

**MTE:**

**the Forward Electricity Market  
with delivery and withdrawal  
obligation**

*Rome - Milan  
1-2 April 2008*

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## Description of the MTE: trading

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Trading in the MTE takes place on a **continuous basis** through an order book where sale and purchase proposals (supply offers and demand bids) are ranked by price and, if their price is identical, by time of submission.

The obligation of delivering/withdrawing electricity through the Forward Electricity Account Trading Platform (PCE) has the following implication: to be entered into the order book, the trading proposals should be **compatible with** and **technically adequate** for the recording of the corresponding transactions on the **PCE**, and the related financial guarantees (verified in the MTE) should be sufficient.

## Description of the MTE: compatibility with the PCE (1/4)

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The obligation of delivering/withdrawing electricity through the PCE implies that:

- A. The contracts in the MTE should be **compatible** with the recordings admitted on the PCE:
- under AEEG's Decision 111/06, the transactions recorded on the PCE should have a **maximum delivery period of 60 days**.

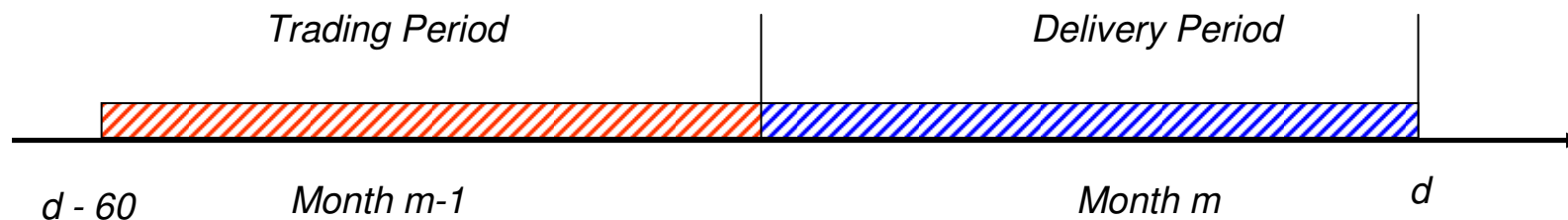
## Description of the MTE: compatibility with the PCE (2/4)

Considering that:

- the transactions which may be recorded on the PCE cover a time period of 60 days;
- for each contract traded in the MTE, an adequate trading period should be provided;



the contracts traded in the MTE should have a delivery period not exceeding 1 month



## Description of the MTE: compatibility with the PCE (3/4)

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The obligation of delivering/withdrawing electricity through the PCE implies that:

- B. To be included in the order book, the trading proposals should undergo the **technical adequacy verifications** that are required on the PCE:
- in particular, GME will check whether the margins of the forward electricity account (specified in the proposal) are sufficient with respect to the electricity quantity (specified in the same proposal). This verification ensures that no Market Participant may trade in the MTE a quantity of electricity exceeding his/her generating/consuming capacity.

## Description of the MTE: compatibility with the PCE (4/4)

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The obligation of delivering/withdrawing electricity through the PCE implies that:

- C. To be included in the order book, the trading proposals should undergo the adequacy-of-financial guarantee verifications (financial guarantees towards GME and Terna) that are required on the PCE.

## Description of the MTE: matching and delivery on the PCE

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After two proposals of opposite sign have been matched in the MTE, the following transactions will be recorded on the PCE:

- a sale transaction on the forward electricity account specified in the seller's proposal and whose counterparty is the forward electricity account of GME (as Qualified Market Participant)
- a purchase transaction on the forward electricity account specified in the buyer's proposal and whose counterparty is the electricity account of GME (as Qualified Market Participant).

## Description of the MTE: OTC clearing (1/2)

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Also OTC transactions may be recorded in the MTE, specifying the quantities of electricity and the price covered by the corresponding bilateral contract.

These transactions should be recorded in the same form as the contracts traded in the MTE and they undergo the same technical adequacy and adequacy-of-financial guarantee verifications as those required for the trading proposals on the PCE and in the MTE.

## Description of the MTE: OTC clearing (2/2)

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By recording OTC transactions, the Market Participants that have concluded a bilateral contract

- assign to GME the role of counterparty of their transactions
- use the clearing system of the MTE
- offset the payables/receivables deriving from the recording of OTC contracts in the MTE with the payables/receivables arising from the trades made in the MTE.

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## Questions for consultation (1/5)

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### **Question for consultation no. 1:**

*Considering the period of time for recording transactions on the PCE that is established in AEEG's Decision 111/06, do you deem it useful to trade not only monthly contracts but also contracts of lower duration (weekly, daily)?*

## Questions for consultation (2/5)

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### ***Question for consultation no. 2:***

*What types of contracts should be traded (base-load, peak-load, off-peak, ...)?*

## Questions for consultation (3/5)

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### ***Question for consultation no. 3:***

*Considering the need for having a wide range of tradable contracts and for increasing liquidity through the trading of a limited number of contracts, what contracts should be chosen for the initial stage of the MTE?*

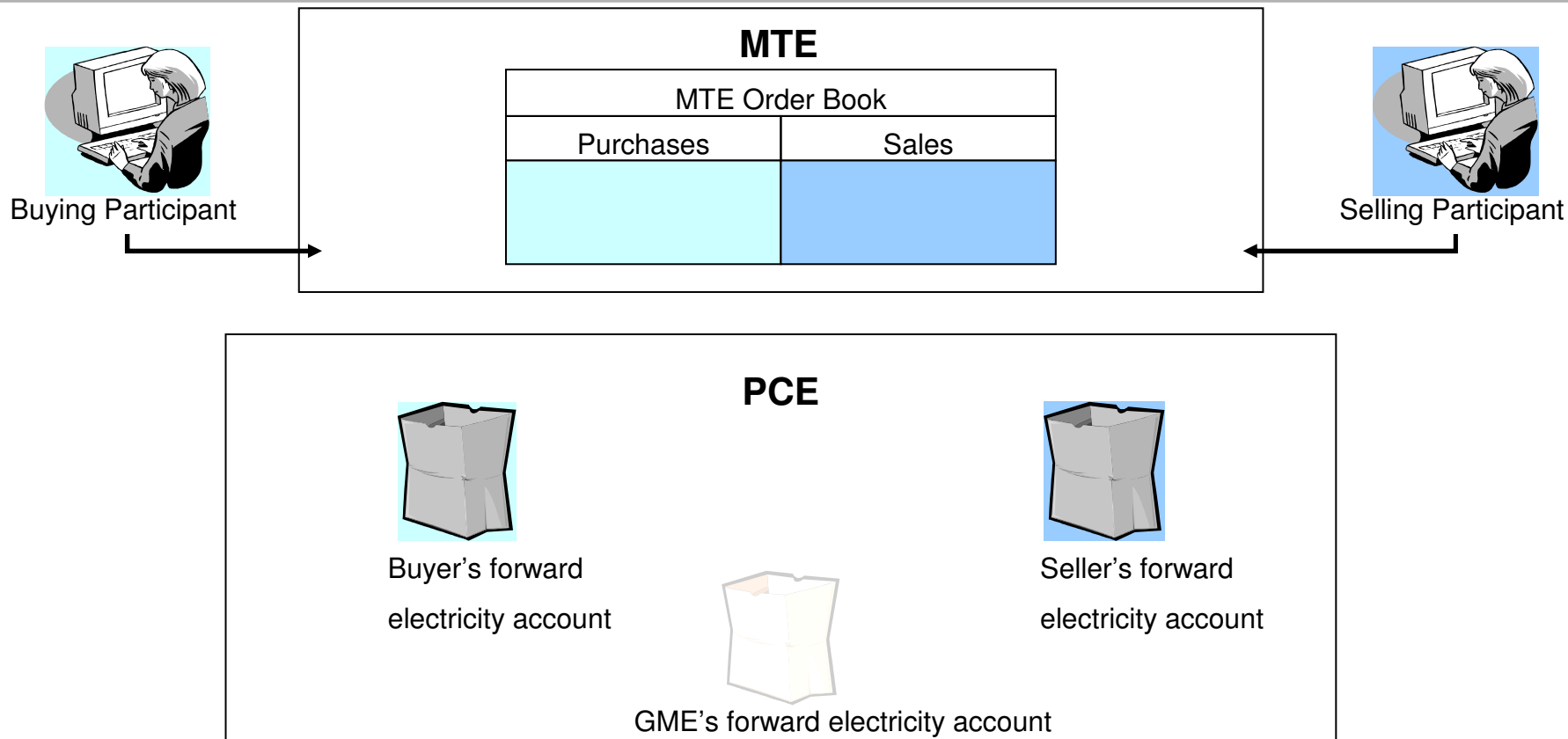
➤ **Operation of the MTE**

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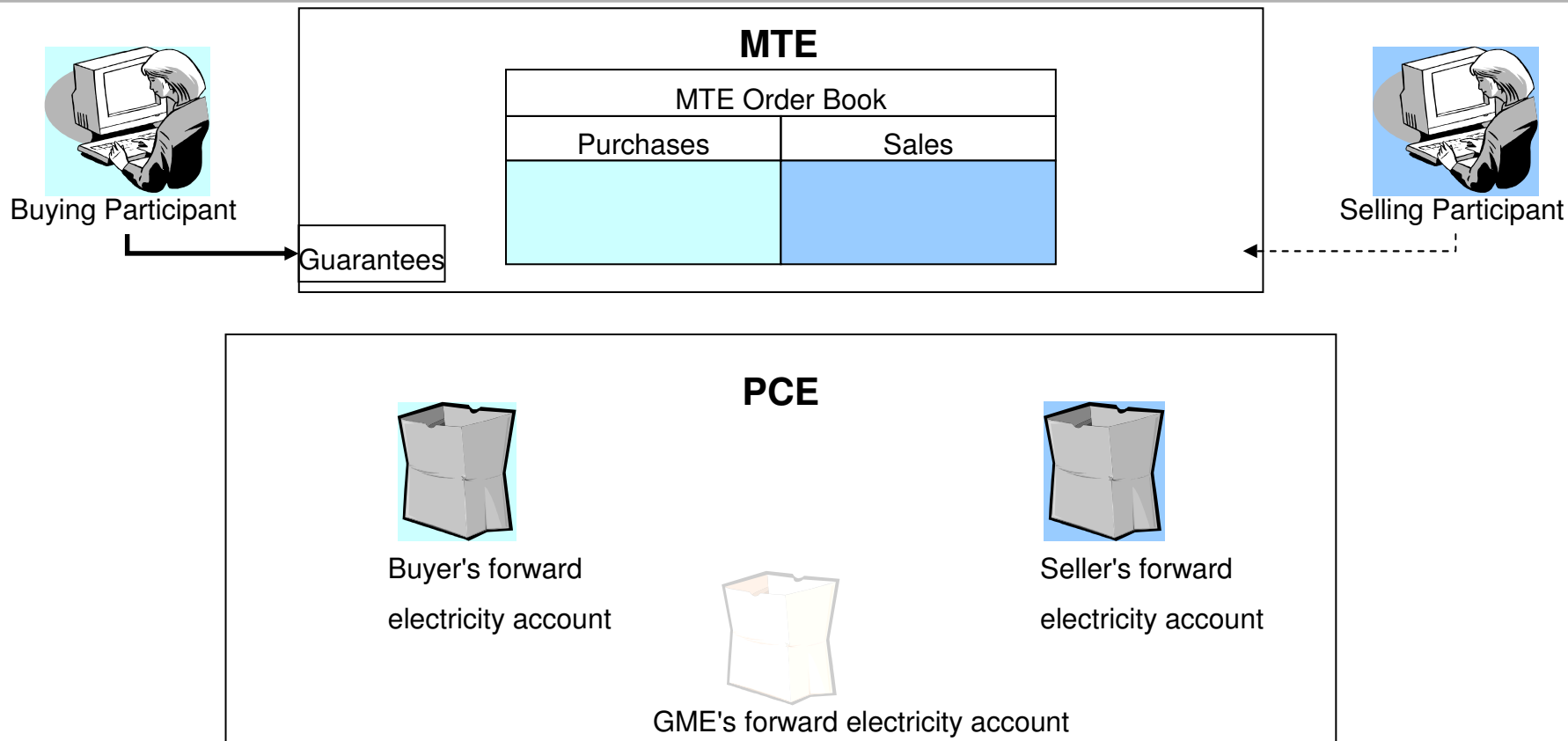
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## Example of trading (1/6)



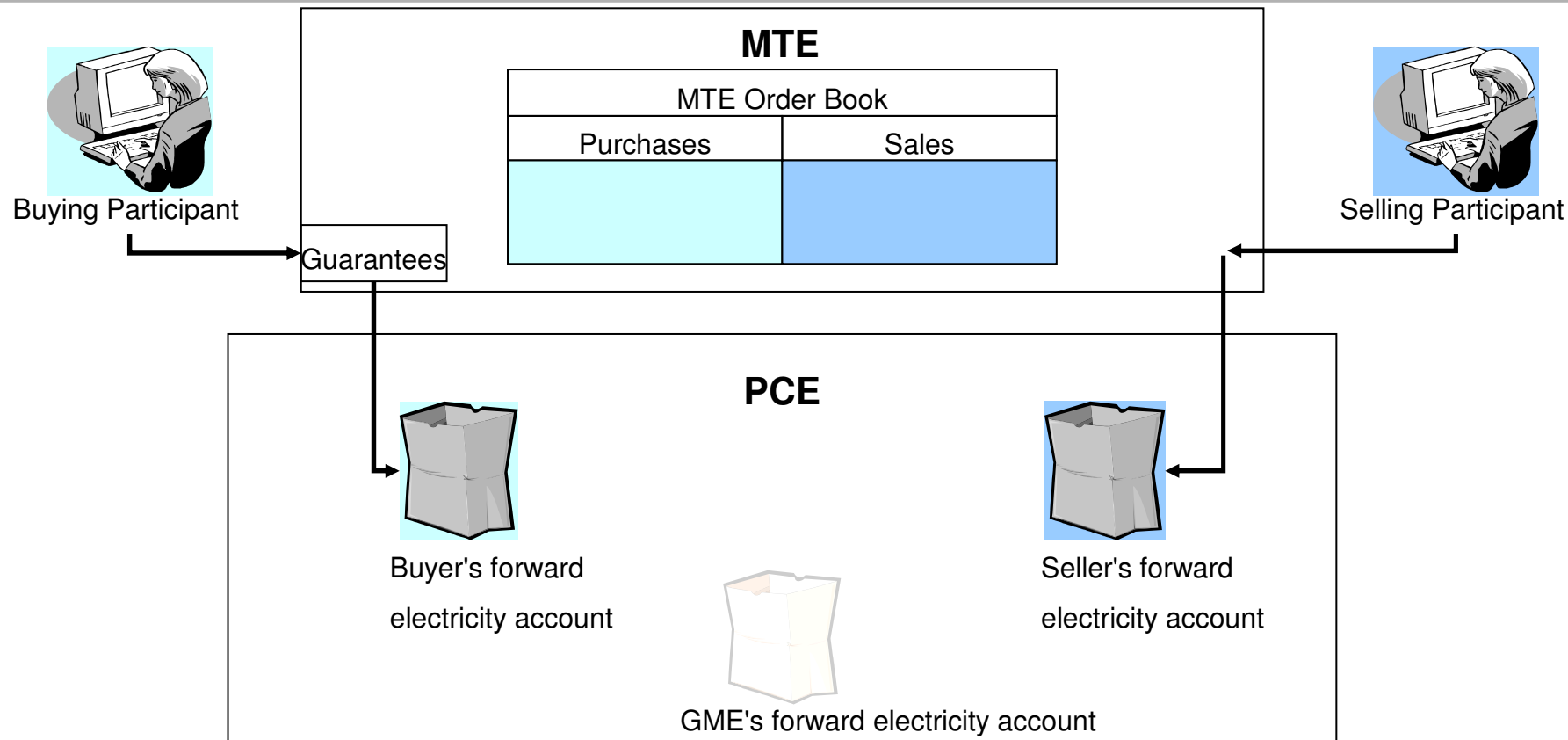
Market Participants submit their sale/purchase proposals into the MTE, specifying the quantity and price of their proposal, as well as the forward electricity account of the PCE on which the corresponding sale/purchase transactions should be recorded.

## Example of trading (2/6)



The purchase proposals undergo the adequacy-of-financial guarantee verifications that are required in the MTE.

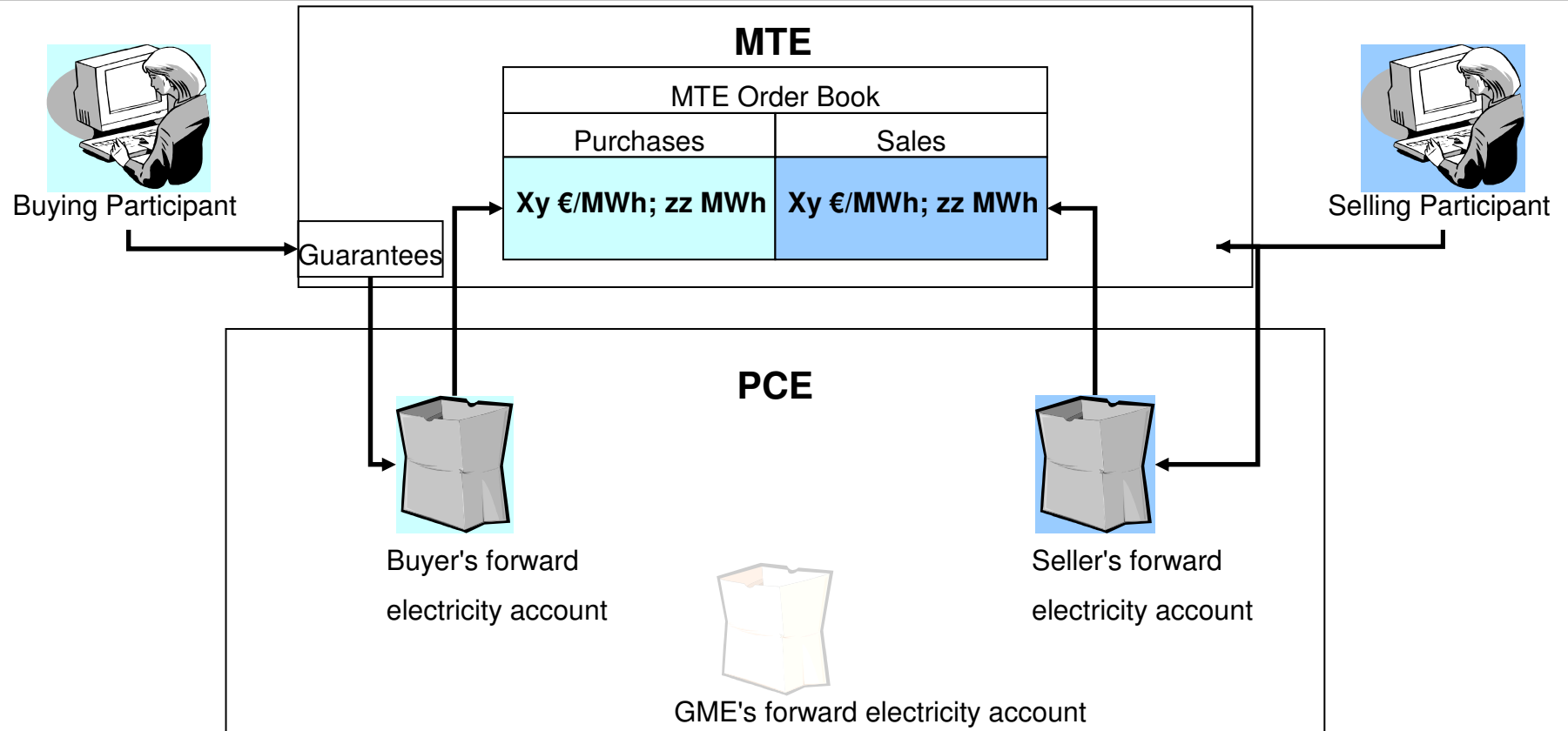
## Example of trading (3/6)



Before being included in the order book, the trading proposals undergo the technical adequacy and adequacy-of-financial guarantee\* verifications that are required on the PCE.

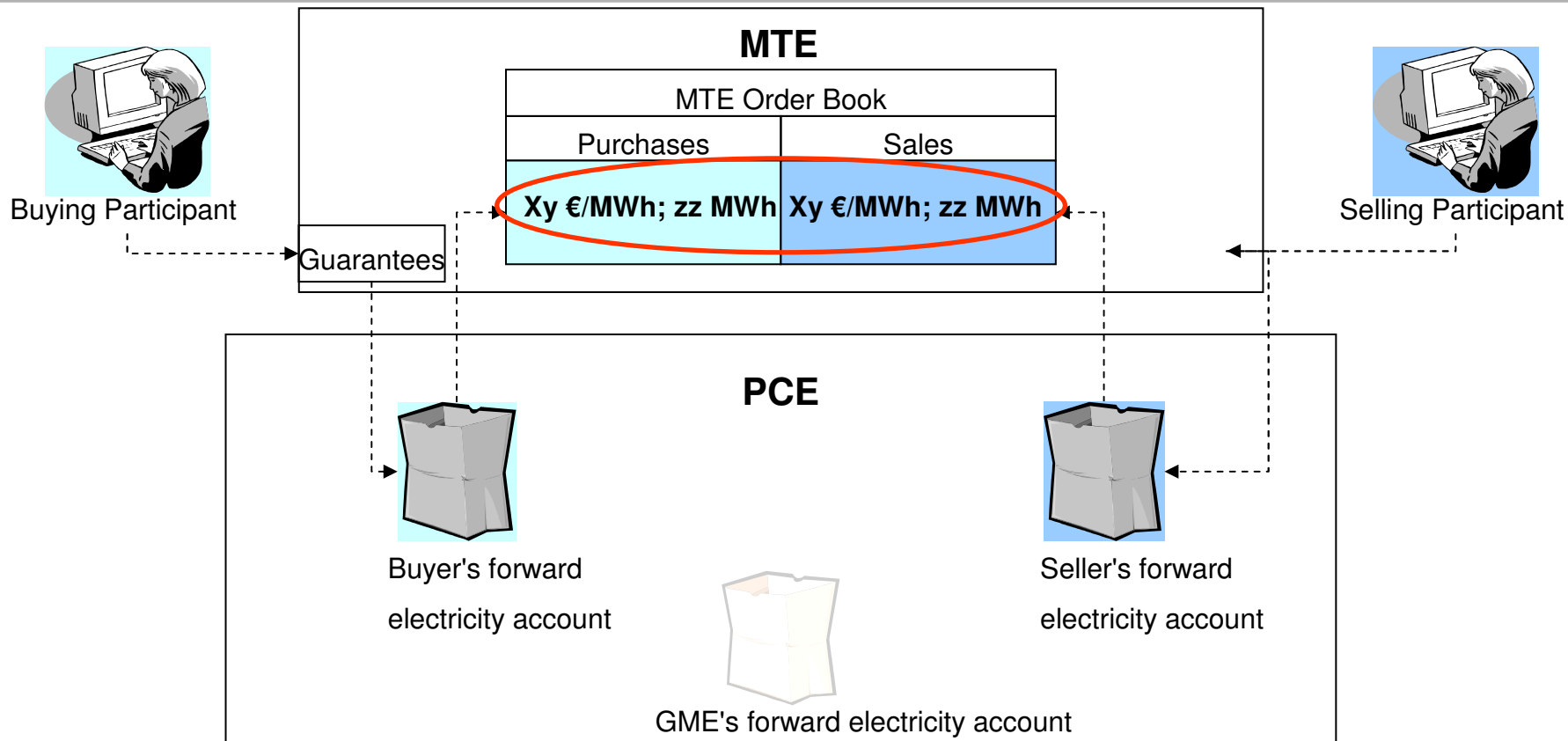
\* Limited to sale proposals pertaining to an injection account

## Example of trading (4/6)



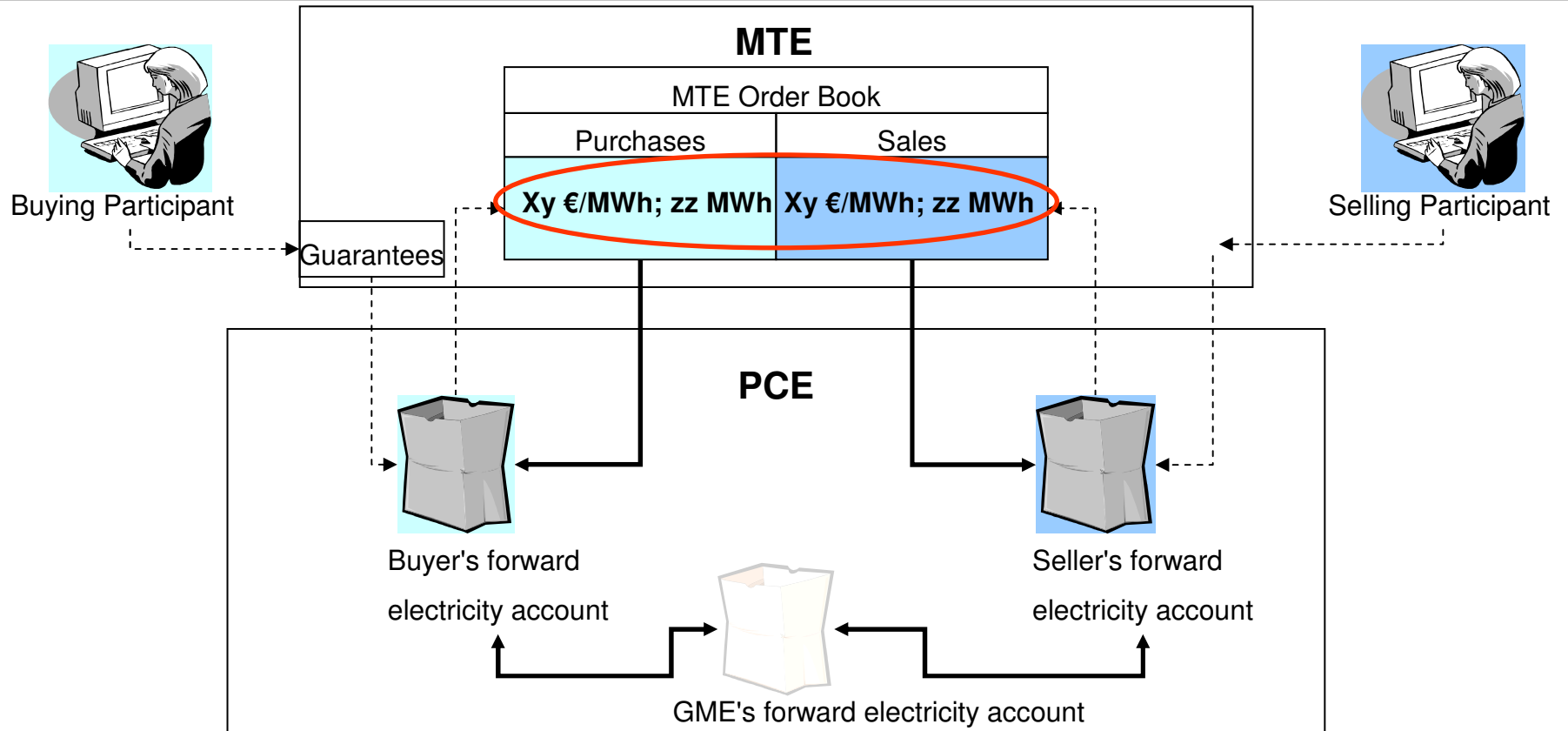
The sale/purchase proposals that have been verified to be adequate on the PCE are entered into the MTE order book; these proposals engage the margins of the forward electricity accounts to which they refer, as well as the required financial guarantees.

## Example of trading (5/6)



The proposals that are present in the order book are matched on the basis of their price/time of submission.

## Example of trading (6/6)



After the proposals have been matched, they are recorded on the PCE:

- a sale transaction on the forward electricity account specified in the selling participant's proposal and whose counterparty is GME's forward electricity account
- a purchase transaction on the forward electricity account specified in the buying participant's proposal and whose counterparty is GME's forward electricity account.

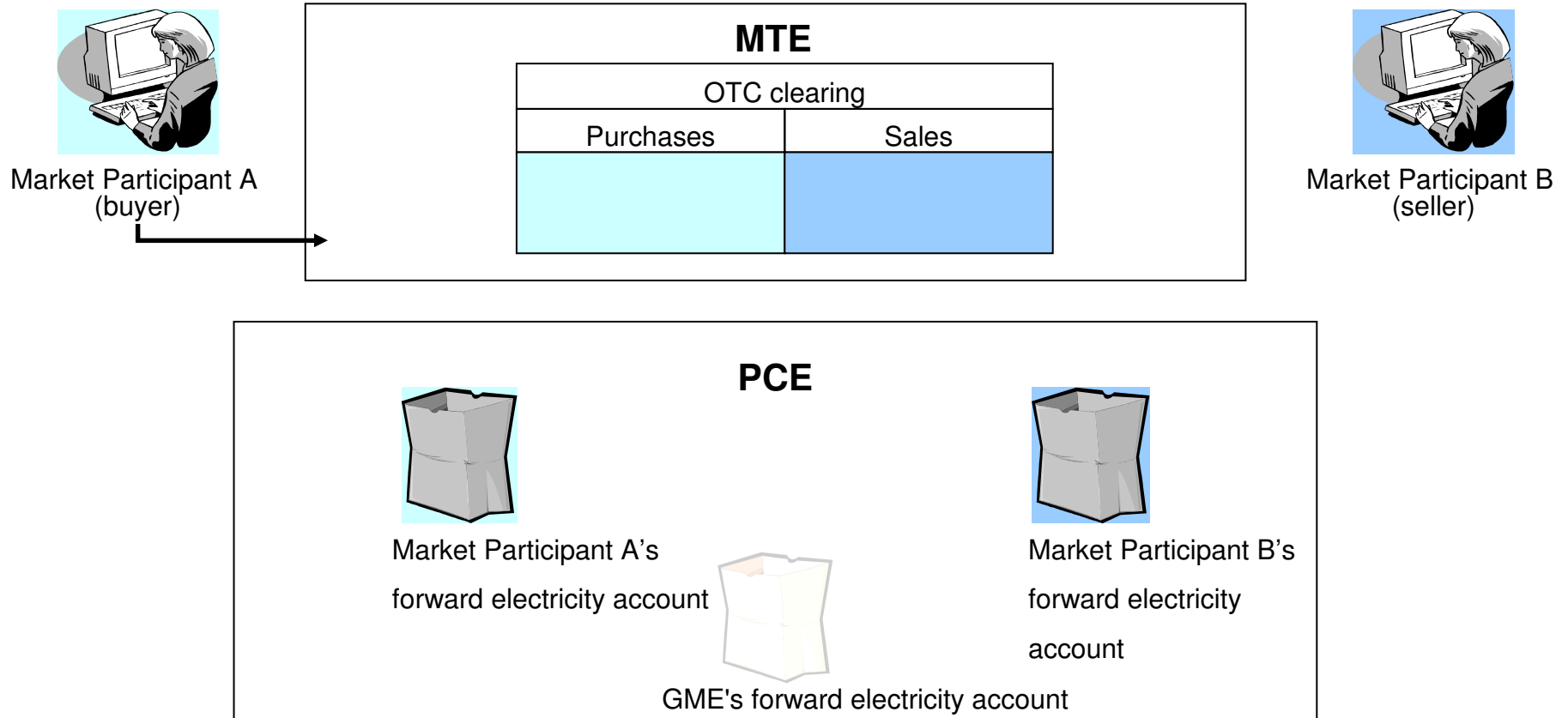
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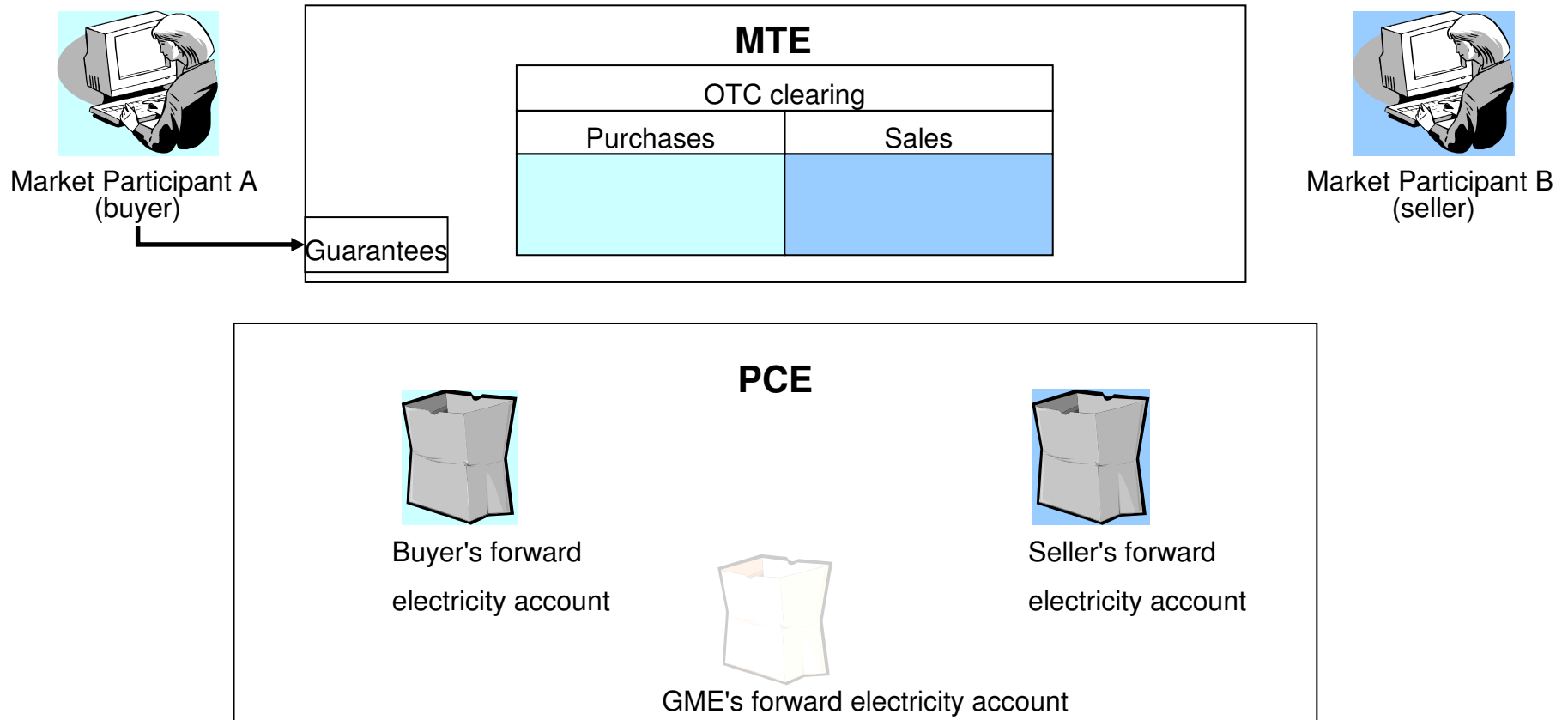
## Example of OTC clearing (1/9)



Market Participant A (in our example, the buyer) submits his/her sale/purchase proposal into the MTE, specifying not only the quantity and price of the recorded contract, but also:

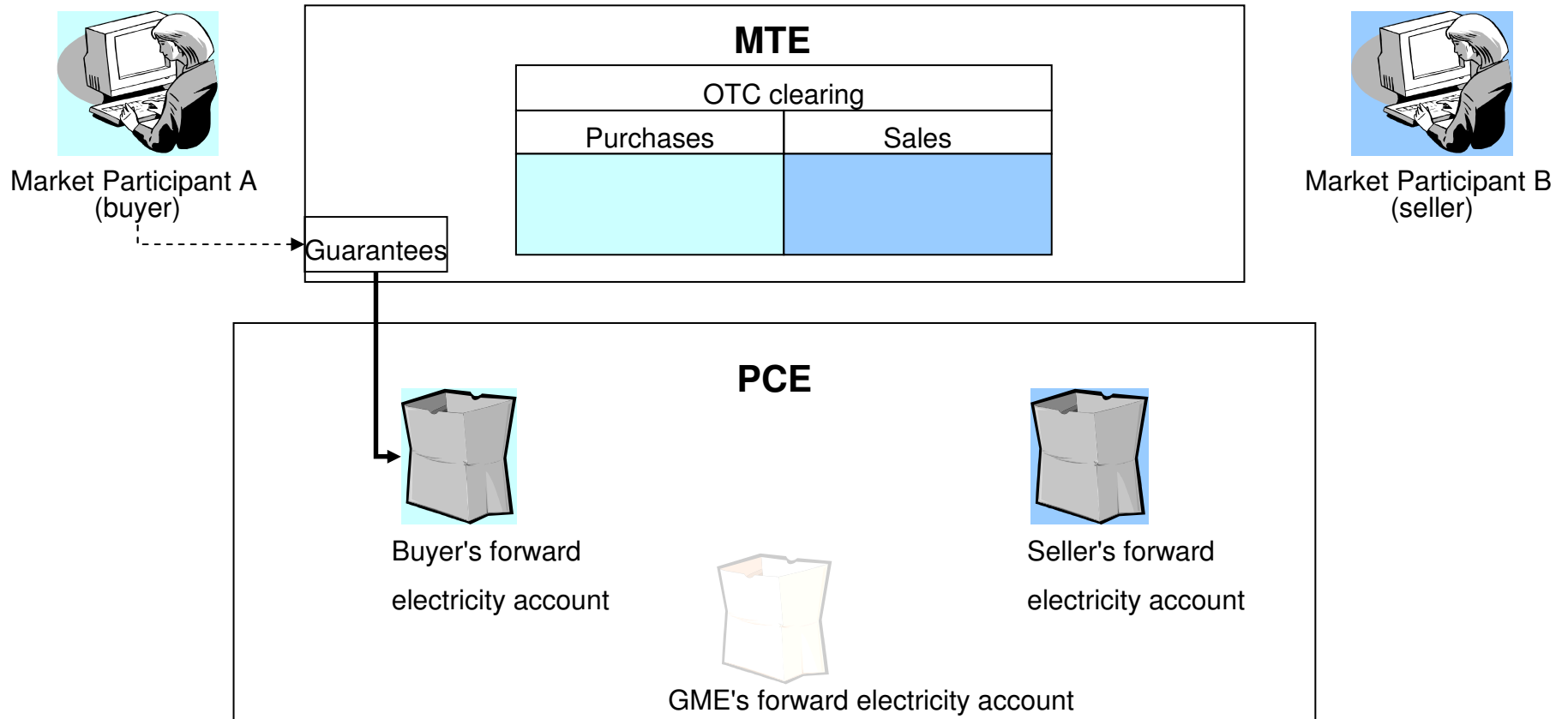
- the counterparty Market Participant (Market Participant B)
- the matching code known by the counterparty.

## Example of OTC clearing (2/9)



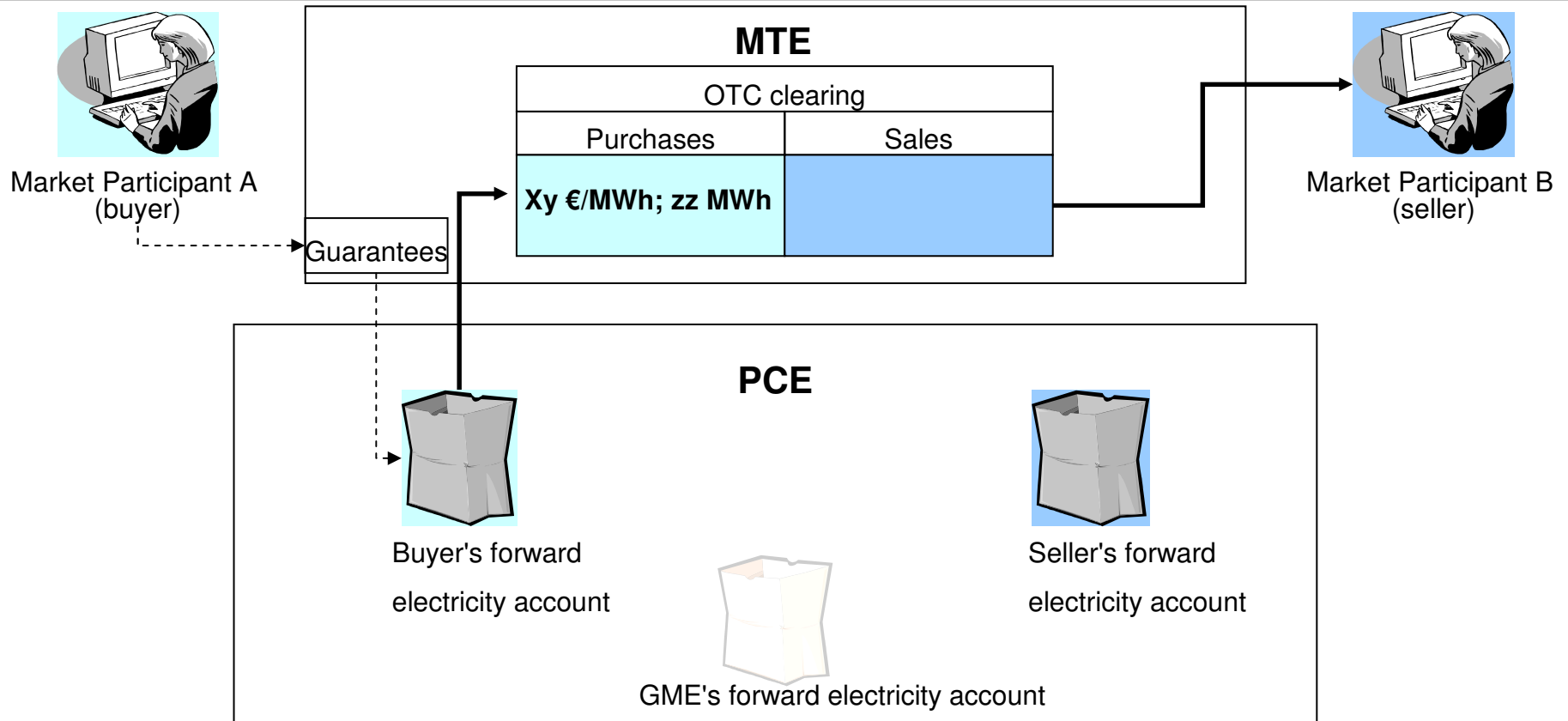
If Market Participant A has submitted a purchase proposal, the proposal undergoes the same adequacy-of-financial guarantee verifications as those required in the MTE for the other purchase proposals.

## Example of OTC clearing (3/9)



The proposal then undergoes the technical adequacy verifications that are required on the PCE.

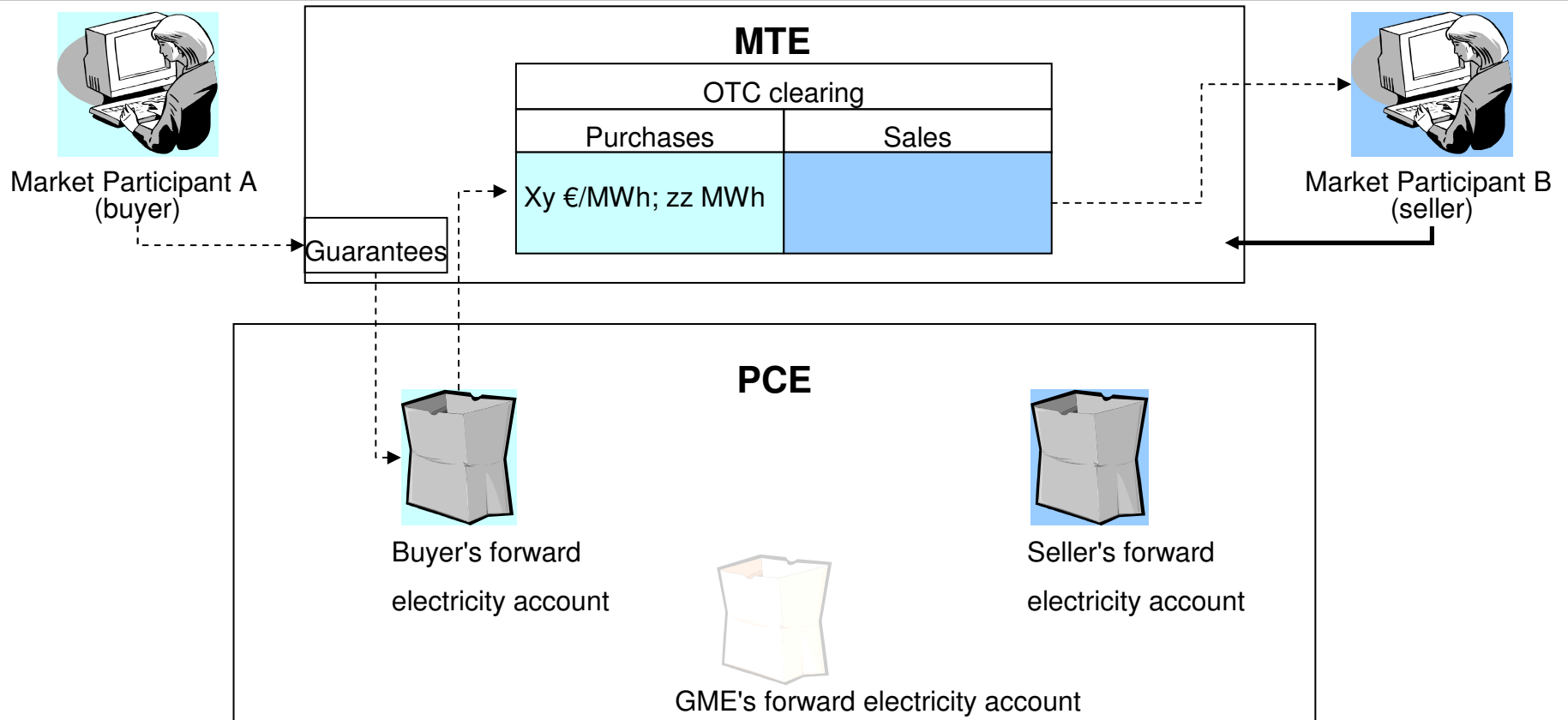
## Example of OTC clearing (4/9)



If the adequacy verifications are successful, the proposal is notified to the counterparty Market Participant and displayed in the OTC clearing screen of the two Market Participants.

The proposal engages the margins of the forward electricity account to which it refers, as well as the required financial guarantees (proposal in the pending status).

## Example of OTC clearing (5/9)

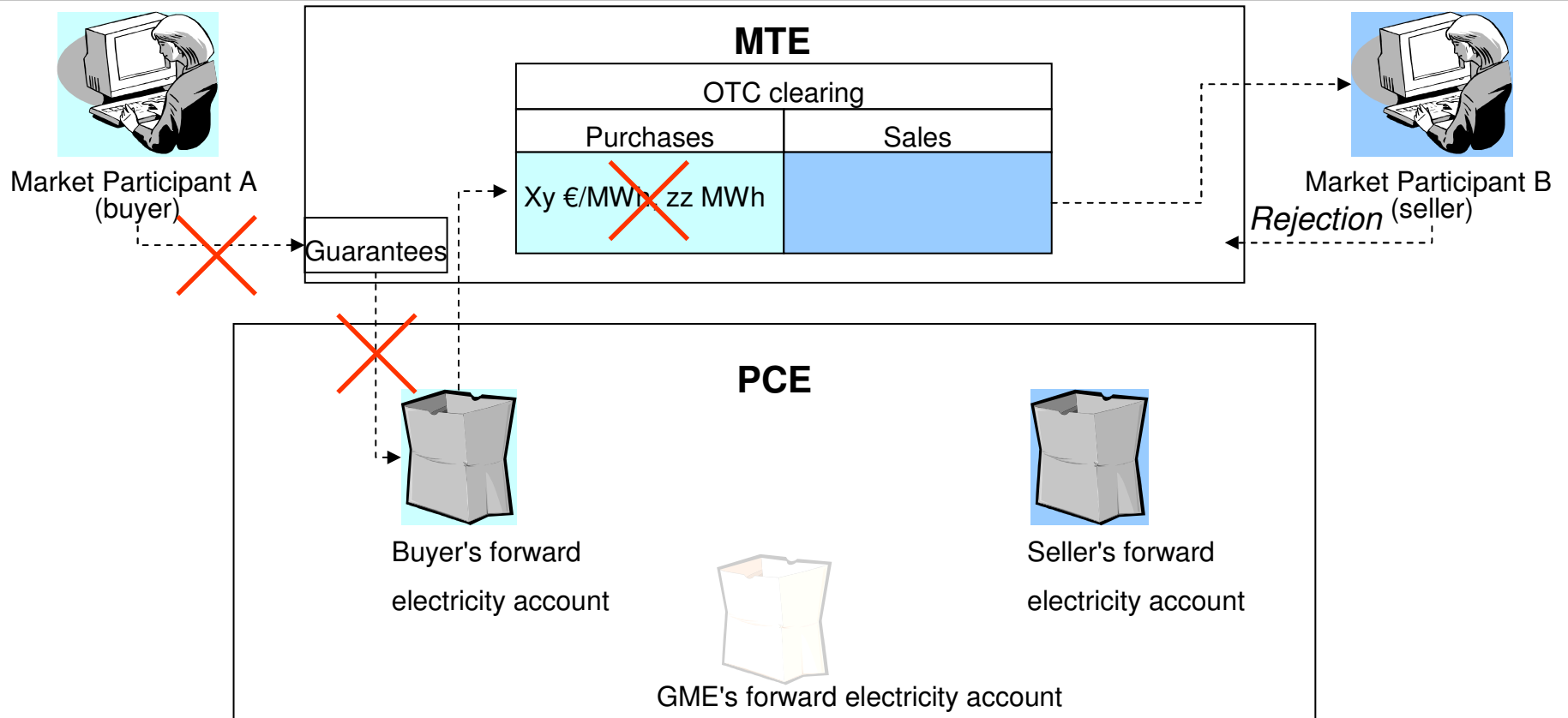


Market Participant B may:

- confirm the received proposal, accepting it in its entirety
- reject the proposal.

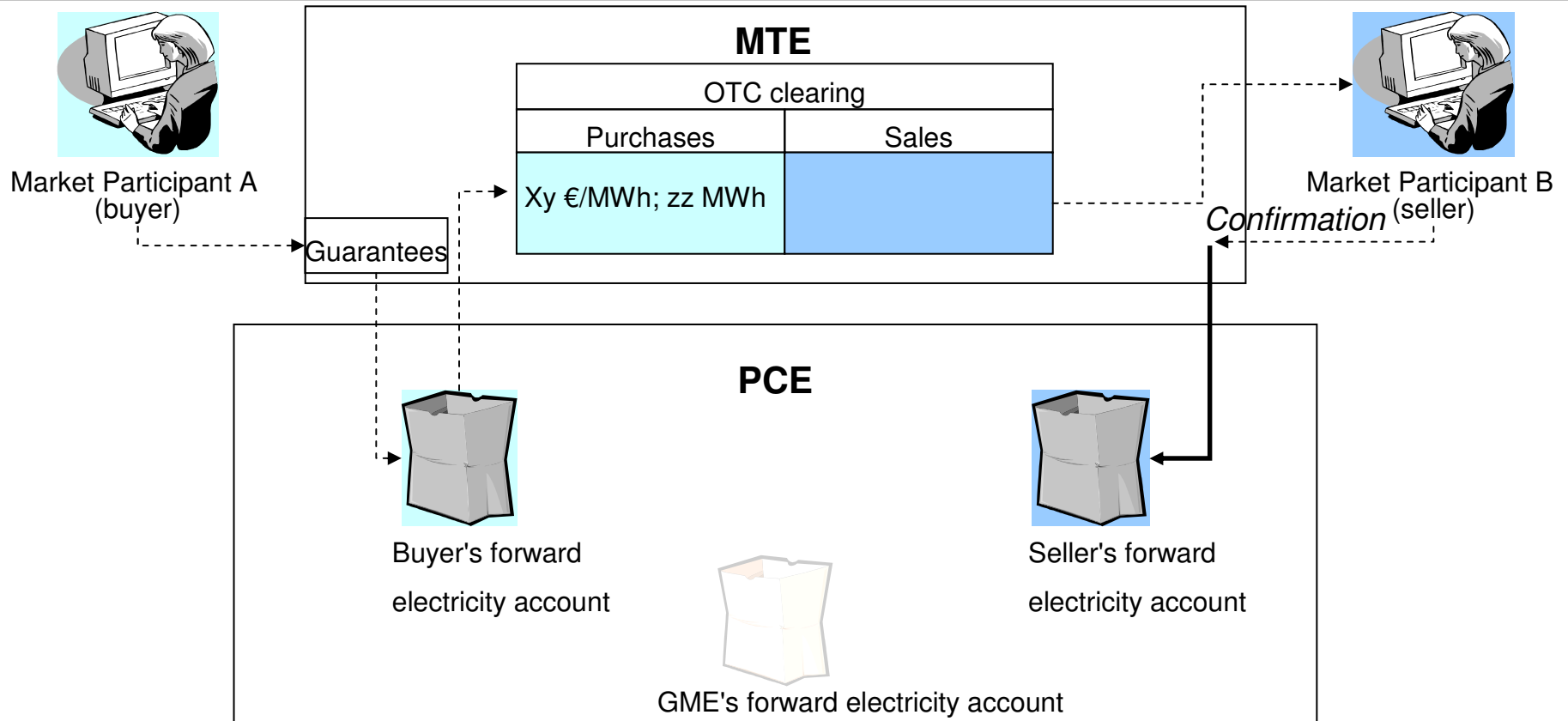
The proposal may not be modified.

## Example of OTC clearing (6/9)



If Market Participant B rejects the received proposal, the proposal is cancelled and the margins and financial guarantees engaged by the same proposal are freed up.

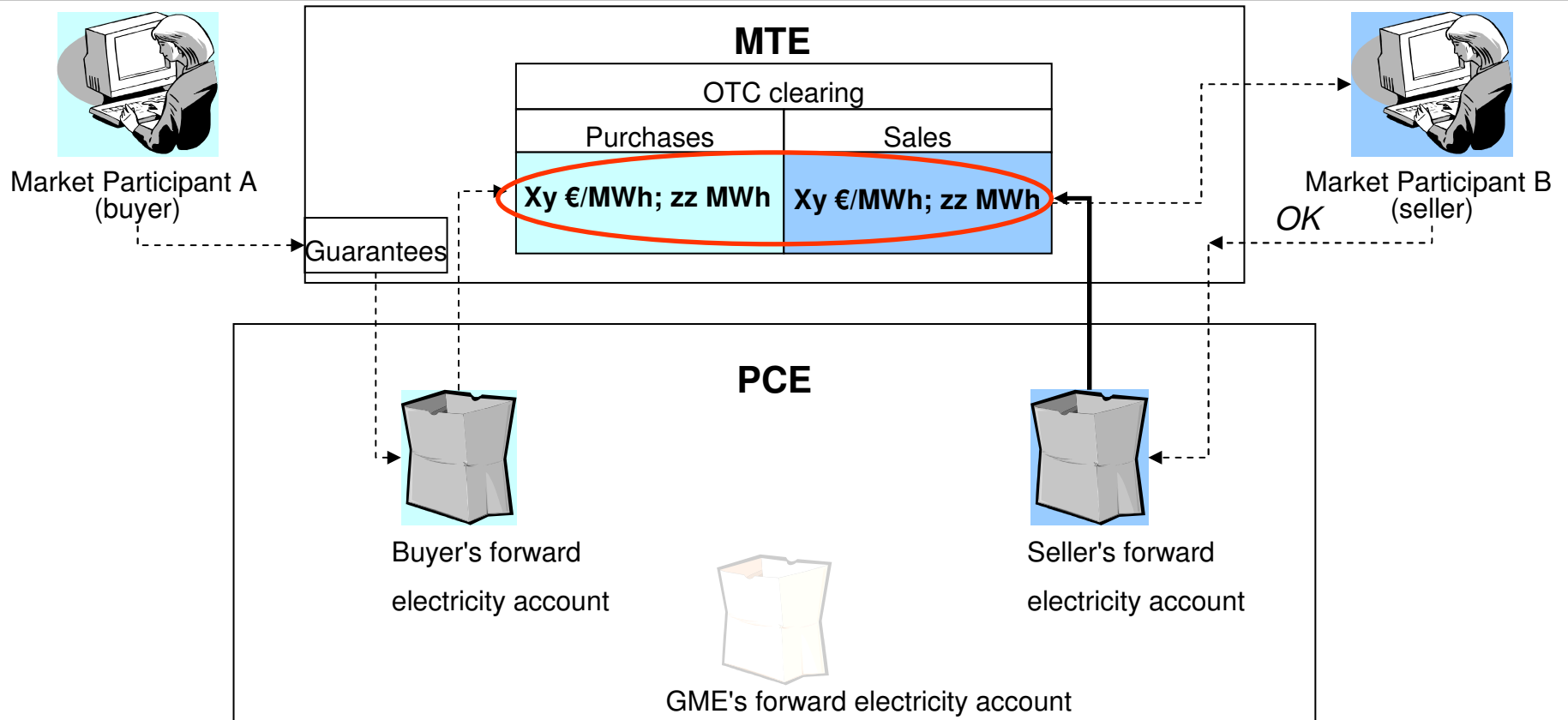
## Example of OTC clearing (7/9)



If Market Participant B confirms the received proposal, he/she must specify the matching code and the forward electricity account to which the OTC transaction pertains.

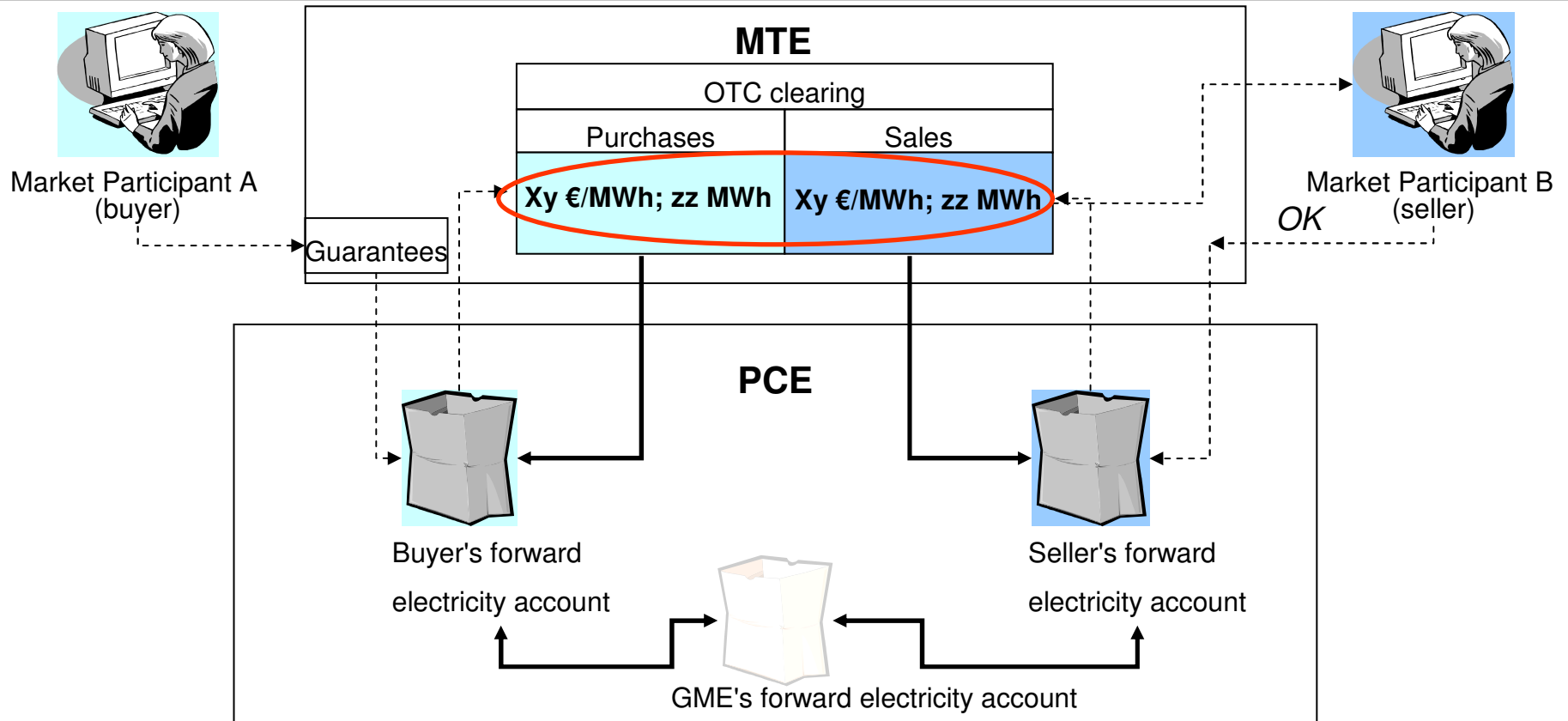
The request of confirmation of the OTC transaction undergoes the technical adequacy and adequacy-of-financial guarantee verifications that are required on the PCE.

## Example of OTC clearing (8/9)



If the adequacy verifications on the PCE are successful, the OTC transaction is matched.

## Example of OTC clearing (9/9)



After being matched, the proposals are recorded on the PCE:

- a sale transaction on the forward electricity account specified in the selling Market Participant's proposal and whose counterparty is GME's forward electricity account
- a purchase transaction on the forward electricity account specified in the buying Market Participant's proposal and whose counterparty is GME's forward electricity account.

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## Guarantee system (1/3)

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The proposed amendments to the Electricity Market Rules involve a single guarantee system for the Electricity Market.

This system is thus based on **first-demand bank guarantees** covering the entire value of the transactions concluded in the MTE and in the other energy markets (Day-Ahead Market-MGP and Adjustment Market-MA).

Market Participants have more flexibility, as they may - under exceptional and urgent circumstances - increase their guaranteed amount by making a **non-interest bearing cash deposit**.

## Guarantee system (2/3)

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The bank guarantee should cover:

→ payments in respect of **bids/offers submitted into the MGP/MA**;

→ payments in respect **bids/offers submitted into the MTE**;

→ payments for **recording transactions/schedules on the PCE**, if the Market Participant has opted for submitting the integrated bank guarantee form (Annex 5 to the Electricity Market Rules);

→ amounts due for penalties (1% of the amount due to GME in case of late payment)

→ amounts due for default interest (in case of late payment)

→ any fees for redemption of the bank guarantee (under the agreement between GME and the bank in charge of its treasury services, these fees are equal to zero)

## Guarantee system (3/3)

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The Market Participant's bank guarantee specifies a **single amount** for covering payments arising from participation in the MGP/MA, MTE and PCE.

The Market Participant submits to GME a declaration indicating the allocation of the guaranteed amount among the various markets.

At any time, based on operational requirements, the Market Participant may change the allocation of the guaranteed amount among the different markets.

The new allocation indicated by the Market Participant is subject to GME's verification. In other terms, GME will check whether the debits accrued in the market where the guaranteed amount has been decreased are adequately covered.

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## DIREZIONE MERCATO ADEQUACY-OF-FINANCIAL GUARANTEE VERIFICATIONS (1/6)

➤ GME will check whether the **guaranteed amount** in the MTE or on the PCE is **adequate** in the following cases:

guaranteed amount in the MTE

- ✓ upon submission of a **demand bid** in the MTE

guaranteed amount on the PCE

- ✓ upon submission of **supply offer** into the MTE, specifying an injection account (**CE-IMM**) on which the offer submitted into the PCE should be recorded.

## DIREZIONE MERCATO Adequacy-of-financial guarantee verifications (2/6)

➤ A **demand bid with a specified price** is adequate and thus the verification is successful if:

$$[(Qty * Profile * P) * (1 + VAT)] * 1.01 \leq \text{adequacy of financial guarantee in the MTE}$$

where:

- Qty = number of contracts specified in the bid
- Profile = number of hours underlying the contract
- P = price specified in the bid
- VAT = VAT rate applied to each Market Participant
- 1% = penalty

➤ In the case of **demand bid without a specified price**, GME will check whether the guaranteed amount is adequate by using the weighted average price of the supply offers that are present in the order book at that time, until reaching the specified quantity.

## DIREZIONAMENTO ADEQUACY-OF-FINANCIAL GUARANTEE VERIFICATIONS (3/6)

➤ A **supply offer**, specifying an injection account (CE-IMM), is adequate and thus the verification is successful if:

1.  $[(Qty * Profile * estimated\ CCT) * (1 + VAT)] * 1.01 \leq \text{adequacy of financial guarantee PCE\_GME}$
2.  $[(Qty * Profile * Ps) \leq \text{adequacy of financial guarantee PCE\_TERNA}$

where:

- Qty = number of contracts specified in the offer
- Profile = number of hours underlying the contract
- estimated CCT = value of the estimated transmission capacity fee (CCT)
- Ps = deviation price determined by TERNA
- VAT = VAT rate applied to each Market Participant
- 1% = penalty

## DIREZIONE MERCATO

# Adequacy-of-financial guarantee verifications (4/6)

- For the financial guarantee verifications, the **guaranteed amount** of each Market Participant **in the MTE** is equal to:
- amount of the **bank guarantee**  
+
  - paid **cash deposit**  
+
  - **value of sale transactions** concluded in the same invoicing period  
-
  - **value of purchase transactions** concluded in the same invoicing period  
-
  - **value of demand bids** that have been submitted during the market session and not yet matched  
-
  - **net debit** pertaining to the invoicing periods for which payments have not yet been settled.

## DIREZIONAMENTO

# Adequacy-of-financial guarantee verifications (5/6)

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- The guaranteed amount in the MTE is updated in the following stages:
  - **submission of a demand bid;**
  - **matching of a demand bid;**
  - **change/cancellation of a demand bid;**
  - **matching of a supply offer;**
  - **settlement of payments.**

## D I R E Z I O N E M E R C A T I

# Adequacy-of-financial guarantee verifications (6/6)

- The financial guarantees that have been posted for recording OTC transactions are subject to the same verifications and updated in the same way as described in the previous slides.
- The advantages of recording OTC transactions are as follows:
  - ✓ GME's management of the counterparty risk;
  - ✓ streamlining of back office procedures (invoicing, settlement of payments, etc.);
  - ✓ reduction of financial exposure due to the offsetting of OTC positions with the transactions closed in the MTE;
  - ✓ lower reliance on lines of credit.

## Adequacy-of-financial guarantee verifications: example

### Session of 7 Apr. 2008

Bank guarantee: + € 1,000,000

Submission of demand bid – 10 monthly base-load (May) @ 80 €/MWh:

Value =  $10 * 80 * 744 * (1 + 0.10) * 1.01 = € 661,267.2$        $\Rightarrow$  adequate in the MTE

Available guarantee = € 338,732.80

Matching @ 75 €/MWh

Available guarantee = € 380,062.00

### Session of 8 Apr. 2008

Available guarantee = € 380.062,00

Submission of Supply Offer - 5 weekly base-load (from 14 Apr. to 20 Apr.) @ 70 €/MWh

$\Rightarrow$  adequate on the PCE

Available guarantee = € 380,062.00 (not modified)

Matching at 70 €/MWh

Value =  $5 * 70 * 168 * (1 + 0.10) * 1.01 = € 65,326.80$

Available guarantee = € 445,388.80

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## D I R E Z I O N E M E R C A T O

# Settlement of payments

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- Every day, GME determines and notifies each Market Participant of the value of **purchase/sale transactions** (increased by VAT) **concluded in the MTE** and of related fees.
- For the payables/receivables that are determined daily by GME and that pertain to transactions concluded in the same invoicing period, GME issues invoices/notifications to Market Participants.
- Based on invoices received/notifications sent, GME determines the net debit/credit position (excluding fees) to be settled.

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## Questions for consultation (4/5)

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### ***Question for consultation no. 4:***

*What time limits for payment should be applied in the MTE?*

## Questions for consultation (5/5)

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### ***Question for consultation no. 5:***

*Considering the current guarantee system in the MTE (bank guarantees equal to the overall amount of the net debit) and on the PCE (towards both GME and Terna), if the time limit for recording transactions on the PCE were extended, would you deem it useful to introduce contracts with delivery periods of more than one month?*

[www.mercatoelettrico.org](http://www.mercatoelettrico.org)

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