EU ETS – Participation in the auctions and outlook secondary market

06/28/22
Agenda

1. EU ETS

2. EEX as common auction platform

3. Auction participation

4. Auction process

5. Secondary Market

6. Intermediaries

7. Q&A
1) EU ETS

- The EU Emissions Trading System (EU ETS) sets an overall limit (the “cap”) on the GHG emissions for the sectors included (currently power, industry, aviation). The cap decreases every year, ensuring that total emissions fall.

- One emission allowance gives the holder the right to emit 1 ton of CO₂ (equivalent).

- Within the cap, companies receive or buy emission allowances, which they can trade as needed.
1) Auctioning – Background

• **A transparent method** for allocating emission allowances that allows participants to acquire the allowances concerned at **market price**

• **The default method** of allocating allowances since 2013 (so-called phase 3 of the EU ETS). Up to **57%** of the allowances allocated through auctioning.

• The proportion of allowances businesses have to buy through auctions is **increasing**.

• The exact **auctioning volume:**
  - Determined annually based on the provisions of the **ETS Directive**.
  - May also be impacted by the functioning of the **Market Stability Reserve**.
## 1) Auctioning – Relevant Legislation

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Operational</th>
<th>Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETS Directive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auctioning Regulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint Procurement Agreement</td>
<td>Common auction platform (CAP3) contract with Annexes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Escrow and custody agreements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clearing conditions, as part of contractor’s tender</td>
<td></td>
</tr>
<tr>
<td>Since 2018, emission allowances are classified as financial instruments under the Markets in Financial Instruments Directive (MiFID).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial rules are applicable to emission allowances, in particular:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market Abuse Regulation (MAR)</td>
<td>Anti-Money Laundering Directive (AMLD)</td>
<td></td>
</tr>
<tr>
<td>Settlement Finality Directive</td>
<td>Regulation on OTC Derivatives, Central Counterparties and Trade Repositories (EMIR)</td>
<td></td>
</tr>
</tbody>
</table>
1) Auctioning – The Auction Platform

- 28 countries (25 EU Member States and 3 EEA/EFTA countries) auction their allowances on the common auction platform. To this end, they have signed a Joint Procurement Agreement.

- Currently, the European Energy Exchange (EEX) in Leipzig is the common auction platform.

- Germany and Poland have opted-out of the common auctioning platform. Germany has nominated EEX as its opt-out platform, while Poland is using the common auction platform (EEX) to auction its allowances until further notice.
2) EEX as common auction platform - Who is EEX?

EEX Group builds secure, successful and sustainable commodity markets worldwide – together with its customers.

The group offers trading in power, natural gas, environmental products, freight and agriculturals as well as clearing, registry and other services.

EEX Group consists of European Energy Exchange (EEX), EEX Asia, EPEX SPOT, Power Exchange Central Europe (PXE) and Nodal Exchange as well as the registry provider Grexel and software companies KB Tech and Lacima. Clearing is provided by EEX Group’s clearing houses European Commodity Clearing (ECC) and Nodal Clear.

Shareholders:

- EEX is part of Deutsche Börse Group (75.05%)
- 3 Saxon Shareholders, e.g. State of Saxony (7.94%)
- 12 Minor shareholders from industrial, energy and financial companies, e.g. Uniper, 50Hertz Transmission, EnBW, Enel (17.03%)
2) EEX Group - A global commodity exchange

North America  Europe  Asia  #GoingGlobal

# 1 in Power Trading worldwide

More than 800 trading participants from 41 countries

19 locations
2) Importance of Exchange Trading

- Creating **transparency** through recognised reference prices and the publication of market data (prices and volumes)
- Access to a large number of trading participants and **concentrating liquidity** at one trading platform
- Very high degree of **automation** on account of electronic and **standardised trading and settlement processes**
- **Elimination of the counterparty risk** through clearing and settlement via the clearing house of the exchange
- The anonymity of exchange trading and the regulation of the market ensure **non-discrimination and equal treatment** of all trading participants
2) EEX’s involvement in Global Carbon Markets

We believe in building markets long-term and in the combination of synergetic elements.

We offer **infrastructure, auctions, registry and trading for carbon schemes** and look back on a proven track record of successful cooperations with governments, regulators and traders.

### EEX Group supports carbon markets worldwide.

- **EEX**
  - Germany ETS
  - Auction Services, Spot & Derivatives
- **nodal**
  - WCI
  - Spot & Derivatives
  - **eex**
    - Swiss ETS
    - Linking Efforts
  - **eex**
    - UK ETS
    - Linking Efforts
  - **eex**
    - EU ETS
    - Auction Services, Spot & Derivatives
  - **eex**
    - German Sector nEHS
    - Sell-off platform
  - **eex**
    - China ETS
    - Memorandum of Understanding
  - **eex**
    - NZ ETS
    - Auction Services
    - Cooperation with NZX

### Milestones of EEX Group carbon markets

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>EEX pioneers EUA spot market</td>
</tr>
<tr>
<td>2008</td>
<td>EEX launches EUA futures market</td>
</tr>
<tr>
<td>2008</td>
<td>EEX launches EUA options market</td>
</tr>
<tr>
<td>2010</td>
<td>German EUA auction platform</td>
</tr>
<tr>
<td>2012</td>
<td>EEX lists Kyoto CER offset contracts</td>
</tr>
<tr>
<td>2012</td>
<td>EEX lists EU Aviation Allowances</td>
</tr>
<tr>
<td>2012</td>
<td>EEX lists Kyoto CER offset contracts</td>
</tr>
<tr>
<td>2012</td>
<td>EEX becomes Common Auction Platform for the European Union</td>
</tr>
<tr>
<td>2012</td>
<td>EEX runs NER300 sales program for EIB</td>
</tr>
<tr>
<td>2016</td>
<td>EEX becomes CAP2</td>
</tr>
<tr>
<td>2017</td>
<td>Nodal enters US carbon markets with CCA &amp; RGGI Futures &amp; Options</td>
</tr>
<tr>
<td>2018</td>
<td>Nodal offers most comprehensive set of products in North America</td>
</tr>
<tr>
<td>2020</td>
<td>EEX and NZX operate on carbon markets</td>
</tr>
<tr>
<td>2021</td>
<td>EEX and NZX operate on carbon markets</td>
</tr>
<tr>
<td>2022</td>
<td>EEX and Nodal to list products, EEX to list UK ETS contracts</td>
</tr>
</tbody>
</table>
2) EEX auctions for the EU ETS

→ 2,249 auctions as of 31st December 2021
2) EU ETS Auctions timing and volume 2022

To be auctioned by EEX in 2022: up to ~596 million EUA* and ~4 million EUAA

EU ETS States are the sellers of the allowances. They appoint an auctioneer to sell on their behalf and appoint an auction platform which is responsible for conducting the auctions.

**EU auctions**
- Auctions for 25 EU Member States plus 3 EEA/EFTA countries (Norway, Iceland, Liechtenstein) plus Innovation Fund and Modernisation Fund
- ~406 million allowances in 2022*
- EUA Auctions held on Mon, Tue, and Thu, 9-11 am CET
- EUAA Auctions on 9 February, 6 April, 15 June, 7 September, 16 November 2022

**DE auctions**
- Auctions on behalf of Germany
- ~113 million allowances in 2022*
- EUA Auctions held weekly on Fri, 9-11 am CET
- EUAA Auction on 19 October 2022

**PL auctions**
- Auctions on behalf of Poland (currently using the EU common auction platform)
- ~75 million allowances in 2022*
- EUA Auctions held bi-weekly on Wed, 9-11 am CET
- EUAA Auction on 18 May 2022

**UK auctions**
- in respect of generation of electricity in Northern Ireland
- ~2 million allowances in 2022*
- EUA Auctions held on 23 February and 21 September 2022

*Link to the Auction Calendar 2022. The certificates auctioned in September to December 2022 are preliminary and will be subject to adjustments due to the operation of the Market Stability Reserve.*
3) Auction participation - Why participate in Emissions Auctions?

- Auctioning is the default method of allocating allowances within the EU Emissions Trading System (EU ETS) → this means that companies liable under the EU ETS have to buy a proportion of allowances (European Union Allowances (EUAs) and EU Aviation Allowances (EUAAs)) through auctions.

- Auctioning is an open, transparent, harmonised and non-discriminatory process (see Auctioning Regulation).

- Advantages to participate in EUA/ EUAA Auctions at EEX:
  - Unique access to emissions auctions on mostly 5 days/week, covering 100% of European auction volume plus continuous trading on one single exchange.
  - Variety of direct and indirect access options offered.
  - Strong customers focus and personal assistance through our single admission team and offices in 19 Locations.
  - Fair and transparent price formation.
  - Potentially lower fees than on the OTC and secondary market.
  - Small discount to the secondary market price is possible.
3) Auction participation - Who is eligible to bid in Emissions Auctions?

• Eligible participants according the EU Auctioning Regulation are:
  ✓ Compliance buyers (operators of stationary installations, aircraft operators)
  ✓ Investment firms and credit institutions
  ✓ Business groupings of compliance buyers
  ✓ Other intermediaries specifically authorised by the home Member State

• These participants have to fulfil admission requirements according to EU and EEX rules, i.a.:
  ✓ Establishment in the EU (except for compliance buyers)
  ✓ Hold a nominated holding account in the Union registry (see details)
  ✓ Hold a nominated bank account

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3) Auction participation – several ways to participate

Direct Access – bid directly at EEX

A Full Membership
- all products of EEX

B Power Markets Plus Membership
- all products of EEX excl. EEX Natural Gas

C Emerging and Environmental Markets
- Emissions Auction, Secondary M. and others*

D Auction Only - System
- Emissions Auctions via Auction System

E Auction Only - Helpdesk
- Emissions Auctions via Market Operations

Contact:

Admission Team
- Member Readiness
  Phone: +49 341 2156 261
  E-mail: memberreadiness@ecc.de

Sales Emissions
- Phone: + 44 207 862 7555
  E-mail: sales@eex.com
  or your Key Account Manager

Market Operations (Helpdesk)
- Phone: +49 341 2156 222
  E-mail: sales@eex.com or auctions@eex.com

Indirect Access – bid via an intermediary

Intermediaries are eligible to bid on own behalf and on behalf of clients in accordance with Article 18 of the Auctioning Regulation. Currently the following companies offer to bid on behalf of clients in EEX auctions:

- www.abnamroclearing.com
- www.actcommodities.com
- www.afsgroup.nl
- www.gkpge.pl/dom-maklerski
- www.viennainvestment.ro
- www.zf-bq.com

F Intermediaries
- Emissions Auctions via Intermediary
### 3) Auction participation - comparison

<table>
<thead>
<tr>
<th>Markets and Products</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to the Auction System</td>
<td>Direct</td>
<td>Direct</td>
<td>Direct</td>
<td>Direct</td>
<td>Via EEX Helpdesk</td>
<td>Via Intermediaries</td>
</tr>
<tr>
<td>One-off admission costs [kEUR]</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fixed costs in the first year [kEUR]</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fixed costs from the second year on [kEUR/a]</td>
<td>30*</td>
<td>19*</td>
<td>2.5*</td>
<td>0*</td>
<td>0*</td>
<td>To be agreed with the Intermediary</td>
</tr>
<tr>
<td>Variable Costs for Primary Auctions [EUR/1,000 allowances]</td>
<td>3.50-4.46</td>
<td>3.50-4.46</td>
<td>3.50-4.46</td>
<td>3.50-4.46</td>
<td>3.50-4.46</td>
<td>3.50-4.46</td>
</tr>
</tbody>
</table>

| Criteria to fulfil                                       | ✓                      | ✓                      | ✓                      | ✓                      | ✓                      | ✓                      |
| Eligibility criteria (according to Article 18 Auctioning Regulation) | ✓                      | ✓                      | ✓                      | ✓                      | ✓                      | ✓                      |
| Personal reliability and qualification of Members of the Management Board, Contract with Clearing Member, ECC Approval (Clearing House of EEX), Technical arrangements for settlement | ✓                      | ✓                      | ✓                      | ✓                      | ✓                      | Bilateral agreements with the Intermediary |
| Personal reliability and qualification of Trader/Trader Assistants, EEX Admission of at least one trader, incl. EEX Trader examination, Technical arrangements for trading | ✓                      | ✓                      | ✓                      | ✓                      | ✓                      | ✓                      |
| Liable equity of at least EUR 50,000                     | ✓                      | ✓                      | ✓                      | ✓                      | ✓                      | ✓                      |

* In addition to the fixed costs for the trading membership displayed above, from the second year on, an annual fee for the use of the clearing and settlement systems is charged. The fee is 1,000 EUR/a whereby all revenues with regards to variable clearing fees collected from the respective participant in the respective calendar year, will be credited against the annual fee. Details about all fees are available in the EEX price list and the ECC price list.
3) Auction participation - steps for direct access

I. Contact and Decision (order of the two bullet points can vary):
- Contact EEX (contact details see slide 15)
- Decide for one of the access options (see slides 15 and 16)

II. Documents and Training:

<table>
<thead>
<tr>
<th>Document Description</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligibility Form</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application for Admission as Exchange Participant (A01)</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Application for Setup / Modification of Exchange Traders/ Trader Assistants (A03)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Application for „Auction only“- Exchange participant (A05a)</td>
<td>x</td>
<td>✓</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Application for „Auction only“- Exchange participant (A05b)</td>
<td>x</td>
<td>x</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Declaration of Personal Reliability (Board Members) (E01)</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Application for Setup / Modification of EEX User IDs (E03)</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Declaration of Personal Reliability (Trader/ Trader Assistants) (E04)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Order for Technical Access (T01)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Straight Through Processing (T08)</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Application for Admission as Non-Clearing Member (NCM01)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>NCM Agreement with the Clearing Member (NCM02)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Know Your Customer Questionnaire (Group_KYC)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Application for approval as a Trading Participant (TP)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>VAT Details (TP07)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Take the training incl. examination</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

III. Confirmation of EEX/ ECC and Bidding/ Trading
4.) Auction process - overview

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00-11:00 am CET</td>
<td>Bidding window:</td>
</tr>
<tr>
<td></td>
<td>• Products:</td>
</tr>
<tr>
<td></td>
<td>i. T3PA (Spot EU Allowances for Phase 4 of the EU ETS, lot size: 500 EUA)</td>
</tr>
<tr>
<td></td>
<td>ii. EAA3 (Spot EU Aviation Allowances for Phase 4 of the EU ETS, lot size: 500 EUAA)</td>
</tr>
<tr>
<td></td>
<td>• Bids could be submitted, modified and withdrawn during the bidding window</td>
</tr>
<tr>
<td></td>
<td>• Bids could be submitted directly in the Auction System (see Video Tutorial) or indirectly via EEX Helpdesk or via Intermediary</td>
</tr>
<tr>
<td></td>
<td>• Bids are submitted without seeing other participant’s bids</td>
</tr>
<tr>
<td>~11:01 am CET</td>
<td>Determination of the auction clearing price:</td>
</tr>
<tr>
<td></td>
<td>• Bids are sorted in descending order of the price bid</td>
</tr>
<tr>
<td></td>
<td>• Tied bids are sorted through random selection according to an algorithm</td>
</tr>
<tr>
<td></td>
<td>• Bid volumes are added, starting with the highest bid</td>
</tr>
<tr>
<td></td>
<td>• The price at which the summed up bid volumes match or exceed the volume of allowances auctioned sets the auction clearing price for all successful bidders</td>
</tr>
<tr>
<td>~11:05 am CET</td>
<td>Publication:</td>
</tr>
<tr>
<td></td>
<td>• Detailed Auction Results on the Website (link to the dedicated auction website)</td>
</tr>
<tr>
<td>Auction Day + 1 ECC Business day</td>
<td>Payment:</td>
</tr>
<tr>
<td></td>
<td>• From the Clearing Member of a Trading Member to ECC</td>
</tr>
<tr>
<td></td>
<td>• From ECC to the Auctioneer</td>
</tr>
<tr>
<td>Upon Request</td>
<td>Delivery (external):</td>
</tr>
<tr>
<td></td>
<td>• Transfer of allowances from the ECC Union Registry Account to the Union Registry Account of the Trading Member</td>
</tr>
<tr>
<td></td>
<td><strong>Delivery (internal):</strong></td>
</tr>
<tr>
<td></td>
<td>• Transfer of allowances within the ECC Union Registry Account from the Auctioneer (Seller) to the Trading Member (potentially an Intermediary*) having been successful in the Emissions Auction (Buyer)</td>
</tr>
</tbody>
</table>

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Link to the dedicated Auction Website

* Delivery between the Intermediary and his client, if applicable, is to be agreed bilaterally.
4.) Auction process – clearing price

**Example:** Auction for 1 million EUAs

<table>
<thead>
<tr>
<th>Bidder</th>
<th>Price</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>82.00 €</td>
<td>500,000</td>
</tr>
<tr>
<td>B</td>
<td>86.00 €</td>
<td>600,000</td>
</tr>
<tr>
<td>C</td>
<td>84.00 €</td>
<td>300,000</td>
</tr>
<tr>
<td>D</td>
<td>85.00 €</td>
<td>800,000</td>
</tr>
<tr>
<td>E</td>
<td>85.00 €</td>
<td>500,000</td>
</tr>
<tr>
<td>F</td>
<td>95.00 €</td>
<td>10,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,710,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bidder</th>
<th>Price</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>95.00 €</td>
<td>10,000</td>
</tr>
<tr>
<td>B</td>
<td>86.00 €</td>
<td>600,000</td>
</tr>
<tr>
<td>D</td>
<td>85.00 €</td>
<td>800,000</td>
</tr>
<tr>
<td>E</td>
<td>85.00 €</td>
<td>500,000</td>
</tr>
<tr>
<td>C</td>
<td>84.00 €</td>
<td>300,000</td>
</tr>
<tr>
<td>A</td>
<td>82.00 €</td>
<td>500,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,710,000</td>
<td></td>
</tr>
</tbody>
</table>

**Order book**

*after close of bidding window phase*

- Bids are sorted in descending order of the price bid
- Tied bids are sorted through random selection according to an algorithm
- Bid volumes are added, starting with the highest bid
- The price at which the summed up bid volumes match or exceed the volume of allowances auctioned sets the auction clearing price for all successful bidders

- In the example the volume is allocated at an auction clearing price of 85.00 € per allowance
- Bidder “D” sets the price for all bidders, being the last successful buyer
- More than one bidder on clearing price: *random distribution of rest volume to one bidder

<table>
<thead>
<tr>
<th>Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000</td>
</tr>
<tr>
<td>600,000</td>
</tr>
<tr>
<td>390,000</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

| **Total** | 1,000,000 |
4.) Auction process – cancellation

An auction will be cancelled under certain **conditions**:

a) Total volume of bids falls short of the volume of auctioned allowances (Art. 7(5) Auctioning Regulation)

b) If the auction clearing price is significantly under the secondary market price (Art. 7(6) Auctioning Regulation)

c) Technical problems occur or are likely to occur (Art. 9 Auctioning Regulation)

If an auction is cancelled, the following **procedures** will apply:

1. Immediate information of market participants by EEX
2. Re-adjustment of the auction calendar
3. Auction volume will be evenly distributed over the next four (in case of EUAAs: two) scheduled auctions
4) Auction process - During the auction

- Screenshot auction system

- Link to Auction System Tutorial
- Link to Auction Website
5) Why trade environmental markets on EEX?

EEX Group is committed to contribute to achieve “Net Zero” emissions by 2050.

In addition to the primary auctions, EEX operates a growing spot and derivatives market for EUAs and EUAAs which ensures fast execution and at-the-market prices for our clients. In North America, Nodal Exchange offers the largest set of environmental futures and options contracts in the world, including emission allowances and renewable energy certificates.

<table>
<thead>
<tr>
<th>EU ETS Auctions</th>
<th>EU ETS Spot Futures Options</th>
<th>Voluntary Carbon Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>North American Carbon</td>
<td>nEHS</td>
<td>NZ ETS Auctions</td>
</tr>
</tbody>
</table>

European Commodity Clearing (ECC) is a central clearing house which specialises in energy and commodity products. ECC assumes the counterparty risk and guarantees the physical and financial settlement of transactions, providing security and cross-margining benefits for its customers.
5) Beyond auctions: Secondary market

EEX is offering all main exchange-related products for the EU ETS at a fair price

- Efficient and free delivery process
- Capital efficiencies through cross-margining and EUA as collateral
- Competitive transaction fees and schemes
- Multiple connectivity solutions

<table>
<thead>
<tr>
<th>Product</th>
<th>Auction</th>
<th>Spot</th>
<th>Derivatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUA</td>
<td>✓</td>
<td>✓</td>
<td>✓ ✓ ✓</td>
</tr>
<tr>
<td>EUAA</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

- Comprehensive product suite: Auctions, secondary spot and futures as well as options
- State-of-the-art trading infrastructure via Trading Technologies (TT) screen & M7A Auction screen
- Same-day registry transfer available
- Liquidity enhanced by several market makers
- Efficient and free delivery process
- Capital efficiencies through cross-margining and EUA as collateral
- Multiple connectivity solutions

Spot

+18%

Derivatives

+23%

Market share in net Open interest

>20%

(2020-2021)
5) Offsetting: Voluntary Carbon Market

EEX Group is committed to contribute to achieve “Net Zero” emissions by 2050

Voluntary carbon markets allow carbon emitters to offset their emissions by purchasing carbon credits emitted by projects targeted at removing or reducing greenhouse gas from the atmosphere.

- **Compliance markets**: driven by binding emission reduction targets (e.g. ETS) or other types of regulation (e.g. tax)
- **Voluntary markets**: corporates or individuals who wish to offset their emissions (“voluntary offsetting”)

<table>
<thead>
<tr>
<th>Compliance markets</th>
<th>Voluntary markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETS without offsets</td>
<td>Voluntary offsetting</td>
</tr>
<tr>
<td>(e.g. EU ETS as of 2021)</td>
<td>(e.g. corporates, governments, individuals)</td>
</tr>
<tr>
<td>ETS + offsets</td>
<td></td>
</tr>
<tr>
<td>(e.g. California ETS)</td>
<td></td>
</tr>
<tr>
<td>Carbon tax + offset¹</td>
<td></td>
</tr>
<tr>
<td>(e.g. South Africa)</td>
<td></td>
</tr>
<tr>
<td>CORSIA²</td>
<td></td>
</tr>
<tr>
<td>(offsets only)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Own illustration

**Project-based**

**Different types of carbon credits**

**Two main categories (i) reduction credits and (ii) removal credits.**

**Semi-standardized**

**Boundaries** between compliance and voluntary market are increasingly blurring
5) Voluntary Carbon Market

A well-balanced and carefully selected product suite

Well-balanced and high-quality product suite
One-stop shop for voluntary & compliance markets
Spot and derivatives instruments for VCM products

Global access for a global audience
Worldwide client network connected to EEX Group
Close alignment with public and private stakeholders
Contact Europe:
Christian Fleischer
Phone: +49 341 2156-240
E-mail: christian.fleischer@eex.com

Contact Asia:
Erlend Engelstad
Phone: + 65 6372 9549
E-mail: eengelstad@eexasia.com

Contact IncubEx:
Richard Wilson
E-mail: richard.wilson@theincubex.com
6) Intermediaries

Presenting today:
- ACT Financial Solutions B.V.
- AFS Equity & Derivatives B.V.
- PGE Brokerage House S.A.

Other Auction Intermediaries
- ABN AMRO Clearing Bank N.V.
- S.S.I.F. Vienna Investment Trust S.A.
- Zagora Finacorp AD
Primary European Union Allowance (EUA)
Auction Access

Our Financial Solutions
ACT Financial Solutions
Partnering with regulated carbon market experts

ACT Financial Solutions Role Under MIFID II

- 3rd party clients
- ACT FS
- ACT Group

Part of

Investment services
Ancillary services

• Reception and transmission of orders
• Execution of orders
• Dealing on own accounts
• Investment Advice

Emission Allowance Procurement Strategy Recommendations

Safekeeping and administration

License in 31 Countries
Efficiently comply with regulations and supervision
Fulfilling strict requirements:
• Financial strength
• Accountability
• Client Protection

All of our market experts are licensed by AFM
Market Expertise for Comprehensive Risk Management

**Market Access and Efficient Pricing**
Full membership with major exchanges like EEX, ICE, CME, and other exchanges to provide clients with simple access to markets.

**We Shape Environmental Markets**
Always up-to-speed with latest market developments through our global networks and partnerships including membership in IETA, the World Bank Carbon Pricing leadership Coalition, and other environmental market driving organizations.

**Carbon Market Expertise**
We specialize in helping businesses navigate regulated environmental markets and designing tailor-made solutions to hedge market and compliance risks. Since 2009, ACT has been focused on market-based sustainability solutions. As a result, we have deep product and market knowledge resulting in excellent pricing capabilities.

**Global Presence**
ACT Financial Solutions is fully licensed and operational in 31 countries covering Europe, Asia, and the Americas. Our carbon market experts are regionally focused with local language and market expertise.

**Market Focused Technology**
ACT has developed support technology to handle the administration of these complex markets. Additionally, we have developed CerQlar, a SaaS platform focused on providing upside opportunities through automation with client platforms.
Carbon Trading at ACT

ACT Financial Solutions can provide market access to all European carbon markets (EUA, UKA, nEHS, CHU). This is usually done via the secondary market.

Together with EEX, ACT can now also provide direct and indirect access as to the primary EUA market, via the EEX auction process.

- Both models feature **full price transparency** based on auction prices at EEX
- Very **simple onboarding** procedures and a fast availability (KYC takes 24 hrs)
- **Simple Order Flow**: Via phone or email, no large framework agreements necessary
- Limited availability for direct access due to auction volumes and participation, based on market conditions and demand.
- Fee structure on individual basis, with no hidden costs! Fees will differ between Intermediary (direct) and Counterparty (indirect) models.
- Our **Partner-Network** can also support with all services around the EU-ETS (Consulting, Measurements, Optimization of Subsidies, Balance Sheet Management, Registry Management)
Two Options Primary EUA Auction Access

Our Financial Solutions

Option #1 – Intermediary Access

ACT is your intermediary for access to the EEX EUA auction – no direct onboarding with the exchange.

Use the existing network of ACT as financial service provider – no need for a separate clearing entity, no new credit lines, no added complexity.

Safe payment through the safeguarded custody foundation separate from ACT FS.

Safe transfers directly to the endclient, not via ACT

Option #2 – Counterparty Access

You only face ACT Financial Solutions as a counterparty.

Simple Contracts: Our own single trade agreements suffice

Flexible Order Structure: We do not require fixed order schedules, clip sizes or payment terms if there is need for flexibility.

Available for everyone: No limitations on eligibility currently
CerQlar’s post-trade management solutions create efficiencies, reduce costs & increase participation in the renewable energy certificates space
Thank you very much!

Dario L. Pabst
Desk Manager - DACH
ACT Financial Solutions

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dpabst@actcommodities.com

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Strawinskylaan 3127
1077 ZX Amsterdam
The Netherlands
Registered no: 27336523
AFS Execution Services

EU ETS market access services
AFS Group is an independent European multi-asset class broker, primarily operating as an intermediary for Financial Institutions, Corporate Clients and (semi) Government bodies.

History dating back to 1851

Services related to Financial Instruments such as: Capital Markets, Energy, Equity Derivatives, Foreign Exchange, Interest Rates, Structured and Exotic products.

Regulated by Dutch, German, Swiss authorities

MiFID 2 compliant
AFS Execution Services BV

- Primary market (auction) access
- Secondary market access
- Trading & Risk Management Strategies
Primary (auction) Market Access:

Access to EEX hosted EUA auctions

AFS places bids on behalf of our counterparties

Simple KYC procedure, no need to apply for direct auction access.

Gain exposure to carbon pricing
Secondary Market Access:

Trade volatility in the market

Buy dips

Flexibility entering & exiting trades

Simple KYC required
Trading & Risk Management:

Help setting up an EU Registry Account

Market information

Strategies to help hit better prices

Predictability

Budget Management

Reference prices to match CO2 costs to sales
AFS Execution Services BV

AFS Execution Services

Fully regulated counterparty

Experience bidding at auction and trading in the secondary market

Execution of trades at your specified prices

Strategies to meet your goals
Thank you
Please contact us for any enquiries

For more information

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Manager Carbon Markets
T: +31 20 5220 292
E: a.windmill@afsgroup.nl
PGE Dom Maklerski S.A. - Your partner on EUA EEX market
PGE Dom Maklerski S.A.

PGE Dom Maklerski S.A. - is a brokerage house company fully belongs to the PGE Polska Grupa Energetyczna S.A the biggest electricity producer and provider in Poland.

PGE Dom Maklerski as a licensed broker house acts with the highest market standard with compliance to the EEX exchange rules and MIFID, MIFIR and other european legal acts.

PGE Dom Maklerski is an active member of the European Energy Exchange since the year 2016 in scope of EUA market - both primary and secondary EUA markets.

PGE Dom Maklerski experience and knowledge acheived over the years through power, gas and EUA markets claims us as a strong, reliable and valuable partner for not only the EEX but all entities having interest in EUA market.
PGE Dom Maklerski - Contact

In case of any questions or interest please contact us by:

Via email: co2.dm@gkpge.pl
Via phone no.: +48 22 340 1200; +48 22 340 1201

It would be Our pleasure to be of help and guidance You through the EEX EUA market.
Thank You
Q&A

If you have any questions, please feel free to ask them via the chat function.
Thank you