



Energy Exchange Austria



CO2 EMISSION ALLOWANCES

# MANUAL

# CO2 PRODUCT SPECIFICATION

	Size	Comment
<b>Base value</b>	1	ton
<b>Name</b>	T_CO2_2008-2012	as of March 2008
<b>Name</b>	CERS	if requested by traders
<b>Minimum trading size</b>	1 ton	
<b>Price tick</b>	0.01	[EUR/ton]

# TRADING PHASES CO2

## ▶ **Trading time**

- Submission of orders (price/volume combinations) for the auction

## ▶ **Auction**

- Merging of orders and calculation of prices and volumes

## ▶ **Post-Trading phase**

- Access to remaining surplus volumes after the auction

# TRADING PROCEDURE

Time	Measure
$T_0$	Exchange trading day ( $T_0$ ) for trading CO2 certificates
$T_0$ : 08:00 a.m. - 1:55 p.m.	Trading is open: sending, changing, deleting orders is possible
$T_0$ : as of 11:00 a.m.	Examination if money has been received for buy orders on the cash accounts when the participant has opted for this type of settlement. Only amounts that are disposable on the account at the value time are available for the auction.
As of $T_0$ : 1:30 p.m.	Examination if sell orders are covered by the certificates on the EXAA emissions allowances account. Participants are informed of possible inconsistencies via e-mail.
$T_0$ : 1:55 p.m.	Trading is closed.
$T_0$ : 1:55 p.m.	Coverage is re-examined. Orders, that are not covered by deposited certificates are deleted. The concerned participants are informed by e-mail.
$T_0$ : 2:00 p.m.	Auction: calculation of market clearing prices (MCP) and volumes.
$T_0$ : 2:05 p.m. – 2:10 p.m.	Post-trading; trading in surplus orders
$T_0$ : as of 2:10 p.m.	Exchange members are informed of market clearing prices (MCPs) and volumes; trade confirmations are sent.
$T_0+1$ : as of 8:30 a.m.	Key data for billing (invoices and credits) are available
$T_0 + 3$	Settlement of payments (settlement day); value day: $T_0 + 3$ on the third banking business day after the exchange trading day for environmental products.

# TRADING IN 8 STEPS

step	activity:
1	<p><b>Seller</b> transfers CO2-certificates to the EXAA-account: AT-121-121-0, a transfer back to the original owner is possible if requested in writing.</p> <p><b>buyer</b> has to deposit the collaterals either in form of a bank guarantee combined with a direct debit autorisation of an Austrian bank account <b>or</b> the cash has to be transferred from an announced account to the EXAA account at OeKB: (account number: 31103727006 Bank code: 10.000, IBAN: AT551000031103727006, BIC: OEKOATWW).</p>
2	<p>Both, buyers and sellers submit their bids as a combination of price and volume in the EXAA trading system. The trader decides whether he wants to submit limit orders (buy up to a certain price or sell from a certain price) or market orders (accept the price set in the auction).</p> <p>At 13:30 the system checks if the seller has deposited the certificates for his sell orders and if the buyer has deposited collaterals for his buy orders. In case of a shortage the trader is informed by the trading system. Additional certificates can be transferred.</p>
3	<p>The trade with CO2 certificates is closed; no further bids can be submitted</p>
4	<p>The system again checks, if the sell orders are covered with certificates at the EXAA Depot . Information about inconsistency are sent to the participants per email. Sell orders without certificates or short certificates are deleted. Buy orders which are not covered with collaterals are deleted as well.</p>
5	<p>Auction: The result : a Market Clearing Price and the preliminary calculate volume is shown.</p>
6	<p>Post-Trading; Trade with surplus at the auction price: The volume of the buy and sell orders is seldom exactly the same. Mostly there is a surplus in one direction. This surplus can be bought or sold at the posttrading. Afterwards the results are confirmed.</p>
7	<p><b>Physical settlement:</b> The transferred certificates stay on the EXAA account and are transferred back if requested in writing.</p>
8	<p><b>Financial settlement:</b> Participants, who have deposited a bank guaratee will receive the credit or debit note three days after the trading day. Also the transaction fees are charged three days after the trading day. Participants, who have deposited cash will receive the debit notes the day after trading (value day), less 2 Cents transaction fee. Participants, who sold certificates will receive a credit note ( also less 2 Cents transcation fee).</p>

# SUBMISSION OF BIDS

- ▶ Via internetbased platform (no additional software)
- ▶ Entry and change of a order during trading time
- ▶ In case of technical problems
  - On behalf of Trading: EXAA will submit the bid for you

# OBOT (ON BEHALF OF TRADING)

- ▶ Contact EXAA Market Operation
  - Telephone: +43 (0)1 253 72 72-90
  - Fax: +43 (0)1 253 72 72-96
  - E-Mail: [markets@exaa.at](mailto:markets@exaa.at)
- ▶ Sent your orders to EXAA by using the OBOT Form (by Fax & E-Mail)
- ▶ EXAA Market Operation submits the order on behalf of the trader

# ORDERS IN THE SYSTEM

- ▶ Identification of each buy and sell order per product with time stamp and reference number
- ▶ Buy and sell orders are treated independently by the system
- ▶ No submission of upper and lower limits
- ▶ Automatic check for monotony
- ▶ Any changes of orders during trading time
- ▶ Last order counts

# SUBMISSION OF ORDERS

- ▶ Per product
- ▶ As price/volume combinations
- ▶ Limit (step or linear) order or market orders
- ▶ Post-trading orders:
  - As signed volume (limited to displayed volume)

# FORM OF THE ORDER

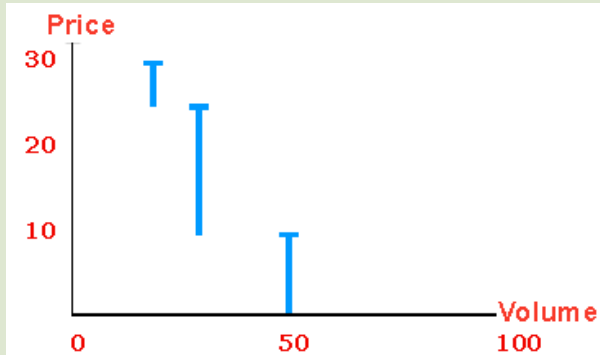
- ▶ Volume allocation for limit orders in case of:
    - Linear order through linear interpolation
    - Step order to (buy) and of (sell) the entered order
- Sell order** → negative value („minus“ as prefix)
- Buy order** → positive value
- Market Order:** is an order without a price limit, a „M“ is written in the price column, the volume is submitted like for a limit order

# EXAMPLE: LIMIT BUY ORDERS

- ▶ Submission of various price-volume combinations

Price in €	10,00	25,00	30,00
Volume (in tons)	50	30	20

Step function



Linear interpolation



# EXAMPLE: LIMIT SELL ORDER (STEP)

## ▶ Submission sell order (step):

Price in €	20,00	23,00	25,00
Volume in tons	-50	-80	-140

## ▶ Volume allocation for different MCPs:

MCP in €	Volume allocation (tons)
To 19,99	0
from 20,00 to 22,99	-50
from 23,00 to 24,99	-80
25,00 or more	-140

# EXAMPLE: LIMIT SELL ORDER (LINEAR)

## ▶ Submission sell order (linear):

Preis in €	20,00	23,00	25,00
Volumen in Tonnen	-50	-80	-140

## ▶ Volume allocation for different MCPs:

MCP in €	Volumen allocation (tons)
20,00	-50
21,00	-60
21,50	-65
22,50	-75
25,00 or more	-140

# ADDITIONAL ORDER OPTIONS

For Post-Trading bids:

## ▶ Standard

- Submitted post volume might be partly executed (except FillorKill option is used)

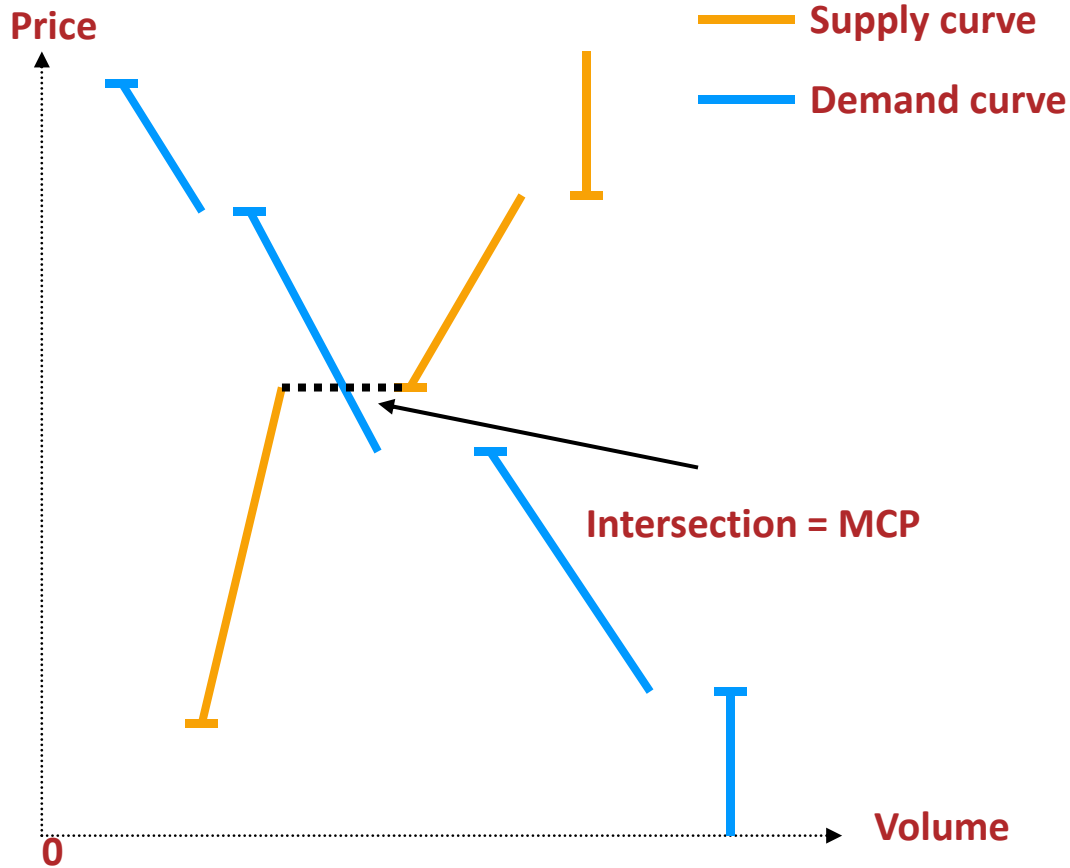
## ▶ „Fill-or-Kill“ Option

- Either the total volume will be executed or nothing

# PRICE FIXING – MATCHING RULES

- ▶ Principle to execute the highest total trading volume
- ▶ Submitted buy and sell orders are aggregated to one Buy and to one Sell curve
- ▶ Intersection point of the two curves is the Equilibrium Price = Market Clearing Price (MCP)

# PRICE FIXING - SURPLUS AT MCP



▶ At MCP → supplied volume > demanded volume

# SURPLUS MANAGEMENT - ALLOCATION

In case of supply or demand surpluses at the market clearing price (MCP) the following allocation priorities apply within a product:

1. Largest Market orders
2. Largest area of the order curve underneath/above MCP
3. Highest volume at the determined MCP
4. Earliest time of last order modification

Suprplus volume → available for post-trading

# ALLOCATION POST-TRADING

- ▶ At market clearing prices fixed in the auction
- ▶ Principle of „First come, first served“
  - Time of order submission
  - Time of last order modification
- ▶ Time stamp of post-trade order is criteria for allocation
- ▶ Submitted post volume might be partly executed (except FillorKill Option is used)
- ▶ Allocated post-trade and pre-trade volume will be shown in one sum
- ▶ „Active and passive“ participation in post-trading

# AUTHORIZATION CONCEPT

- ▶ Granting access rights to the participants

In the system EXAA Market Operation sets up

- ▶ The **member**
- ▶ The **registered traders**
- ▶ The **member supervisor** und
- ▶ The requested **trading accounts** for the member

# USER COMPETENCES

Competence	Senior Trader	Trader	Member Supervisor
Order submission	X	X	-
Querying, editing and canceling of orders	X	X	-
Assigning and canceling of accounts	X	-	X
Editing trading restrictions for user (e.g.: predefined max. volume for Trader)	X	-	X

# AUTHORISATION OF MEMBER

- ▶ Member-ID: EXAA-Code **plus** Member-Code
- ▶ Example (MBCTEST):

MBC	plus	TEST
Always 3 characters		max. 7 characters

- ▶ MBC... Member Certificates

# USER IDENTIFICATION

▶ User-ID: 

EXAA-Code	plus	initials
-----------	------	----------

▶ Examples:

Always 3 characters		Always 3 characters
<b>STR</b>	plus	2 letters of last name plus 1 letter of first name
<b>TRD</b>	plus	
<b>MSV</b>	plus	

- ▶ **STR**... Senior Trader
- ▶ **TRD**... Trader
- ▶ **MSV**... Member Supervisor

# ORDER SUBMISSION VIA INTERNET

- ▶ Via internet based trading system
- ▶ PC or working station with internet connection
- ▶ No installation of additional software
- ▶ Secure internet connection via SSL-Connection
- ▶ PIN for access
- ▶ Easy access to trading system
- ▶ Simple & fast input of orders (MS-Office compatible)

EXAA Energy Exchange Austria: HOME - Windows Internet Explorer

http://www.exaa.at/

Deutsches Menü

Home Unternehmen Spotmarkt Strom Spotmarkt CO2 Marktinformation Mitglieder Service

Greening Liberalised Markets

Emissionsrechte  
Keine Fixkosten, Transaktionsgebühr von nur 2 Cent/Tonne...

EXAA Training  
Die Schulung für Marktteilnehmer und Interessenten...

Company News  
08.01.2008 Emissionshandel neu ab 2008 - Handeln Sie jetzt!  
21.09.2007 Stromhandel an der EXAA um 35% über Plan  
14.06.2007 E-World Follow-How für Europa

Spotmarkt Strom  
Liefererzone AT/DE

Umweltprodukte  
Preis (Eur/tonne)

APA-News  
16.01.2008 Energiemerketreform: Alternativen  
16.01.2008 Verbund bei Energie AG immer häufiger im Gespräch  
15.01.2008 Entgelt deutscher Stromkonzerne offenbar gesenkt

E-World 2008  
Treffen Sie uns auf der E-World 2008 vom 19. bis 21. Februar in der Halle 8, Stand 354

Suche auf exaa.at

Suche...

Umweltprodukte

weiter

aktuelles & übersicht

weiter

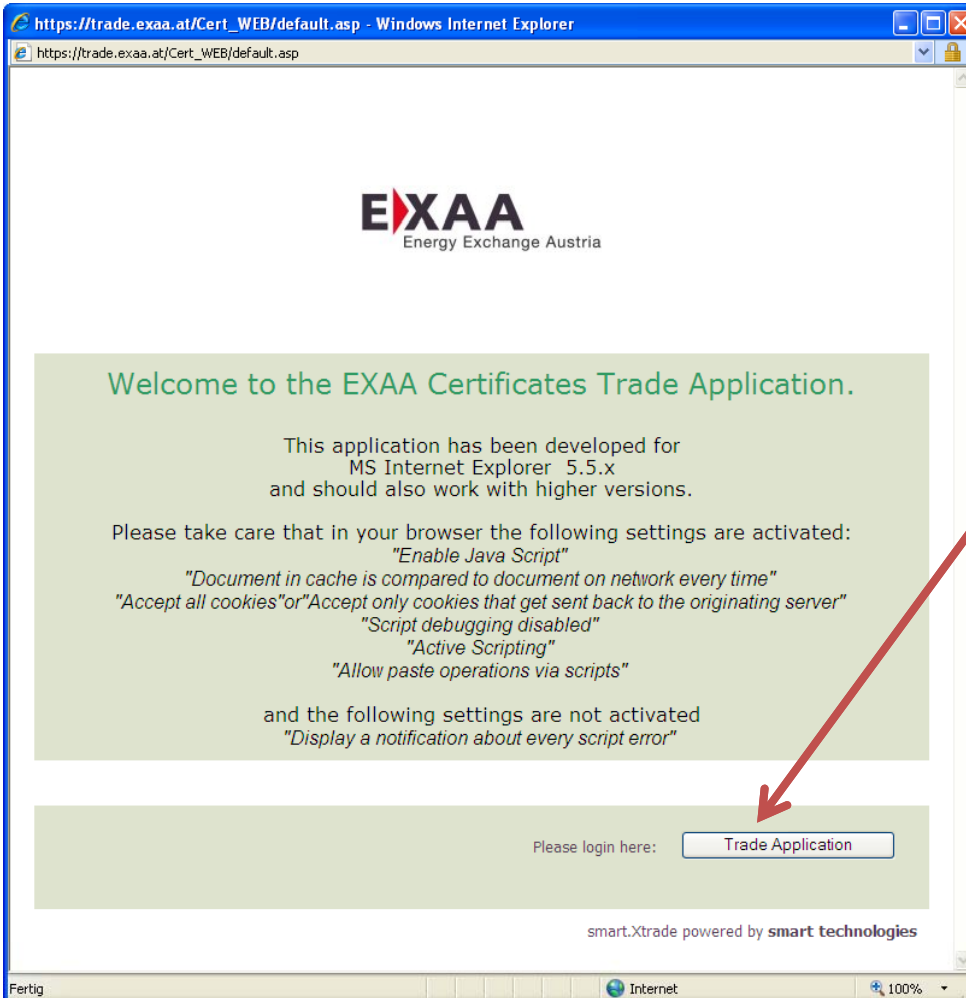
© 2007 Energy Exchange Austria | Abwicklungsstelle für Energieprodukte AG Kontakt Impressum Disclaimer Mitglieder-Login FAQ

1.) Select:  
„CO2 Trading System“

2.) Button:  
„start“

► Or direct link to trading system: [https://trade.exaa.at/Cert\\_WEB/](https://trade.exaa.at/Cert_WEB/)

# LOG-IN EMISSION MARKET



▶ Check if your Browser is configured exactly

Click on Trade Application

# LOG-IN UMWELTMARKT

smart.Xtrade Certificate - Windows Internet Explorer  
https://trade.exaa.at/Cert\_WEB/frameset.asp?lang=EN

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**User Login**

User

Company Code

Password

Login Cancel

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## Example

- ▶ User: **TRDTEST**
- ▶ Company Code: **MBCTEST**
- ▶ Password: **XXXXXXXX**

*Please ask (via Mail) for a password to take a first look at our trading system.*

# TRADE STATUS

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https://test.exaa.at/Cert\_WEB/frameset.asp?lang=EN

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Home User Data Trading Statistics Logout

Trade Status Certificate Editor Orderbook Single Product Editor Post Editor Trade Results Deposits

## Deposits for Account: AT-121-112-0 User: STRAZA

Day 25 1 2008

### Information about cash deposits

**Time of Inquiry:** 25.01.2008 12:09:23 **Company:** CO2 Handels GmbH  
**Cash Deposit data for day:** 25.01.2008

<b>Amount locked by recent Trades</b>	0,00 (€)
<b>Last Trade Day covered:</b>	
<b>Amount Bank Guarantees:</b>	0,00 (€)
<b>Transaction Balance of the Year:</b>	50.000,00 (€)
<b>Last Cash deposit Transaction:</b>	16.01.2008
<b>Trade Balance of the Year:</b>	0,00 (€)
<b>Sum:</b>	<b>50.000,00 (€)</b>

### Information about certificates deposit

For Day	Certificate Type	Transaction Balance [t]	Last Transaction	Trade Balance [t]	Last Trade	Sum
25.01.2008	T_CO2_2005-2007	9500	17.01.2008	0		9.500

Certificate Editor →  
Order entry

List of the entered bids  
(after confirmation via  
the Submit button) in  
Orderbook

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# POSSIBLE TRADING STATES

- ▶ **Trade has been opened**
  - Order entry is possible
- ▶ **Trade has already been closed**
  - Trade closed, you can not entry orders anymore
- ▶ **Auction has been completed**
  - Auction successfully finished (MCP calculated)
- ▶ **Post trading has been opened**
  - Post-trading phase
- ▶ **Post trading has already been closed**
  - End of post-trading phase
- ▶ **Results has been confirmed**
  - Trade finished, Results are fixed

# CERTIFICATE EDITOR

The screenshot shows the EXAA Certificate Editor interface. At the top, there is a navigation bar with links for Home, User Data, Trading, Statistics, and Logout. Below this is a secondary navigation bar with links for Trade Status, Certificate Editor, Orderbook, Single Product Editor, Post Editor, and Trade Results. The main area displays account information: Account: AT-121-133-0, User: straza. It also shows security details: Day: 16/2/2005, Deposit Securities: 1.000.000,00, and Remaining Securities: 1.000.000,00. A dropdown menu for Type is set to Step Function. A toolbar contains buttons for Recalculate Used Securities, Submit, Delete Changes, Add columns, Add, and Clear. Below the toolbar is a table with columns for Used Securities, Price, and Sum [t]. The table has two rows: one for T\_CO2\_2005-2007 and one for Sum [t]. Red arrows point from the Price column to the text 'Price entry (in €)' and from the Sum [t] column to the text 'Volume entry (in tons)'. The footer of the interface reads 'smart.Xtrade v 5.1.9 © by smart technologies GmbH'.

1. Day: 16/2/2005

2. Deposit Securities 1.000.000,00

3. Remaining Securities 1.000.000,00

4. Type: Step Function

5. Recalculate Used Securities

6. Submit

7. Delete Changes

Add columns: 8. Add 9. Clear

Used Securities	Price																			
0	T_CO2_2005-2007																			
0	Sum [t]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Price entry (in €)

Volume entry (in tons)

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# CERTIFICATE EDITOR

## 1. Day

- Trading day

## 2. Deposit Securities

- Deposited collaterals at EXAA, you can buy up to this amount at maximum (minus 2 Cent fee and potential tax)

## 3. Remaining Securities

- The available amount after other bids have already been submitted.

## 4. Type

- Type of bid submission, step or linear

## 5. Recalculate used Securities

- Updates the amount Deposit Securities & Remaining Securities, if the bids are not yet submitted into system (those that are written in „italic“)

## 6. Submit

- The bids are sent to the system (and so binding)

## 7. Delete Changes

- Deletion of not submitted bids (those that are written in „italic“)

## 8. Add

- Adjust the table

## 9. Clear

- Deletes all values (**ATTENTION:** please confirm with „Submit“)

# BUY ORDER: NOT YET SUBMITTED

The screenshot shows the EXAA trading system interface. At the top, there is a navigation menu with links for Home, User Data, Trading, Statistics, and Logout. Below this is a secondary menu with buttons for Trade Status, Certificate Editor, Orderbook, Single Product Editor, Post Editor, Trade Results, and Deposits. The main content area displays account information: Account: AT-121-111-0, User: straza, Day: 25/1/2008, Deposit Securities (€): 50.000,00, Remaining Securities (€): 50.000,00, and Type: Step Function. Below the account information are buttons for Recalculate Security Needs, Submit, Delete Changes, and Add columns. A table shows the estimated security need for T\_CO2\_2005-2007 with a price of 0,05 and a quantity of 1500. The table has 11 columns for different categories, all showing 0 in the 'Sum [t]' row.

Estimated Security Need	Price										
0	T_CO2_2005-2007	1500									
0	Sum [t]	0	0	0	0	0	0	0	0	0	0

# BUY ORDER: SUBMITTED

The screenshot displays the EXAA trading system interface. At the top, the EXAA logo and navigation menu are visible. The account information shows: Account: AT-121-111-0, User: STRAZA, Day: 25/1/2008, Deposit Securities (€): 50.000,00, Remaining Securities (€): 49.910,00, and Type: Step Function. Below this, there are buttons for 'Recalculate Security Needs', 'Submit', 'Delete Changes', and 'Add columns:'. A table displays the 'Estimated Security Need' for 'T\_CO2\_2005-2007' with a price of 1.500,0 and a sum of 1.500,0. The table also shows a 'Sum [t]' row with values 1.500,0 and several zeros.

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https://test.exaa.at/Cert\_WEB/frameset.asp?lang=EN

**EXAA**  
Energy Exchange Austria

Home User Data Trading Statistics Logout

Trade Status Certificate Editor Orderbook Single Product Editor Post Editor Trade Results Deposits

Account: AT-121-111-0 Day: 25 1 2008 Deposit Securities (€) 50.000,00 Type: Step Function  
User: STRAZA Remaining Securities (€) 49.910,00

Recalculate Security Needs Submit Delete Changes Add columns:

Estimated Security Need	Price												
92,3	T_CO2_2005-2007	1.500,0											
92,3	Sum [t]	1.500,0	0	0	0	0	0	0	0	0	0	0	0

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# SELL ORDER: NOT YET SUBMITTED

The screenshot shows the EXAA trading system interface. At the top, the EXAA logo and navigation menu are visible. The main area displays account information and security needs. A table shows the estimated security need for a sell order.

Account: AT-121-112-0  
User: straza  
Day: 25 / 1 / 2008  
Deposit Securities (€): 0,00  
Remaining Securities (€): 0,00  
Type: Step Function

Buttons: Recalculate Security Needs, Submit, Delete Changes, Add columns:

Estimated Security Need	Price												
0	T_CO2_2005-2007	-5000											
0	Sum [t]	0	0	0	0	0	0	0	0	0	0	0	

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# SELL ORDER: SUBMITTED

The screenshot displays the EXAA trading system interface. At the top, the EXAA logo (Energy Exchange Austria) is visible, along with navigation links: Home, User Data, Trading, Statistics, and Logout. Below this, a secondary menu includes Trade Status, Certificate Editor, Orderbook, Single Product Editor, Post Editor, Trade Results, and Deposits.

Account information is shown as: Account: AT-121-112-0, User: straza. The Day is set to 25, 1, 2008. Deposit Securities (€) and Remaining Securities (€) are both 0,00. The Type is set to Step Function.

Buttons for Recalculate Security Needs, Submit, Delete Changes, and Add columns: are present. Below this is a table for Estimated Security Need:

Estimated Security Need	Price												
0	T_CO2_2005-2007	-5.000,0											
0	Sum [t]	-5.000,0	0	0	0	0	0	0	0	0	0	0	

At the bottom, the version information is smart.Xtrade v 5.1.14 C by smart technologies GmbH. The status bar shows 'Fertig' and 'Internet'.

# POST EDITOR

The screenshot shows the EXAA Post Editor interface. At the top, there is a navigation bar with links for Home, User Data, Trading, Statistics, and Logout. Below this is a secondary navigation bar with links for Trade Status, Certificate Editor, Orderbook, Single Product Editor, Post Editor (which is active), and Trade Results. The main content area features a large header: "Post Editor for Account: AT-121-133-0" and "User: straza". Below the header, there are date selection controls for "Day" (16), "Month" (2), and "Year" (2005). A table displays trade data for the product "T\_CO2\_2005-2007" with a price of 8,99 and a volume available of 7.220. The table includes columns for Product, Price, Preliminary Trade Results (Buy in t, Sell in t), Volume available (t), FillorKill (set to No), and Order (set to 200,0). There are "Submit all" and "Submit" buttons. On the left side, there is a "Refresh" button and a "Post Trading open for" section showing the date "16.02.2005". The footer of the application indicates "smart.Xtrade v 5.1.9 © by smart technologies GmbH".

smart.Xtrade Certificate - Microsoft Internet Explorer

**EXAA**  
Energy Exchange Austria

Home User Data Trading Statistics Logout

Trade Status Certificate Editor Orderbook Single Product Editor Post Editor Trade Results

**Post Editor for Account: AT-121-133-0**  
**User: straza**

Day 16 2 2005

Product	Price	Preliminary Trade Results		Volume available t	FillorKill	Order	Submit all
		Buy in t	Sell in t				
T_CO2_2005-2007	8,99			7.220	No	200,0	Submit

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# DEPOSITS (CASH & CERTIFICATES)

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 https://test.exaa.at/Cert\_WEB/frameset.asp?lang=EN

**EXAA**  
Energy Exchange Austria

Home User Data Trading Statistics Logout

Trade Status Certificate Editor Orderbook Single Product Editor Post Editor Trade Results Deposits

## Deposits for Account: AT-121-112-0 User: STRAZA

Day 25 1 2008

### Information about cash deposits

Time of Inquiry: 25.01.2008 12:09:23 Company: CO2 Handels GmbH  
**Cash Deposit data for day: 25.01.2008**  
 Amount locked by recent Trades: 0,00 (€)  
 Last Trade Day covered: 0,00 (€)  
 Amount Bank Guarantee: 0,00 (€)  
 Transaction Balance of the Year: 50.000,00 (€)  
 Last Cash Deposit Transaction: 16.01.2008  
 Trade Balance of the Year: 0,00 (€)  
 Sum: **50.000,00 (€)**

### Information about certificates deposit

For Day	Certificate Type	Transaction Balance [t]	Last Transaction	Trade Balance [t]	Last Trade	Sum
25.01.2008	T_CO2_2005-2007	<b>9500</b>	17.01.2008	0		9.500

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