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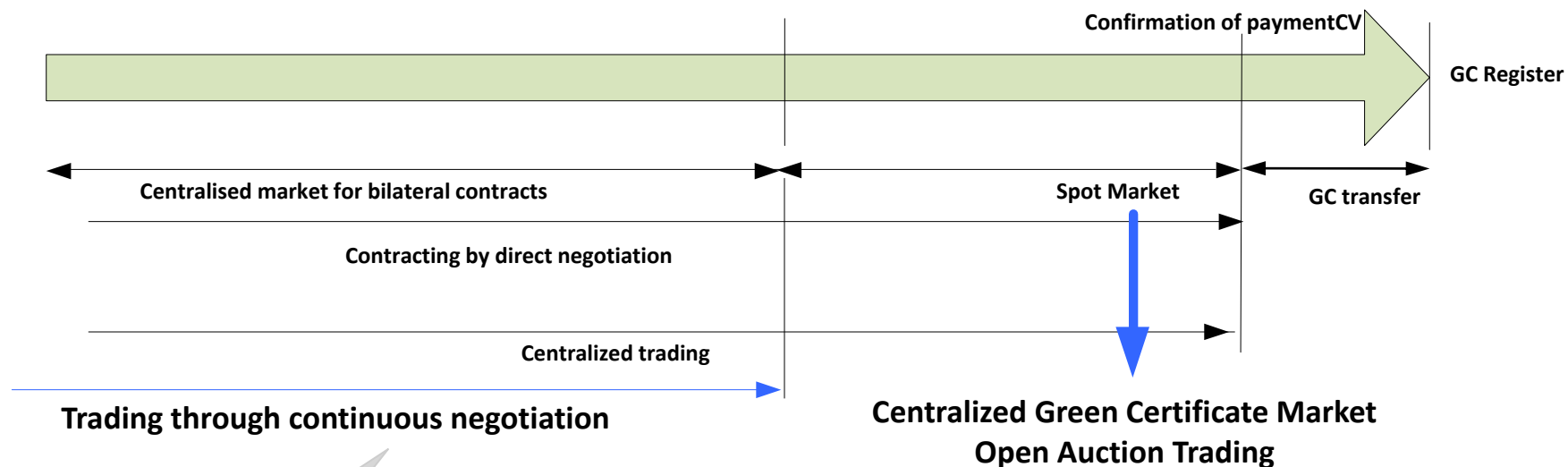Romanian gas and electricity market operator

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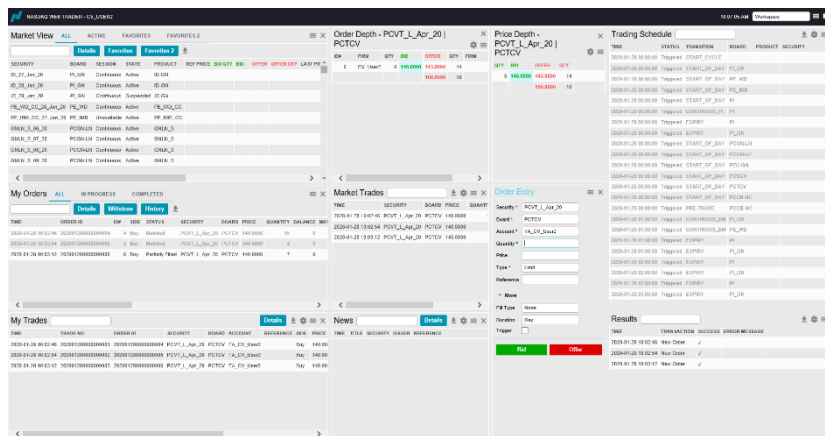# Trading mechanisms on Anonymous Centralised Green Certificate Markets

# Legislation that governs the trading of GC on Green Certificates Market

- ✓ Incident Laws (Law no. 220/2008 – main provisions concerning Green Certificates Market functioning)
- ✓ Regulations and Methodologies approved by Romanian Energy Regulatory Authority (ANRE) through Orders
- ✓ Procedures worked out by OPCOM
- ✓ Participation Agreements signed between OPCOM and each market participant

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# Green certificate market segments



Confirmation of paymentCV

GC Register

Centralised market for bilateral contracts

Spot Market

GC transfer

Contracting by direct negotiation

Centralized trading

Trading through continuous negotiation

Centralized Green Certificate Market
Open Auction Trading

Transactions at the best price proposed by the newest offer introduced

Transactions by allocating GC according to sales offers and purchase offers existing in the trading system at the end at the end of the submission phase of tenders

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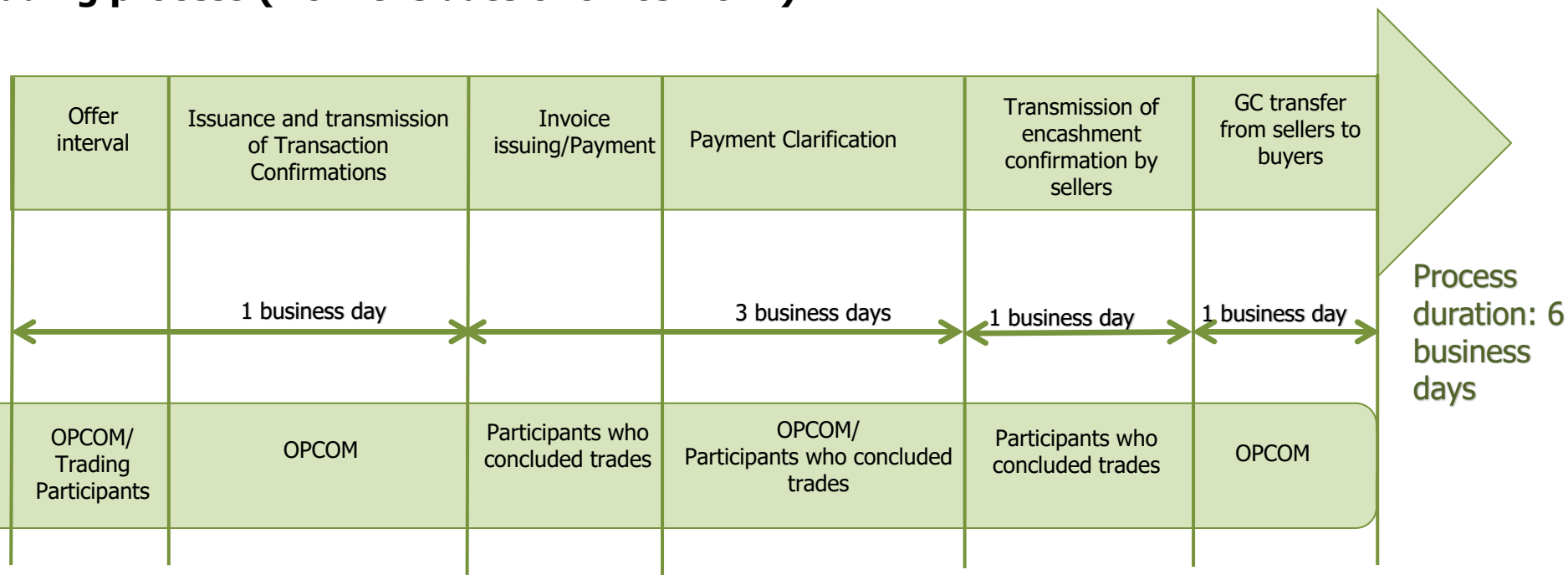# Centralized anonymous spot market for green certificates – GCACSM

## Characteristics:

- Trading is done online from market participants terminals;
- The trading sessions are organized between 09:00 - 11:00, according to the trading schedule published on OPCOM's website;
- The identity of the Participants is anonymous throughout the trading session;
- Bids are simple: quantity in GC (integer) - price in Lei/GC (four decimal places);
- The maximum number of GC in an offer is 10,000 GC;
- The GC number in a sale offer cannot exceed the number of GC available from the E-RES producer account;
- Throughout the trading session, Participants may enter, modify and / or cancel their sales / purchase bids;
- After the trading session ends, the Market Operator publishes the results of the respective auction: the number of traded GC and the closing price of the market.

### *Market Technology: Nasdaq*

# Centralized anonymous spot market for green certificates – GCACSM

# Trading process (from the date of 01.09.2017)

| Offer interval | Issuance and transmission of Transaction Confirmations | Invoice issuing/Payment | Payment Clarification | Transmission of encashment confirmation by sellers | GC transfer from sellers to buyers |
|---|---|---|---|---|---|
| | 1 business day | | 3 business days | 1 business day | 1 business day |

Process duration: 6 business days

| Involved parties | OPCOM/ Trading Participants | OPCOM | Participants who concluded trades | OPCOM/ Participants who concluded trades | Participants who concluded trades | OPCOM |

*Market Technology: Nasdaq*

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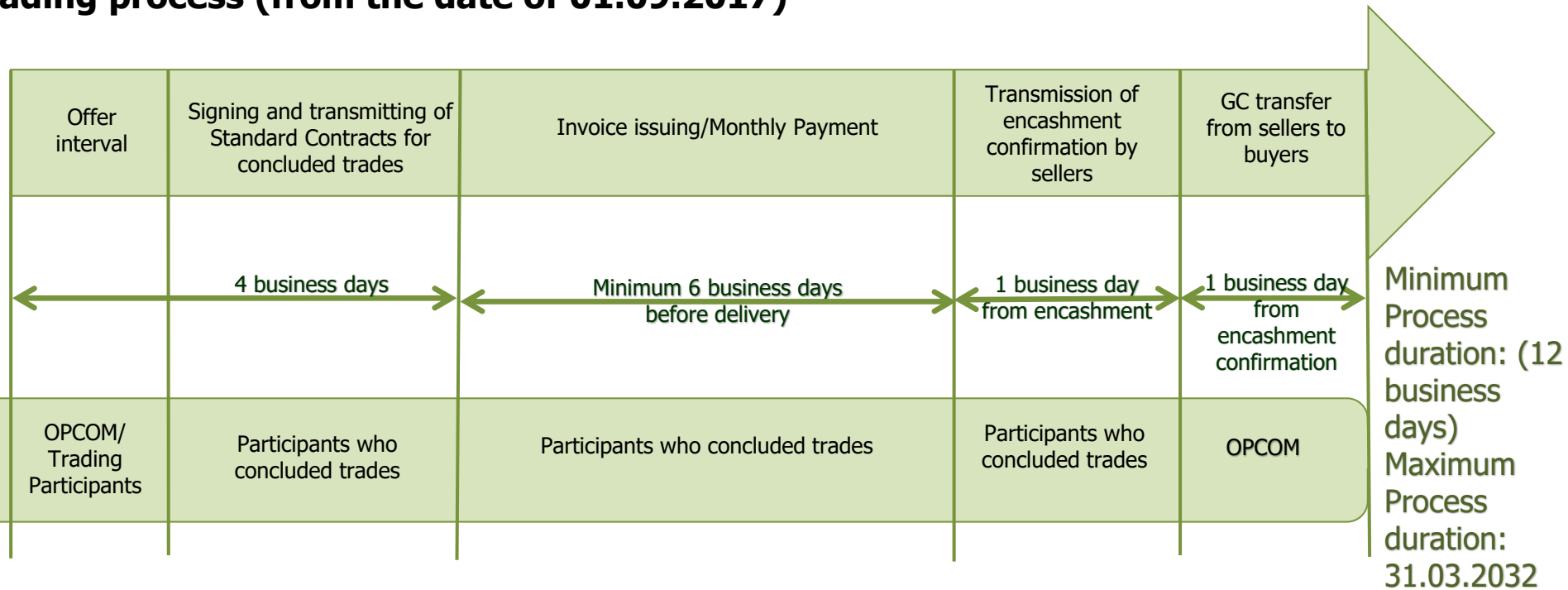*stepping forward to the future*

# Green certificates anonymous centralized term market - GCACTM

## Characteristics

- Trading is done online from market participants terminals, on each business day;
- The trading sessions are organized between 12:00 - 14:00;
- The identity of the Participants is anonymous throughout the trading session;
- Bids are simple: quantity in GC (integer) - price in Lei/GC (four decimal places);
- The maximum number of GC in an offer is 10,000 GC;
- It is mandatory to use the standard contract, according to ANRE Order no. 77/18.08.2017;
- Offers are standardized in terms of delivery periods;
- Throughout the trading session, Participants may enter, modify and / or cancel their offers;
- After the trading session ends, the Market Operator publishes the results of the respective auction:
  - ➢ the name of the traded standard product;
  - ➢ the number of GC traded;
  - ➢ the transaction award price;
  - ➢ the name of the seller and the buyer.

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# Green certificates anonymous centralized term market – GCACTM

## Trading process (from the date of 01.09.2017)

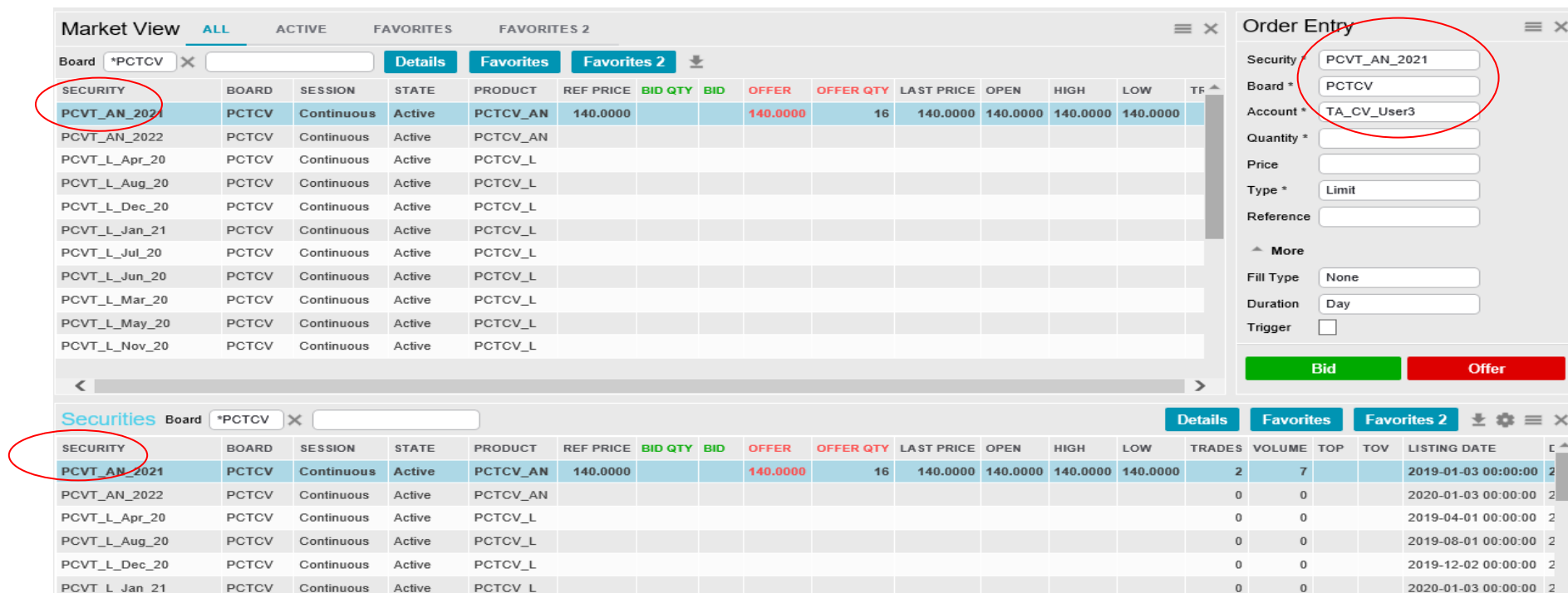| | Offer interval | Signing and transmitting of Standard Contracts for concluded trades | Invoice issuing/Monthly Payment | Transmission of encashment confirmation by sellers | GC transfer from sellers to buyers | |
|---|---|---|---|---|---|---|
| | | 4 business days | Minimum 6 business days before delivery | 1 business day from encashment | 1 business day from encashment confirmation | Minimum Process duration: (12 business days) Maximum Process duration: 31.03.2032 |
| Involved parties | OPCOM/ Trading Participants | Participants who concluded trades | Participants who concluded trades | Participants who concluded trades | OPCOM | |

*Market Technology: Nasdaq*

# Green certificates anonymous centralized term market - GCACTM

| Standard Products | |
|---|---|
| Traded Instrument | Characteristics of the standard contract |
| PCVT_L_LLL_aa | Green certificates will be sold or bought by the standard contract for one calendar month in the calendar month related to the specific standard product. The name of the product contains the abbreviation of the month related to the period of validity of the applicable standard contract (LLL) and the last two digits of the delivery year (aa). |
| PCVT_TR_t_aa | Green certificates will be sold or bought by the standard contract for one quarter, in the quarter related to the specific standard product. The name of the product contains the abbreviation of the quarter related to the period of validity of the applicable standard contract (t) and the last two digits of the delivery year (aa). |
| PCVT_AN _AAAA | Green certificates will be sold or bought by the standard contract for one calendar year, in the calendar year related to the specific standard product. The name of the product contains the year of delivery in four digits (AAAA). |

# Facilities of the Nasdaq app
# Enter Order (1)

There are the following options for entering an order:
1. Fill in all the necessary information in the "Order Entry" window.
2. Select the row with the tool you want to enter the order from the "Market View/Securities" window.
The "Order Entry" window is automatically pre-filled with the name of the instrument and markets.

Romanian gas and electricity market operator

# Facilities of the Nasdaq app
# Enter Order (2)

Order import can be done with a .CSV file using the **"Order Import"**

.CSV file can be exported by pressing the

The .CSV file must contain the correct name of the columns and information to complete them.

| Order Import | | | | | | | | | | | | | | | | | Import Submit Clea |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SECURITY | BOARD | SIDE | ACCOUNT | REFERENCE | QUANTITY | TYPE | PRICE | STATUS | DURATION | EXPIRY DATE | EXPIRY TIME | FILL TYPE | TRIGGER | TRIGGER PRICE | TRIGGER DIRECTION | TRIGGER PRICE TY | |
| PCVT_L_Apr_20 | PCTCV | Sell | TA_CV_CV | | 1000 | Limit | 150 | Submitted | Good Till Cancel | | | | | | | | |
| PCVT_L_Apr_20 | PCTCV | Sell | TA_CV_User3 | | 1500 | Limit | 136.8129 | Imported | Good Till Cancel | | | | | | | | |
| PCVT_L_Apr_20 | PCTCV | Sell | TA_CV_User3 | | 2500 | Limit | 136.8129 | Imported | Good Till Cancel | | | | | | | | |
| PCVT_L_Apr_20 | PCTCV | Sell | TA_CV_User3 | | 3500 | Limit | 136.8129 | Imported | Good Till Cancel | | | | | | | | |
| PCVT_L_Apr_20 | PCTCV | Sell | TA_CV_User3 | | 1500 | Limit | 136.8129 | Imported | Good Till Cancel | | | | | | | | |

Import  Submit  Clear

Before placing orders on the market, check the data and correct it directly in the order import window, or delete it.

Select the rows (each row representing an order) and enter the market by pressing the "Submit" button. You can enter up to 100 orders at once. Receiving a confirmation message.

Orders can be placed in the market whenever the submit button is pressed and rows with orders to be placed in the market are selected.

action successful

# Facilities of the Nasdaq app
# Order Depth

Information on active orders in the market:

➤ Participants' orders are anonymized.

➤ Order Depth
• Own orders are highlighted in the column "FIRM"

➤ Price Depth
• it is permissible to view both aggregate purchase offers, and aggregate sales offers for a selected, grouped and price-ordered instrument.

**Order Depth - PCSCV_10_11_20 | PCSCV**

| ID# | FIRM | QTY | BID | OFFER | QTY | FIRM | ID# |
|-----|------|-----|-----|-------|-----|------|-----|
| 7 | CV_CV | 100 | 139.5089 | 139.5089 | 10 | | |
| | | | | 139.5089 | 15 | | |
| | | | | 139.5089 | 20 | | |
| | | | | 139.5089 | 25 | | |
| | | | | 140.0000 | 5 | | |
| | | | | 141.0000 | 189 | | |

**Price Depth - PCSCV_10_11_20 | PCSCV**

| QTY | BID | OFFER | QTY |
|-----|-----|-------|-----|
| 100 | 139.5089 | 139.5089 | 70 |
| | | 140.0000 | 5 |
| | | 141.0000 | 189 |

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# Facilities of the Nasdaq app
# Information on own orders and transactions

## My Orders

The My Orders window shows sales orders and own purchase orders.



| My Orders | ALL | IN PROGRESS | COMPLETED | | | | | | | | | | | | | | | ≡ × |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

Details | Withdraw | History

| TIME | ORDER ID | ID# | SIDE | STATUS | SECURITY | BOARD | PRICE | QUANTITY | BALANCE | MATCHED QTY | MATCHED VALUE | ACCOUNT | REFERENCE | TYPE | FILL TYPE | DURATION | TRIGGER | TRIGGER PRICE | TRIG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020-02-14 10:24:46 | 202002140000000003 | 3 | Buy | Matched | PCVT_AN_2021 | PCTCV | 140.0000 | 8 | 0 | 8 | 1120.0000 | TA_CV_CV | | Limit | FOK | Immediate | | | |
| 2020-02-14 10:28:56 | 202002140000000004 | 4 | Buy | Matched | PCVT_AN_2021 | PCTCV | 140.0000 | 13 | 0 | 13 | 1820.0000 | TA_CV_CV | | Limit | FOK | Immediate | | | |
| 2020-02-14 10:31:21 | 202002140000000005 | 5 | Buy | Expired | PCVT_AN_2021 | PCTCV | 140.0000 | 3 | 0 | 0 | 0 | TA_CV_CV | | Limit | FOK | Immediate | | | |

## My Trades

The My Trades window shows all your own transactions completed on the current trading day.



| My Trades | | | | | | | | | | | Details | ± ⚙ ≡ × |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

| TIME | TRADE NO | ORDER ID | SECURITY | BOARD | ACCOUNT | REFERENCE | SIDE | PRICE | QUANTITY | MATCHED VALUE | STATUS | USER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020-02-14 10:24:46 | 202002140000000001 | 202002140000000003 | PCVT_AN_2021 | PCTCV | TA_CV_CV | | Buy | 140.0000 | 8 | 1120.0000 | Matched | CV_CV |
| 2020-02-14 10:28:56 | 202002140000000002 | 202002140000000004 | PCVT_AN_2021 | PCTCV | TA_CV_CV | | Buy | 140.0000 | 2 | 280.0000 | Matched | CV_CV |
| 2020-02-14 10:28:56 | 202002140000000003 | 202002140000000004 | PCVT_AN_2021 | PCTCV | TA_CV_CV | | Buy | 140.0000 | 11 | 1540.0000 | Matched | CV_CV |

# Facilities of the Nasdaq app
# Trades & Orders Reports

**Trades & Orders Reports**                                                    ✕

From Date  2020-02-04
To Date    2020-02-14

[Download]  ⚙

| FILE NAME | DATE |
|---|---|
| CV_CV_orders_20200206-223000.csv | 2020-02-06 22:30:00 |
| CV_CV_trades_20200206-223000.csv | 2020-02-06 22:30:00 |
| CV_CV_orders_20200207-095211.csv | 2020-02-07 09:52:11 |
| CV_CV_trades_20200207-095211.csv | 2020-02-07 09:52:11 |
| CV_CV_orders_20200213-223000.csv | 2020-02-13 22:30:00 |
| CV_CV_trades_20200213-223000.csv | 2020-02-13 22:30:00 |

You can download reports containing your orders and transactions in .csv format from this window.

Only information on own orders and transactions is available.

Order and transaction reports are generated at predefined time intervals. It is recommended that they be taken over after the end of the trading session.

Report history is available at any time.

# Facilities of the Nasdaq app

Trading follows the following principles with respect to trading limits:

➢ From the point of view of price:
▪ The minimum and maximum price limits for orders placed on the market shall be applied automatically for each order entered by market participants.

**Order Entry** ≡ ✕

| | |
|---|---|
| Security * | PCVT_AN_2022 |
| Board * | PCTCV |
| Account * | TA_CV_User1 |
| Quantity * | 10 |
| Price | 130.1234 |
| Type * | Limit |
| Reference | |

▲ **More**

| | |
|---|---|
| Fill Type | None |
| Duration | Day |
| Trigger | ☐ |

| **Bid** | **Offer** |
|---|---|

✕ (1118): Trade Rule - Order price must be at least 142.210700

**Order Entry** ≡ ✕

| | |
|---|---|
| Security * | PCVT_AN_2022 |
| Board * | PCTCV |
| Account * | TA_CV_User1 |
| Quantity * | 10 |
| Price | 170.1234 |
| Type * | Limit |
| Reference | |

▲ **More**

| | |
|---|---|
| Fill Type | None |
| Duration | Day |
| Trigger | ☐ |

| **Bid** | **Offer** |
|---|---|

✕ (1119): Trade Rule - Order price must not be more than 169.298500

➢ From the point of view of the quantity:
▪ The trading limit on GCACSM reflecting the number of valid GC existing in the GCR account of producer introducing an offer to sell;
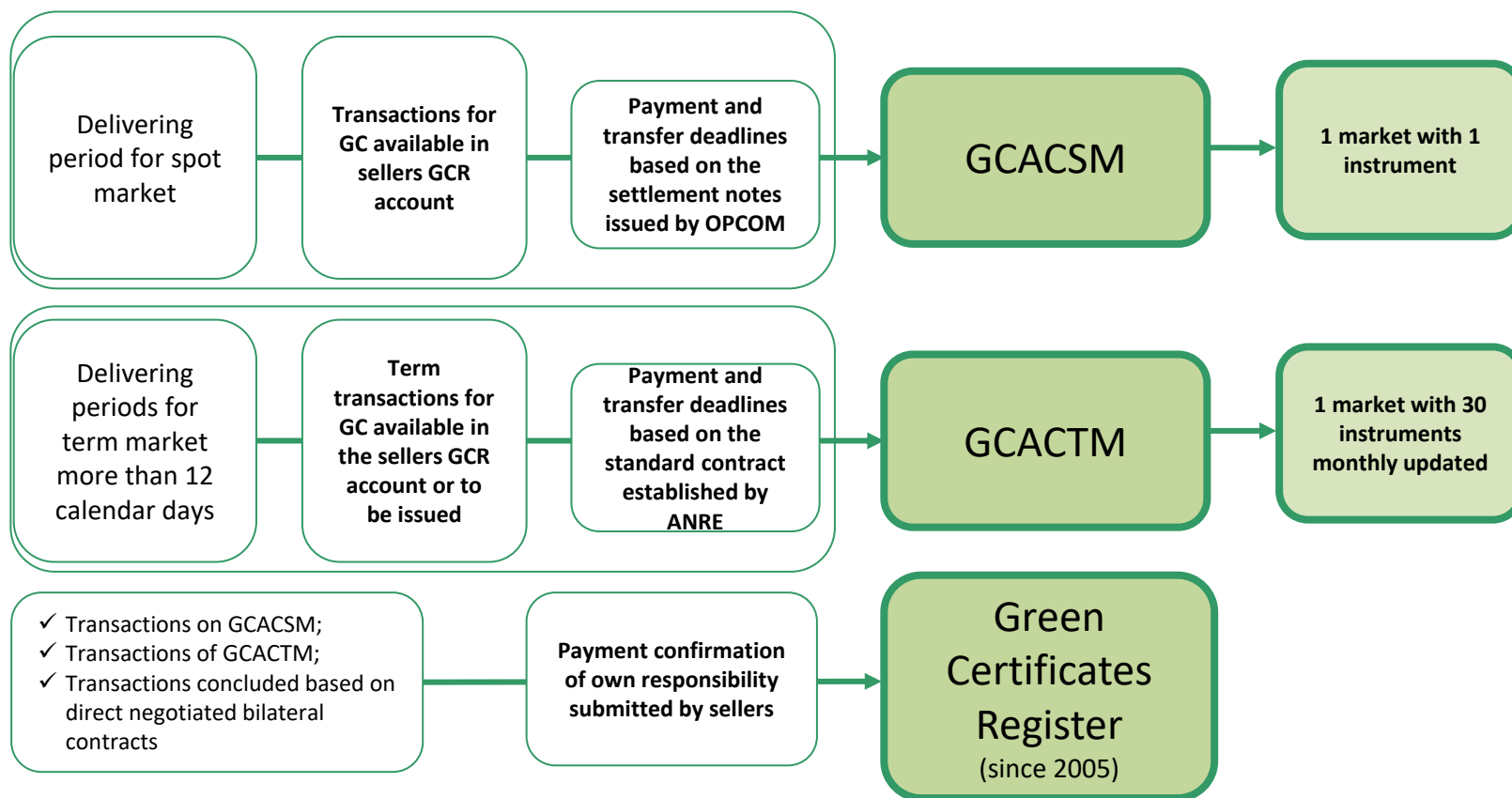▪ Limit of 10,000 GC that can be offered by order on GCACSM and GCACTM.

**Order Entry** ≡ ✕

| | |
|---|---|
| Security * | PCVT_AN_2022 |
| Board * | PCTCV |
| Account * | TA_CV_User1 |
| Quantity * | 20000 |
| Price | 142.2107 |
| Type * | Limit |
| Reference | |

▲ **More**

| | |
|---|---|
| Fill Type | None |
| Duration | Day |
| Trigger | ☐ |

| **Bid** | **Offer** |
|---|---|

✕ (303): Trade Rule - Total order amount (hidden + qty) must not be more than 10000

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# Synthesis of trading mechanisms available on OPCOM trading platforms for Green Certificates

| Delivering period for spot market | Transactions for GC available in sellers GCR account | Payment and transfer deadlines based on the settlement notes issued by OPCOM | → | **GCACSM** | → | **1 market with 1 instrument** |

| Delivering periods for term market more than 12 calendar days | Term transactions for GC available in the sellers GCR account or to be issued | Payment and transfer deadlines based on the standard contract established by ANRE | → | **GCACTM** | → | **1 market with 30 instruments monthly updated** |

✓ Transactions on GCACSM;
✓ Transactions of GCACTM;
✓ Transactions concluded based on direct negotiated bilateral contracts

**Payment confirmation of own responsibility submitted by sellers** → **Green Certificates Register** (since 2005)

2021

Thank you for your attention !

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