP™</u>	<u>If there is no Trades or Orders fulfill the qualification parameters in either the Primary or Secondary Reference Window, or in any calculation step, the CEEREP from the previous day will be applied as the value for the current day.</u> <u>For DA (Day-Ahead) products, the price published for the previous DA product will be used in place of the CEEREP for the current day.</u> <u>For WE (Weekend) products, the price published for the previous WE product will be used in place of the CEEREP for the current day.</u>
	Final CEEREP™	Final price, validated by the CEEEX



2.3. QUALIFICATION PARAMETERS FOR PRIMARY RP INPUTS

For the most reliable result, CEEGEX uses different qualification parameters to select the primary inputs for CEEREP™ calculation:

Parameter	Value	Unit
Minimum quantity of Trades	10	MW
Minimum quantity of Orders	10	MW
Minimum time duration of the bid-ask spread	3	min
Maximum value of the bid-ask spread	2	EUR/MWh

- » Only those Trades and Orders that are in “Inserted” status within the examined Reference Windows are considered. Additionally, Orders with “Updated” status that were submitted before the examined Reference Time Windows can also be considered.
- » Deleted or cancelled Trades are not considered.
- » The Parameters section specifies a minimum Order quantity of 10 MW, which can be fulfilled even if part of this quantity is hidden.
- » A Member’s trader cannot establish a Best Bid and Ask order pair by submitting Orders on Both sides.
 - o In this case, only the best Order that was submitted earlier will be considered in the calculation. The Best Order on the other side will not be take into account in the calculation.
- » In the CEEREP™ calculation, if the arithmetic average price of new Trades deviates by more than ±30% from the price of the previous Trade, or if the arithmetic average of the Best Bid and Best Ask Order pairs deviates by more than ±30% from the price of the previous Trade, it will not be considered in the calculation.
- » If the calculation of CEEREP™ fails in any reference windows or calculation step because no Trades or Offers fulfills the qualification parameters, the CEREP™ from the previous day will be applied as the value for the current day.
- » CEEGEX reserves the right to exclude Trades or Orders that appear to be outliers, which have a suspected motivation to unfairly influence the price calculation process.

formázott: Listaszerű bekezdés;nyíl, Grafikus listajeles felsorolás + Szint: 1 + Igazítás: 0,63 cm + Behúzás: 1,27 cm

formázott: Tabulátorok: Nincs 5 cm

formázott: Listaszerű bekezdés;nyíl, Grafikus listajeles felsorolás + Szint: 1 + Igazítás: 0,63 cm + Behúzás: 1,27 cm

2.4. PUBLICATION

CEEGEX publishes CEEREP™ for each gas day on the last business day before delivery after 5:30 p.m. or after 6:00 p.m. in case of CEEREP™ is calculated based on the volume weighted arithmetic average price of Trades concluded between 8:00 a.m. and 6:00 p.m., or if no Trades or Orders fulfill the qualification parameters, the CEEREP from the previous day will be applied.



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CEEGEX calculates CEEREP™ based on the Trades and Orders of Day-Ahead and the longest available block Product, i.e. Weekend or Holiday according to the Trading Calendar. In case of the absence of a block Holiday Product (i.e. Individual Holiday), CEEGEX calculates CEEREP™ based on the Trades and Orders of the respective Individual Holiday.