Program 1 Commodity futures for early trading

I.   This option applies to agreements entered into in the form of the bilateral derivatives price support agreement

1. The table below shows instruments and their designations for which the Market Maker must maintain quotes and/or trading volumes during the trading session on the Moscow Exchange Derivatives Market under this Program:

Instrument designation	Instrument name
k=1	Brent oil futures
k=2	Gold futures
k=3	Silver futures
k=4	Henry Hub natural gas futures

2. Terms of Market Maker obligations

2.1. The following definitions are used to set the Market Maker obligations parameters:

Spread	The maximum difference between the best bid and the best ask made by the Market Maker with respect to the Instrument. The value of the Spread is determined according to the formula: $Spread_{MM} = \max\{|a*SP_i|; b\}$, where: a, b – Constants specified for the Instrument in paragraph 2.2.1 of this Program; SP_i – Settlement Price of the Instrument with the ith contract month determined at the end of the intraday clearing session. The Spread is determined by the value used for determination of the Instrument's price as set out in the Specifications.
Best bid	The price of an order to buy entered by Market Maker with respect to the Instrument, which volume (considering the volume of all Market Maker orders to buy at the same price or higher) is no less than the minimum required order volume.
Best bid	The price of an order to sell entered by the Market Maker with respect to the Instrument, which volume (considering the volume of all orders to sell of the Market Maker at the same price or lower) is no less than the minimum required order volume.
Quantum	The period of the Trading Session during which the Market Maker must enter orders. Quanta are designated as q= 0, 1, … (where 0, 1, ... – the Quantum sequence number). The Quantum duration (Ts) is measured in seconds.
Nearest contract month for the Instrument	The contract month of the Instrument that is as close as possible to the Trading Day on which quotes are maintained for such Instrument. Such contract month is designated as i=n (where n= 1, 2, … – the sequence number of the expiration date of the Instrument).
Next contract month for the Instrument	The contract month determined as i= n+1
Reporting period	A calendar month.

Terms that are not specified in this Program are used in the values, the land of internal documents of the Public Joint-Stock Company Moscow Exchange MICEX-RTS (hereinafter - the Exchange)

and the National Settlement Depository, and in the absence of such terms - in accordance with the current legislation of the Russian Federation.

2.2. Market Makers obligations parameters

2.2.1. The Market Maker shall perform its obligations only with regard to contract months specified in Tables 1-4 below:

Table No. 1

Conditions for maintaining two-sided quotes for the Henry Hub natural gas futures k=4 during Quantum q=0			
Market makers obligations parameters	The first contract month (i=1)	The second contract month (i=2)	Start of Quantum End of Quantum (q=0)
	Whole period	Whole period	
1. The Spread (in the Instrument price unit as per the Specification)	$\max\{|0.20\%\times SP|;0.03\}$	$\max\{|0.25\%\times SP|;0.03\}$	07:00 MCK (UTC+3) – 10:00 MCK (UTC+3)
2. Minimum quoted size (in contracts)	800	200	
3. Minimum quote maintenance period (as % of the length of Quantum)	60	60	

Table No. 2

Conditions for maintaining two-sided quotes for the Henry Hub natural gas futures k=4 during Quantum q=0		
Market makers obligations parameters	The first contract month (i=1)	Start of Quantum End of Quantum (q=0)
	Whole period	
1. The Spread (in the Instrument price unit as per the Specification)	$\max\{|0.15\%\times SP|;0.03\}$	07:00 MCK (UTC+3) – 10:00 MCK (UTC+3)
2. Minimum quoted size (in contracts)	200	
3. Minimum quote maintenance period (as % of the length of Quantum)	60	

Table No. 3

Conditions for maintaining two-sided quotes for the Henry Hub natural gas futures k=4 during Quantum q=0		
Market makers obligations parameters	The first contract month (i=1)	Start of Quantum End of Quantum (q=0)
	Whole period	
1. The Spread (in the Instrument price unit as per the Specification)	$\max\{|0.40\%\times SP|;0.03\}$	07:00 MCK (UTC+3) – 10:00 MCK (UTC+3)
2. Minimum quoted size (in contracts)	600	

3. Minimum quote maintenance period (as % of the length of Quantum)	60	

Table No. 4

Conditions for maintaining two-sided quotes for the Henry Hub natural gas futures k=4 during Quantum q=0		
Market makers obligations parameters	The first contract month (i=1)	Start of Quantum End of Quantum (q=0)
	Whole period	
1. The Spread (in the Instrument price unit as per the Specification)	max{|0.35%×SP|;0.003}	07:00 MCK (UTC+3) – 10:00 MCK (UTC+3)
2. Minimum quoted size (in contracts)	100	
3. Minimum quote maintenance period (as % of the length of Quantum)	60	

2.2.2. The nearest and the next contract months of the Instruments k=1 and k=4 are the nearest and the next dates of the expiration of the respective Instrument, attributable to every calendar month.

The nearest and the next contract months (i) of the Instruments k=2 and k=3 are the nearest and the next dates of the expiration of the relevant Instrument, attributable to March, June, September and December, respectively.

2.3. During each qth Quantum of the Trading day of the Reporting Period, the Market Maker is allowed to fail to meet obligations (as specified in any of Tables 1-4 in paragraph 2.2 above) with respect to the kth Instrument, maximum 10 (ten) times. If the Market Maker has failed to comply with this clause with respect to any k^{th} Instrument, their services with respect to all other Instruments specified in paragraph 1 above are considered as having not been provided.

3. Compensation for the Market Maker

3.1. The amount of compensation that the Market Maker receives for fulfilling its obligations during the Reporting Period on terms set out in paragraphs 1-2 above, is the sum of compensation values determined in accordance with formulas 1-2 with regard to every group of the position register sections under which the Market Maker performs its obligations under this Program on the basis of the market making agreement with the Exchange.

Formula 1:

$$0.10 \times \sum_{q,j,k,i} Fee_{active}^{k,i,j,q} \times \left(I_{q,i}\left(Pcf_{j,q}^{k,i}; Pcn_{j,q}^{k,i}\right) + 1\right) + 0.50 \times \sum_{q,j,k,i} Fee_{passive}^{k,i,j,q} \times \left(I_{q,i}\left(Pcf_{j,q}^{k,i}; Pcn_{j,q}^{k,i}\right) + 1\right),$$ where:

- $I_{q,i}$ can take the following values:

$$I_{q,i}\left(Pcf_{j,q}^{k,i}; Pcn_{j,q}^{k,i}\right) = \begin{cases} 1, if\ Pcf_{j,q}^{k,i} \geq 80\% \\ \left(\dfrac{\left(Pcf_{j,q}^{k,i} - Pcn_{j,q}^{k,i}\right)}{\left(80\% - Pcn_{j,q}^{k,i}\right)}\right)^5, if\ Pcn_{j,q}^{k,i} \leq Pcf_{j,q}^{k,i} < 80\% \\ -1, otherwise \end{cases}$$

- $Fee_{active}^{k,i,j,q}$ – the sum of exchange and clearing fees charged to the Market Maker for trades executed in the kth Instrument with the ith contract month during the qth Quantum on the jth Trading Day, which trades were executed based on order book orders entered by the Market Maker with the position register sections which are used by the Market Maker to perform its obligations under this Program based on its market making agreement with the Exchange, provided that these orders

3

are registered in the Order Register under numbers which are greater than numbers of the respective counter orders for the corresponding Paired Trades [1];

- $Fee_{passive}^{k,i,j,q}$ – the sum of exchange and clearing fees charged to the Market Maker for trades executed in the kth Instrument with the ith contract month during the qth Quantum on the jth Trading Day, which trades were executed based on order book orders entered by the Market Maker with the position register sections which are used by the Market Maker to perform its obligations under this Program based on its market making agreement with the Exchange, provided that these orders are registered in the Order Register under numbers which are less than numbers of the respective counter orders for the corresponding Paired Trades;

- $Pcf_{j,q}^{k,i}$ – the actual length of time during which the Contractors maintain the Spread for the kth Instrument with the ith contract month during the qth Quantum on the jth Trading Day, on terms set out in paragraph 2.2 above (per cent of the Quantum length);

- $Pcn_{j,q}^{k,i}$ – the minimum length of time during which the Contractors shall maintain the Spread for the kth Instrument with the ith contract month during the qth Quantum on the jth Trading Day, on terms set out in paragraph 2.2 above (per cent of the Quantum length);

- $k = 1, 2, 3$ – the sequence number of the respective Instrument specified in paragraph 1 of this Program;

- $i = 1, 2, \ldots$ – the sequence number of the respective contract month specified in paragraph 1 of this Program;

- $j = 1, 2, \ldots$ – the sequence number of the Trading Day in the respective month;

- $q = 0, 1, \ldots$ – the sequence number of the Quantum specified in paragraph 2. 2 of this Program.

Formula 2:

$$\frac{\sum_{q,j,k,i} max(0\ ; I_{q,i}(Pcf_{j,q}^{k,i}\ ; Pcn_{j,q}^{k,i}) \times (S_2 - S_1) + S_1)}{\sum_{j,k,q} K_j^{k,q}}, \text{ where:}$$

- S_1 – RUB 100,000 (one hundred thousand);

- S_2 – RUB 200,000 (two hundred thousand);

- $K_j^{k,q}$ – the number of expiration dates for the kth Instrument for which the Market Maker must meet the quote maintenance conditions specified in paragraph 2.2 of this Program, during the qth Quantum on the jth Trading Day;

- $k = 1, 2, \ldots$ – the sequence number of the respective Instrument specified in paragraph 1 of this Program;

- $i = 1, 2, \ldots$ – the sequence number of the respective contract month specified in paragraph 1 of this Program;

- $j = 1, 2, \ldots$ – the sequence number of the Trading Day in the respective month;

- $q = 0, 1, \ldots$ – the sequence number of the Quantum specified in paragraph 2.2.1 of this Program.

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[1] This term is defined as per the CCP NCC Clearing Rules regulating clearing services on the Moscow Exchange Derivatives Market.

II. This option applies to agreements entered into in the form of the trilateral derivatives price support agreement

1. The table below shows instruments and their designations for which the Contractors must maintain quotes during the trading sessions on the Moscow Exchange Derivatives Market in accordance with this Program:

Instrument designation	Instrument name
k=1	Brent oil futures
k=2	Gold futures
k=3	Silver futures
k=4	Henry Hub natural gas futures

2. Conditions for the obligations of the Contractors to be fulfilled.

2.1. The following definitions are used to set the Contractors' obligations parameters:

Spread	The maximum difference between the best bid and the best ask in the Instrument entered by Contractor 1. The value of the Spread is determined according to the formula: $Spread_{MM} = \max\{|a*SP_i|; b\}$, where: a – a constant in % as specified for the Instrument in paragraph 2.2.1 of this Program; SP_i – Settlement Price of the Instrument with the ith contract month determined at the end of the intraday clearing session. The Spread is determined by the value used for determination of the Instrument's price as set out in the Specifications
Best bid	The price of an order to buy entered by Contractor 1 with respect to the Instrument, which size (considering sizes of all Contractor 1's orders to buy at the same price or higher) is no less than the minimum order size.
Best bid	The price of an order to sell entered by Contractor 1 with respect to the Instrument, which size (considering sizes of all Contractor 1's orders to sell at the same price or lower) is no less than the minimum order size.
Quantum	The period of the Trading Session during which Contractor 1 must enter orders. Quanta are designated as $q= 0, 1, \ldots$ (where 0, 1, ... – the Quantum sequence number). - Quant sequence number).
Nearest contract month for the Instrument	The contract month of the Instrument that is as close as possible to the Trading Day on which quotes are maintained for such Instrument. Such contract month is designated as $i=n$ (where $n= 1, 2, \ldots$ – the sequence number of the expiration date of the Instrument).
Next contract month for the Instrument	The contract month determined as $i= n+1$
Reporting period	A calendar month.

2.2. Obligations parameters for the Contractors.

2.2.1. The Contractors shall perform their obligations only with regard to contract months specified in Tables 1-4 below:

Table No. 1

Conditions for maintaining two-sided quotes for Brent oil futures k=4 during Quantum q=0			
Market makers obligations parameters	The first contract month (i=1)	The second contract month (i=2)	Start of Quantum End of Quantum (q=0)
	Whole period	Whole period	
1. The Spread (in the Instrument price unit as per the Specification)	max{|0.20%×SP|;0.03}	max{|0.25%×SP|;0.03}	07:00 MCK (UTC+3) – 10:00 MCK (UTC+3)
2. Minimum quoted size (in contracts)	800	200	
3. Minimum quote maintenance period (as % of the length of Quantum)	60	60	

Table No. 2

Conditions for maintaining two-sided quotes for Gold futures k=4 during Quantum q=0		
Market makers obligations parameters	The first contract month (i=1)	Start of Quantum End of Quantum (q=0)
	Whole period	
1. The Spread (in the Instrument price unit as per the Specification)	max{|0.15%×SP|;0.03}	07:00 MCK (UTC+3) – 10:00 MCK (UTC+3)
2. Minimum quoted size (in contracts)	200	
3. Minimum quote maintenance period (as % of the length of Quantum)	60	

Table No. 3

Conditions for maintaining two-sided quotes for Silver futures k=4 during Quantum q=0		
Market makers obligations parameters	The first contract month (i=1)	Start of Quantum End of Quantum (q=0)
	Whole period	
1. The Spread (in the Instrument price unit as per the Specification)	max{|0.40%×SP|;0.03}	07:00 MCK (UTC+3) – 10:00 MCK (UTC+3)
2. Minimum quoted size (in contracts)	600	
3. Minimum quote maintenance period (as % of the length of Quantum)	60	

Table No. 4

Conditions for maintaining two-sided quotes for the Henry Hub natural gas futures k=4 during Quantum q=0		
Market makers obligations parameters	The first contract month (i=1)	Start of Quantum End of Quantum (q=0)
	Whole period	
1. The Spread (in the Instrument price unit as per the Specification)	max{|0.35%×SP|;0.003}	

2. Minimum quoted size (in contracts)	100	07:00 МСК (UTC+3) – 10:00 МСК (UTC+3)
3. Minimum quote maintenance period (as % of the length of Quantum)	60	

2.2.2. The nearest and the next contract months of the Instruments k=1 and k=4 are the nearest and the next dates of the expiration of the respective Instrument, attributable to every calendar month.

The nearest and the next contract months (i) of the Instruments k=2 and k=3 are the nearest and the next dates of the expiration of the relevant Instrument, attributable to March, June, September and December, respectively.

2.3. During each qth Quantum of the Trading day of the Reporting Period, the Market Maker is allowed to fail to meet the obligations (as specified in any of Tables 1-4 in paragraph 2.2 above) with respect to the kth Instrument, maximum 10 (ten) times. If the Market Maker has failed to comply with this clause with respect to at least one k^{th} Instrument during the Reporting Period, their services with respect to all other Instruments specified in paragraph 1 above are considered as having not been provided.

3. Compensation for the Contractors

3.1. The amount of compensation that the Contractors receive for fulfilling their obligations during the Reporting Period on terms set out in paragraphs 1-2 above, is the sum of compensation values determined in accordance with formulas 1-2 below with regard to each group of the position register sections under which the Contractors perform under this Program on the basis of the market making agreement with the Exchange.

Formula 1:

$0.10 \times \sum_{q,j,k,i} Fee_{active}^{k,i,j,q} \times \left(I_{q,i}\left(Pcf_{j,q}^{k,i}; Pcn_{j,q}^{k,i}\right) + 1 \right) + 0.50 \times \sum_{q,j,k,i} Fee_{passive}^{k,i,j,q} \times \left(I_{q,i}\left(Pcf_{j,q}^{k,i}; Pcn_{j,q}^{k,i}\right) + 1 \right)$, where:

- $I_{q,i}$ can take the following values:

$$I_{q,i}\left(Pcf_{j,q}^{k,i}; Pcn_{j,q}^{k,i}\right) = \begin{cases} 1, if\ Pcf_{j,q}^{k,i} \geq 80\% \\ \left(\dfrac{\left(Pcf_{j,q}^{k,i} - Pcn_{j,q}^{k,i}\right)}{\left(80\% - Pcn_{j,q}^{k,i}\right)}\right)^5, if\ Pcn_{j,q}^{k,i} \leq Pcf_{j,q}^{k,i} < 80\% \\ -1, otherwise \end{cases}$$

- $Fee_{active}^{k,i,j,q}$ – the sum of exchange and clearing fees charged to the Contractor 1 for trades executed in the kth Instrument with the ith contract month during the qth Quantum on the jth Trading Day, which trades were executed based on order book orders entered by the Contractor under the position register sections which are used by the Contractor to perform its obligations under this Program based on its market making agreement with the Exchange, provided that these orders are registered in the Order Register under numbers which are greater than numbers of the respective counter orders for the corresponding Paired Trades [2];

- $Fee_{passive}^{k,i,j,q}$ – the sum of exchange and clearing fees charged to the Contractor 1 for trades executed in the kth Instrument with the ith contract month during the qth Quantum on the jth Trading Day, which trades were executed based on order book orders entered by the Contractor 1 with the position register sections which are used by the Contractor to perform its obligations under this Program based on its market making agreement with the Exchange, provided that these orders are

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[2] This term is defined as per the CCP NCC Clearing Rules regulating clearing services on the Moscow Exchange Derivatives Market.

registered in the Order Register under numbers which are less than numbers of the respective counter orders for the corresponding Paired Trades;

- $Pcf_{j,q}^{k,i}$ – the actual length of time during which the Contractors maintain the Spread for the kth Instrument with the ith contract month during the qth Quantum on the jth Trading Day, on terms set out in paragraph 2.2 above (per cent of the Quantum length);

- $Pcn_{j,q}^{k,i}$ – the minimum length of time during which the Contractors shall maintain the Spread for the kth Instrument with the ith contract month during the qth Quantum on the jth Trading Day, on terms set out in paragraph 2.2 above (per cent of the Quantum length);

- $k = 1, 2, 3$ – the sequence number of the respective Instrument specified in paragraph 1 of this Program;

- $i = 1, 2, \ldots$ – the sequence number of the respective contract month specified in paragraph 1 of this Program;

- $j = 1, 2, \ldots$ – the sequence number of the Trading Day in the respective month;

- $q = 0, 1, \ldots$ – the sequence number of the Quantum specified in paragraph 2. 2 of this Program.

Formula 2:

$$\frac{\sum_{q,j,k,i} max(0 \,; I_{q,i}(Pcf_{j,q}^{k,i}\,; Pcn_{j,q}^{k,i}) \times (S_2 - S_1) + S_1)}{\sum_{j,k,q} K_j^{k,q}}, \text{ where:}$$

- S_1 – RUB 100,000 (one hundred thousand);

- S_2 – RUB 200,000 (two hundred thousand);

- $K_j^{k,q}$ – the number of expiration dates for the kth Instrument for which the Contractor 1 must meet the quote maintenance conditions specified in paragraph 2.2 of this Program, during the qth Quantum on the jth Trading;

- $k = 1, 2, \ldots$ – the sequence number of the respective Instrument specified in paragraph 1 of this Program;

- $i = 1, 2, \ldots$ – the sequence number of the respective contract month specified in paragraph 1 of this Program;

- $j = 1, 2, \ldots$ – the sequence number of the Trading Day in the respective month;
- $q = 0, 1, \ldots$ – the sequence number of the Quantum specified in paragraph 2.2.1 of this Program.