

## **Technical Rule no. 07 MGAS**

(under article 4 of the Natural-Gas Market Rules, approved by the Ministry of Economic Development with its Decree of 6 March 2013, as subsequently amended and supplemented)

<b>Title</b>	<b>Validation/Adequacy Verification of Bids/Offers and Available Amount of the Financial Guarantee</b>
Reference legislation	Article 19, para. 19.3; Article 29, para. 29.1 e); Article 35, para. 35.1 e); Article 42, para. 42.1 e); and Article 57, paras. 57.1, 57.2, 57.4, 57.5 and 57.7 of the Natural-Gas Market Rules

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## 1. Foreword

Article 19, paras. 19.2 and 19.3 of the Natural-Gas Market Rules (hereafter “Rules”) provides that, for each operator authorised for the PSV, GME shall - in accordance with the procedures and within the time limits identified by GME and Snam Rete Gas in an appropriate agreement - acquire from Snam Rete Gas at least the personal identification data and the PSV code (para. 19.2), and that such data and information shall have effect within the time limits indicated in the Technical Rules (para. 19.3).

Article 29, para. 29.1 e), Article 35, para. 35.1 e) and Article 42, para. 42.1 e) of the Rules provide that, after receiving each bid/offer in the MGP-GAS, MI-GAS and MT-GAS, respectively, GME shall check whether the price and volume specified therein fall within the limits identified in the Technical Rules.

Article 29, para. 29.1 g), Article 35, para. 35.1 g) and Article 42, para. 42.1 g) of the Rules provide that, after receiving each bid/offer in the MGP-GAS, MI-GAS and MT-GAS, respectively, GME shall check whether the bid/offer is guaranteed under Article 57 of the same Rules.

Article 31, para. 31.5 b) and Article 37, para. 37.5 b) of the Rules provide that, for the MGP-GAS and the MI-GAS, respectively, the registration of the Market Participant’s net delivery position shall be allowed if it is guaranteed under Article 57 of the same Rules.

Article 57 of the Rules stipulates that:

- GME shall determine and update the available amount of the guarantee in accordance with the modalities and within the time limits defined in the Technical Rules (para. 57.1). If the guarantee is not sufficient, the Market Participant shall increase the guaranteed amount in accordance with the modalities and within the time limits defined in the Technical Rules (para. 57.2);
- after the submission of bids/offers into the MGAS and upon registration of the net delivery position at the PSV, as set forth in Articles 31 and 37 of the Rules, respectively, GME shall verify whether the available amounts of the related guarantees are sufficient in accordance with the procedures defined in the Technical Rules (para. 57.4);

- GME shall determine and update the available amount of the guarantee and carry out the adequacy verifications under the procedures specified in the Technical Rules and the principles stated in the same Article 57 (para. 57.5);
- GME shall decrease the Market Participants' guaranteed amount by a value specified in the Technical Rules (para. 57.5 a));
- GME shall define the values of the parameters  $\alpha$  and  $\beta$  in the Technical Rules (para. 57.7).

## **2. Time limits for transmission of data and information about operators authorised for the PSV**

Snam Rete Gas will transmit the data and information about each Market Participant to GME every day by 9:15; said data and information will have immediate effect.

## **3. Verification of the price and volume of submitted bids/offers**

Bids/offers are valid if:

- the offered price is not higher than the check price increased by 25%, or lower than the check price decreased by 25%, of the contract to which the bid/offer refers;
- the volume specified in the bid/offer is not higher than a maximum value equal to 100 contracts.

## **4. Adequacy verifications with respect to the guarantee**

After receiving a demand bid or supply offer in the MGAS, GME shall verify its adequacy with respect to the available amount of the guarantee.

The bid/offer is guaranteed if the available amount of the guarantee (determined as indicated in para. 4.1 below and taking also into account the bid/offer being verified) is higher than zero. Payables and receivables in respect of bids/offers are determined on the basis of the offered volumes and prices, as well as of VAT, where chargeable.

The registration of a net delivery buy position is adequate if the available amount of the guarantee (determined as indicated in para. 4.1 below and taking also into account the full value of the position to be registered) is higher than zero.

#### **4.1 Definition of the available amount of guarantees for the purposes of adequacy verifications**

For each Market Participant, GME will define the available amount of the financial guarantee, with respect to which it shall verify the financial adequacy of bids/offers.

The amount of the guarantees posted by each Market Participant will be decreased by an amount, called maintenance margin (MM), equal to 10% of the overall amount of the guarantees.

The guarantee posted by each Market Participant and used for determining the available amount is equal to:

$$G = \left( \sum_i F_i + \sum_j D_j \right) * (1 - MM) \quad (1)$$

where

$F_i$  = amount of the i-th bank guarantee posted by the Market Participant

$D_j$  = amount of the j-th deposit made by the Market Participant

MM = maintenance margin

MM = 10%.

#### **Net delivered positions for the past months**

Let us consider, for each type of traded contract (whatever its maturity), the volume covered by the contract and pertaining to the day G:

$$QC_{g,i}$$

where

$QC_{g,i}$  = volume (MWh) covered by the i-th contract and pertaining to the day G.

Let us consider, for the purposes of this document, that

$QC_{g,i} < 0$  for buy transactions

$QC_{g,i} > 0$  for sell transactions

Let us consider the financial position of each of the past months in which all the days have been delivered, but for which payments have not yet been made:

$$\forall g \in M \in M_{Past}, PF_{M \in M_{Past}} = \text{if} \left( \begin{array}{l} \sum_i \sum_{g \in M \in M_{Past}} P_i * (1 + vat) * QC_{g,i} + \sum_{g \in M \in M_{Past}} (CA_g - DA_g) \geq 0; 0; \\ \sum_i \sum_{g \in M \in M_{Past}} P_i * (1 + vat) * QC_{g,i} + \sum_{g \in M \in M_{Past}} (CA_g - DA_g) \end{array} \right)$$

where

$M_{Past}$  = past months, i.e. months for which all the days have already been delivered, but payments have not yet been made

$PF_{M \in M_{Past}}$  = financial position pertaining to a generic past month M

$P_i$  = trading price of the i-th contract

$DA_g^1$  = possible debit adjustment pertaining to the day G

$CA_g^2$  = possible credit adjustment pertaining to the day G.

The VAT rate applied to the price  $P_i$  is equal to the rate applied to the Market Participant on transactions having the same sign as the one of the contract i (e.g. if the Market Participant has concluded a sale on the contract i at the price  $P_i$ , we will apply VAT on sales).

Let us consider the overall financial position pertaining to all the months for which all the days have been delivered:

$$PF_{Past} = \sum_{M \in M_{Past}} PF_M \quad (2)$$

<sup>1</sup> This adjustment may be needed to correct possible errors in the valuing of payables and receivables.

<sup>2</sup> See note 1.

### Exposure on traded contracts pertaining to the future months

Let us consider the exposure on traded contracts, pertaining only to the delivery periods of the months for which no day has yet been delivered:

$$EC_{FUT} = \sum_{g \in M_{FUT}} \sum_i QC_{g,i} * (P_i * (1 + vat) - PC_g * (1 + vat)) \quad (3)$$

where

$M_{FUT}$  = future months, i.e. months for which no day has yet been delivered

$PC_g$  = check price of the delivery day  $g$ .

The VAT rate applied to the price  $P_i$  is equal to the rate applied to the Market Participants on transactions having the same sign as the one of the contract  $i$  (e.g. if the Market Participant has concluded a sale on the contract  $i$  at the price  $P_i$ , we will apply VAT on sales).

The VAT rate applied to the price  $P_g$  is equal to the rate applied to the Market Participant on transactions having a sign opposite to the one of the contract  $i$  (e.g. if the Market Participant has concluded a sale on the contract  $i$ , we will apply VAT on purchases).

### Exposure on net positions of the days belonging to the future months

The net position of each day of the future months is equal to the sum of the volumes covered by the contracts that include the day in the delivery period:

$$\forall g \in M_{FUT}, PN_g = \sum_i Q_{g,i}$$

where

$PN_g$  = net position of the day  $G$ .

Let us suppose that the future exposure on the net positions of each day of the future months is:

$$\forall g \in M_{FUT}, EF_g = PN_g * \alpha_g * PC_g * (1 + vat)$$

where

$EF_g$  = future exposure of the net position of the day  $G$  belonging to the future months

$\alpha_g$  = parameter  $\alpha$  for the day  $g$ .

The VAT rate to be applied to the price  $PC_g$  must be equal to the rate applied to the Market Participant on transactions having a sign opposite to the one of the net position (e.g. if PN is a sale, we will apply VAT on purchases).

The overall future exposure of each future month  $m$ ,  $EF_m$  is:

$$\forall m_j \in M_{FUT}$$

$$EF_{mj} = IF \left\{ \text{Max} \left[ \left( \forall EF_{g \in mj} \geq 0, \sum_{g \in mj} EF_g \right); \left( \forall EF_{g \in mj} \leq 0, \sum_{g \in mj} |EF_g| \right) \right] \right\} = \left( \forall EF_{g \in mj} \geq 0, \sum_{g \in mj} EF_g \right); \left( \forall EF_{g \in mj} \geq 0, \sum_{g \in mj} EF_g \right); \left( \forall EF_{g \in mj} \leq 0, \sum_{g \in mj} EF_g \right) \right\} -$$

$$- IF \left\{ \text{Min} \left[ \left( \forall EF_{g \in mj} \geq 0, \sum_{g \in mj} EF_g \right); \left( \forall EF_{g \in mj} \leq 0, \sum_{g \in mj} |EF_g| \right) \right] \right\} = \left( \forall EF_{g \in mj} \geq 0, \sum_{g \in mj} EF_g \right); \left( \forall EF_{g \in mj} \geq 0, \sum_{g \in mj} EF_g \right); \left( \forall EF_{g \in mj} \leq 0, \sum_{g \in mj} EF_g \right) \right\} * \beta_{mj}$$

where

$m_j$  =  $j$ -th future month

$\beta_m$  = offsetting factor of the month  $m$ , ranging from 0 to 1

$$EF = \text{Max} \left[ \left( \forall EF_m \geq 0, \sum_m EF_m \right); \left( \forall EF_m \leq 0, \sum_m |EF_m| \right) \right] + \text{Min} \left[ \left( \forall EF_m \geq 0, \sum_m EF_m \right); \left( \forall EF_m \leq 0, \sum_m |EF_m| \right) \right] * \beta$$

The overall future exposure on the future months  $EF_{FUT}$  is equal to:

**(4)**

where

$\beta$  = offsetting factor, ranging from 0 to 1.

### Exposure on orders for contracts pertaining to the future months

Let us calculate the exposure associated with the orders entered by the Market Participant but not yet matched. Upon entry of an order, we will check whether, for each day  $g$ , the sum between the net position resulting from the concluded contracts and the gas volume covered by the order to be entered and by all other orders of the same sign already present in the MGAS (in each order book of the MGAS) and pertaining to  $g$  is higher, in absolute terms, than the net position already acquired by the Market Participant on the same day  $g$ :

- if the result is negative (the net position resulting from the concluded contracts is higher in absolute terms), we will calculate the exposure associated with the order by considering only the possible exposure associated with the spread between the offered price and the check price;
- if the result is positive (the net position resulting from the concluded contracts is lower in absolute terms), we will calculate the exposure associated with the order to be entered and with all the orders of the same sign already present in the order book by considering both: i) the possible exposure associated with the spread between the offered price and the check price; and ii) the exposure associated with the possible increase, in absolute terms, of the net position resulting from the possible matching of the gas volumes covered by the order to be entered and all other orders of the same sign already present in the order books of the MGAS.

$\forall g \in M_{FUT}, \forall QP_{g,i} > 0$ :

$$\begin{aligned}
 EP_g^+ &= \sum_i \text{If} \left[ QP_{g,i} * (P_i * (1 + VAT) - PC_g * (1 + VAT)) \right. \\
 &\quad \left. \geq 0; 0; QP_{g,i} * (P_i * (1 + VAT) - PC_g * (1 + VAT)) \right] + \\
 &+ \sum_i \text{If} \left[ \left| PN_g + \sum_i QP_{g,i} \right| > |PN_g|; - \left( \left| \left( PN_g + \sum_i QP_{g,i} \right) \right| - |PN_g| \right) * \alpha * PC_g * (1 + VAT); 0 \right]
 \end{aligned}$$

$\forall g \in M_{FUT}, \forall QP_{g,i} < 0$ :



$$\begin{aligned}
 EP_g^- &= \sum_i \text{If} \left[ QP_{g,i} * (P_i * (1 + VAT) - PC_g * (1 + VAT)) \right. \\
 &\quad \left. \geq 0; 0; QP_{g,i} * (P_i * (1 + VAT) - PC_g * (1 + VAT)) \right] + \\
 &+ \sum_i \text{If} \left[ \left| PN_g + \sum_i QP_{g,i} \right| > |PN_g|; - \left( \left| PN_g + \sum_i QP_{g,i} \right| - |PN_g| \right) * \alpha * PC_g * (1 + VAT); 0 \right]
 \end{aligned}$$

$$EP_{FUT} = \sum_{g \in M_{FUT}} EP_g^+ + \sum_{g \in M_{FUT}} EP_g^- \quad (5)$$

where

$QP_{g,i}$  = volume covered by the order for the i-th contract and pertaining to the day G

g = reference day

Finally, for the purposes of this document, let us consider that

$QP_{g,i} < 0$  for buy orders

$QP_{g,i} > 0$  for sell orders

$EP_g^+$  = exposure on all sell orders for any type of contract that are present in the order books and that pertain to the day g

$EP_g^-$  = exposure on all buy orders for any type of contract that are present in the order books and that pertain to the day g

$P_i$  = price at which the order is entered.

The VAT rate to be applied to the price  $P_i$  must be equal to the rate applied to the Market Participant on transactions having the same sign as the one of the contract i (e.g. if the Market Participant has concluded a sale on the contract i at the price  $P_i$ , we will apply VAT on sales).

The VAT rate to be applied to the price  $P_g$  must be equal to the rate applied to the Market Participant on transactions having a sign opposite the one of the contract  $i$  (e.g. if the Market Participant has concluded a sale on the contract  $i$ , we will apply VAT on purchases).

### Exposures on the current month

The following paragraphs show the procedure for determining the overall exposure on the current month  $M_0$ , i.e. the month for which some days (but not all) have been delivered and for which some contracts (daily and BoM) are also traded.

$PF_{M_0}$  = financial position pertaining to the month  $M_0$  and only to the delivered days of the month

$$PF_{M_0} = \sum_i \sum_{g \in M_0} P_i * (1 + vat) * QC_{g,i} + \sum_{g \in M_0} (CA_g - DA_g)$$

where

$CA_g$  = possible credit adjustment pertaining to the day  $g$

$DA_g$  = possible debit adjustment pertaining to the day  $g$

$EC_{M_0}$  = exposures on contracts being traded and pertaining to  $M_0$  in respect of the day not yet delivered

$$EC_{M_0} = \sum_{g \in M_0} \sum_i QC_{g,i} * (P_i * (1 + vat) - PC_g * (1 + vat))$$

$EP_{M_0}$  = exposures on orders for contracts being traded and pertaining to  $M_0$

$$EP_{M_0} = \sum_{g \in M_0} \sum_i EP_{g,i}$$

where

$EP_{g,i}$  = exposure on the order pertaining to the  $i$ -th contract and to the day  $g$

$EF_{M_0}$  = future exposure on the net positions of the days belonging to the month  $M_0$  and not yet delivered

$$EF_{M_0} = Max \left[ \left( \forall EF_g \geq 0, \sum_{g \in M_0} EF_g \right); \left( \forall EF_g \leq 0, \sum_{g \in M_0} |EF_g| \right) \right] + Min \left[ \left( \forall EF_g \geq 0, \sum_{g \in M_0} EF_g \right); \left( \forall EF_g \leq 0, \sum_{g \in M_0} |EF_g| \right) \right] * \beta_{M_0}$$

At this stage, let us calculate  $E_{M_0}$ , i.e. the overall exposure of the month  $M_0$ :

$$E_{M_0} = PF_{M_0} + EC_{M_0} + EP_{M_0} - EF_{M_0}$$

(6)

The VAT rates to be applied follow the same criteria as those previously described in this paragraph.

### Available amount of the guarantee

The available amount of the guarantee  $CG_{FUT}$ , with respect to which financial adequacy verifications are carried out on the transactions of all the contracts pertaining to the days of the future months (all the contracts except for the daily and BoM ones in respect of the days of the month  $M_0$ ), is:

$$CG_{FUT} = G + PF_{Past} + EC_{FUT} + EP_{FUT} - EF_{FUT} + CA - DA + Min(0; E_{M_0}) \quad (7a)$$

The available amount of the guarantee  $CG_{M_0}$ , with respect to which financial adequacy verifications are carried out on the deliveries and the transactions of the daily and BoM contracts in respect of the days of the month  $M_0$ , is:

$$CG_{M_0} = G + PF_{Past} + EC_{FUT} + EP_{FUT} - EF_{FUT} + CA - DA + E_{M_0} \quad (7b)$$

where

CA<sup>3</sup> = possible credit adjustment

DA<sup>4</sup> = possible debit adjustment

The CAs and DAs may be used to decrease or increase the available guarantee in particular cases that do not fall under the already described ones.

### **Updating of the available amount of the guarantee**

The available amount of the financial guarantee is recalculated:

- at the end of each market session;
- upon the entry/revocation of a buy/sell order into/in the order book;
- upon the matching of an order;
- upon the updating of the check price;
- upon the updating of the parameters  $\alpha$  and  $\beta$ ;
- upon the updating of the amount of the guarantee;
- upon making payments.

### **5. Increase of the guarantee**

If the guarantee, updated under the procedure described in this Technical Rule, is insufficient, GME will send an e-mail message to the Market Participant asking him/her/it to increase it.

By 10.30 of the 3<sup>rd</sup> working day following the one of receipt of the request, the Market Participant must pay the amount sufficient to guarantee his/her/its exposure to the bank in charge of GME's treasury services (with value date on the same day) through "bonifici di importo rilevante" (BIR) or

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<sup>3</sup> See note 1

<sup>4</sup> See note 1

equivalent procedures, or he/she/it must submit a bank guarantee (or increase an already posted one) for an amount at least equal to the requested one.

If the Market Participant fails to make the payment within the above time limits, GME will initiate the default procedure referred to in Article 63, para. 63.1 of the Rules.

## 6. Values of the parameters $\alpha$ and $\beta$

Each product differentiated by maturity is associated with a riskiness parameter, as shown in the following table:

	MATURITY			
	1	2	3	4
Monthly <sup>5</sup>	19.70%	19.60%	19.60%	
Quarterly	14.90%	13.10%	12.60%	11.90%
Half-yearly	14.50%	12.20%		
Yearly	11.00%			
Daily	13.10%			

The net delivery position of each gas-day is associated with a parameter  $\alpha$ , equal to the highest of the riskiness parameters associated with the products being traded and concerning the corresponding gas-day.

The parameter  $\beta$  is equal to 1.

<sup>5</sup> For the purpose of identifying the risk, the BoM product is equated with the monthly product. Therefore, the riskiness parameter associated with the monthly product in the table will be applied to the BoM product.