


Overview of Carbon Credit Market

Tokyo Stock Exchange, Inc.

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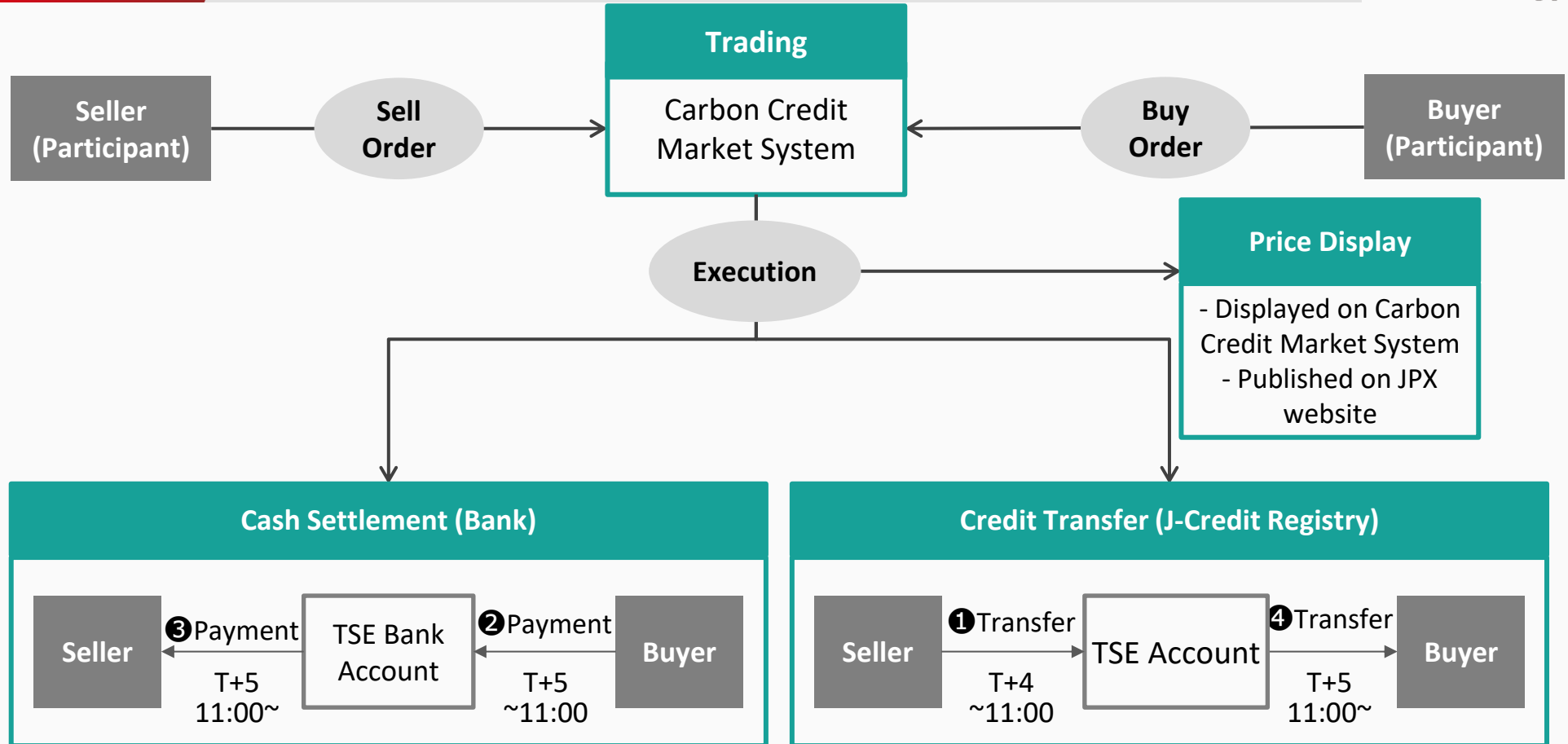
Purpose

- In order to achieve its goal of carbon neutrality by 2050, in February 2023, the Japanese government announced the introduction of an "emissions trading system" as part of the carbon pricing system design in its "Basic Policy for the Realization of GX." Trial trading is scheduled to begin in FY2023 and full-scale operation in FY2026, so as part of this, there are expectations for a carbon credit market to be created in FY2023.
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- A large, light gray downward-pointing arrow indicating a logical flow or consequence.
- Based on the knowledge and market operation experience gained from the “Technical Demonstration Project for Carbon Credit Market” commissioned by the Ministry of Economy, Trade and Industry (METI) in FY2022, Tokyo Stock Exchange, Inc. (TSE) opened the carbon credit market and began trading in October 2023.

2. Overview of Specifications

Overview		
Items Eligible for Trading	J-Credits	GX Credits
Trading Method	Call auction 11:30 a.m. and 15:00 p.m. (based on price priority)	Call auction 15:00 p.m. (based on price priority)
Settlement Date	Sixth business day from day of execution (T+5)	
Type of Orders	Limit orders (market orders will not be accepted)	
Trading Categories	9 categories sorted by project type (for J-Credits)	1 category
Order Acceptance Hours	8:00 – 11:29 / 12:30 – 14:59	8:00–14:59 ※Trading Days are Every Fridays (from Nov. 2025 through Dec. 2025 in FY2025)
Tick Size	JPY 1	
Trading Unit	1t-CO2	
Price Limits	±90% of the reference price	
Base Prices	1. Final execution price of last auction 2. Base price of last auction	
Settlement	Transfer of cash and credits between buyer and seller	

3. Structure of Market for J-Credit (Flow of Trading)



Timing of Fund and Credit Transfers

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|---|-----------------|---------------------------------|
| ① | T+4 by 11:00 | Seller transfers credits to TSE |
| ② | T+5 by 11:00 | Buyer transfers funds to TSE |
| ③ | T+5 after 11:00 | TSE pays funds to seller |
| ④ | | TSE transfers credits to buyer |

4-1. Registration Requirements (1)

- Applicants must meet the following a. through f. to register as a Participant.

Registration Requirements (cited from Outline of Specifications)	
a	Being a corporation, government or local government, or <i>nin-i dantai</i> (voluntary organization)
b	Having a system in place to ensure stable operations
c	Having sound management, including having sufficient social credibility to be a TSE trading participant and not being subject to the control or influence of any party lacking social credibility or any other party considered inappropriate in light of the objectives of TSE and its operation of the markets
d	Not being insolvent
e	Having established a bank account and a credit account in the applicant's own name and being registered as a qualified invoice issuer (see next page for details)
f	<p>Not having representatives, directors, or important employees that fall under any of the following items:</p> <p>(a) A person who does not have the appropriate recognition, judgement, or two-way communication abilities that are needed to carry out their business due to a mental disorder;</p> <p>(b) A person for whom a decision of commencement of bankruptcy proceedings has been made and who has not obtained restoration of rights, or a person who is treated in the same manner under foreign laws and regulations; or</p> <p>(c) A person who has been sentenced to a punishment at least as severe as imprisonment (including equivalent punishment under foreign laws and regulations), or fines under the provisions of the Commodity Derivatives Transaction Act or equivalent foreign laws and regulations (including equivalent punishment under foreign laws and regulations), where less than five years have passed since the date of completion or cancellation of said punishment.</p>

4-1. Registration Requirements (2)

Registration Requirement (e)

Having established a bank account and a credit account in the applicant's own name and being registered as a qualified invoice issuer

Please note the following points.

- The bank account must be in your own name and be a Japan-based account (i.e., provided by a branch in Japan).
- The J-Credit Scheme Registry and GX credits Registry account must be in your own name.
- Qualified invoice issuers (as a general rule):
 - In response to the introduction of the new invoicing system in October 2023, TSE will provide qualified invoices and related documents.
 - Because checking to see whether a customer is a qualified invoice issuer is difficult, Participants may not act as agents for orders from others.
 - For foreign corporations, there are additional procedures to be a qualified invoice issuer.

4-2. Fees

- TSE will stipulate fees for market participation.

Fees for market participation		
1.	Registration fee	Collected at the point of registration as a Participant.
2.	Participant security money	Collected at the point of registration as a Participant as collateral for 3. to 5. below.
3.	Basic fee	A fixed fee to maintain registration as a Participant.
4.	Transaction fee	A fee collected per 1 ton of credits traded.
5.	Settlement fee	A fee collected per 1 ton of credits settled.

- We believe that it is desirable to activate the market and improve its convenience by having as many people as possible participate and trade from an early stage.
- Therefore, for the time being, these fees will all be zero.

4-3. Participant Rules

- TSE will specify frameworks for compliance with trading rules, monitoring and investigations, and sanctions in the case of violations.

Item	Details
Compliance with trading rules	<ul style="list-style-type: none">• Participants shall endeavor to ensure fair price formation and stable settlement in the Market, thereby maintaining and improving the functioning of carbon pricing.
Monitoring and investigations by TSE	<ul style="list-style-type: none">• TSE shall monitor the status of orders, trades, and settlements of Participants on the Market from the perspective of ensuring fair price formation and smooth settlements.• TSE may, if it deems it necessary in light of the aforementioned monitoring or operation of the Market, request a Participant to submit reports or documents that provide information on trading or settlement by said Participant in the Market or its operations or assets pertaining to carbon credits. Upon receiving such a request, the Participant shall submit reports or documents without delay in a manner prescribed by TSE.
Sanctions	<ul style="list-style-type: none">• If a Participant violates the Terms and Conditions, TSE may, after requesting an explanation from the Participant as necessary, cancel or suspend its registration, suspend its permission to trade, or request improvements.

4-3. Participant Rules(2)

- TSE will specify regulatory measures against Participants in settlement default.

Item	Details
Regulatory measures against Participants in settlement default	<ul style="list-style-type: none">• TSE shall request that a Participant who has caused a settlement default or other issue that leads to cancellation of a trade reports on information such as the background of the issue, the cause and its analysis, and measures to prevent recurrence.• TSE will apply the necessary measures, such as trade suspensions, after comprehensive consideration of the contents of the above report, the circumstances and frequency of defaults, and any other violations of the Carbon Credit Market Terms and Conditions.

5. Execution method

- Auction trading in the carbon credit market is conducted by aggregating sell orders and buy orders for each trading category and executing trades between matching bids and offers in accordance with the precedence of bids and offers as follows (the Itayose method).
- When either of the following converge at a particular price through competition among offers, competition among bids, and competitive matching of bids and offers, this shall be the execution price, and trades shall be effected between corresponding bids and offers in accordance with the precedence of bids and offers.
- When an order is amended, time precedence will be based on the pre-amendment order for changes to volume (decreases) or changes in the validity period of the order and on the post-amendment order for changes to price and changes to volume (increases).

Precedence of bids and offers

1. A lower offer shall have precedence over higher offers, and a higher bid shall have precedence over lower bids.
2. Where two or more bids or offers are made at the same price, precedence shall be determined in the order of the time at which such bids or offers were made: i.e., an earlier bid or offer shall have precedence over later bids or offers.

6. Timing of Fund and Credit Transfers for J-Credit

● Processes

Timing	Process	
(0) T+3 by 1:00 p.m.		a
(1) T+4 by 11:00 a.m.	Seller transfers credits to TSE	b
(2) T+5 by 11:00 a.m.	Buyer transfers funds to TSE	c
(3) T+5 after 11:00 a.m.	TSE pays funds to seller	
(4) T+5 after 11:00 a.m.	TSE transfers credits to buyer	

Note: The counterparty of settlement shall not be shown.

● Treatment of settlement defaults and probable defaults

a	(0) When a participant notifies TSE that they will have difficulty transferring credits by 1:00 p.m. on T+3, TSE will cancel the trade execution pertaining to the relevant Credits for Delivery.
b	(1) If, by 11:00 a.m. on the trading day preceding the settlement date, the Credits for Delivery have not been transferred in full to TSE by the selling Participant, execution of said trade will be canceled and no further procedures will be performed.
c	(2) If all or part of Funds for Delivery are not paid by a buying Participant by the payment cutoff time on the settlement date, TSE will cancel execution of all trades pertaining to said Funds for Delivery and will not perform subsequent procedures.

Note: In settlement of carbon credits, when an executed trade is cancelled, any credits or funds transferred to TSE to execute said trade shall be returned to the relevant Participants. Any other costs or damage incurred by the Participant in connection with such a cancellation shall be borne by the Participant.

(Reference) Bids and Offers

- A Participant shall make a bid or offer when it intends to conduct auction trading.
- Participants shall make clear the following information to TSE when making bids or offers.

Information to be Specified		Details
1.	Trading category	Selection of one of the trading categories designated by TSE
2.	Whether the order is a sale or a purchase	Selection of sale or purchase
3.	If a sale, the credit certification number of the carbon credits to be transferred if said sale is executed	Entry of the credit certification number* of the carbon credits
4.	Order quantity	Entry of a quantity above the smallest unit (1t-CO2)
5.	Order price	Entry of an order price within the price limits
6.	Effective period	The validity of the bids and offers are generally limited to the same day, but it can be set optionally**.

*The credit certification number for a J-Credit is assigned to each project at the time of certification.

**In amending the effective period of the order, Participants may designate the effective period as up to the 30th day, counting from the day of such amendment of the effective period.

(Reference) Base Prices and Price Limits on Bids and Offers



- From the perspective of preventing erroneous order placement while not hindering fair price formation, the price limits on bids and offers shall be 90%.

How price limits are determined

Example: If the base price is JPY 1,995, the price limits are:

$\text{JPY } 1,995 \times 90\% = \text{JPY } 1,795.5 \rightarrow \text{fractions rounded down} \rightarrow \text{JPY } 1,795$

Upper price limit: $\text{JPY } 1,955 + \text{JPY } 1,795 = \text{JPY } 3,750$

Lower price limit: $\text{JPY } 1,955 - \text{JPY } 1,795 = \text{JPY } 160$

How base prices are determined

The base price depends on whether there was (1) or wasn't (2) an execution at the most recent auction:

(1) If there was an execution at the previous auction → **final execution price of the previous auction**

(e.g.) If the final execution price of the second auction of the previous trading day (or the first auction of the current trading day) was JPY 2,800, the base price of the first (or second) auction of the current trading day will be JPY 2,800.

(2) If there were no executions at the previous auction → **base price of the previous auction**

(e.g.) First auction of previous trading day: final execution price JPY 2,900

Second auction of previous trading day: no executions

In this case, the base price of the second auction of the previous trading day would have been JPY 2,900.

At the first auction of the current trading day, since there were no executions at the previous auction (the second of the previous trading day), the base price will be the same base price used at that auction: JPY 2,900.

From October 1, 2023, the "qualified invoice storage method (invoice system)" will be introduced for consumption tax.

- For a business to receive consumption tax deductions for eligible purchases, they will need a "qualified invoice" issued by the seller.
- Among businesses making eligible sales, only those registered as "Qualified Invoice Issuers" (QIIs) will be able to issue these invoices.

Participants shall be limited to QIIs

- Only QIIs can become Participants, which means buyers are able to receive consumption tax deductions.
- Because checking to see whether a customer is a QII is difficult, Participants may not act as agents for orders from orders.

(Reference) Table of Trading Categories (1/3)

- TSE will establish standardized trading categories based on the properties and other conditions of carbon credits on the Market, taking into consideration price formation and supply and demand for carbon credits.
- Specified third layer will not be traded under the specification.
- Within the Second layer, TSE will establish standardized trading categories based on the actual amount of energy conservation, renewable energy (electricity) and renewable energy (heat) held by the respective transfer credits.

First layer	Second layer	Third layer	Outline
Scheme	Main Category	Subcategory	
J-Credit	Energy saving	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 1 and that are certified using only the energy saving methodologies specified in the J-Credit Scheme, where only the amount of saved energy (kl) is a positive number in the monitoring report*.
	Renewable energy (electricity)	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 1 and that are certified using only the renewable energy methodologies specified in the J-Credit Scheme (excluding the methodologies for substituting solid biomass fuels (woody biomass) for fossil fuels or grid electricity), where only the amount of renewable energy (electricity) (MWh) is a positive number in the monitoring report.
	Renewable Energy (electricity: woody biomass)	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 1 and are certified using only the renewable energy methodologies specified in the J-Credit System (limited to the methodologies for substituting solid biomass fuels (woody biomass) for fossil fuels or grid electricity), where only the amount of renewable energy (electricity) (MWh) is a positive number in the monitoring report.
	Renewable energy (heat)	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 1 and that are certified using only the renewable energy methodologies specified in the J-Credit Scheme, where only the amount of renewable energy (heat) (GJ) is a positive number in the monitoring report.
	Renewable energy (mixed electricity/heat)	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 1 and that are certified using only the renewable energy methodologies specified in the J-Credit Scheme, where two or more credits of numerical figures referred to in each of the following items are positive numbers in the monitoring report. (1) Amount of renewable energy (electricity) (MWh) of J-Credits that are certified using only methodologies other than those for substituting solid biomass fuels (woody biomass) for fossil fuels or grid electricity (2) Amount of renewable energy (electricity) (MWh) of J-Credits that are certified using only the methodologies for substituting solid biomass fuels (woody biomass) for fossil fuels or grid electricity (3) Amount of renewable energy (heat) (GJ)

*A "monitoring report" is created for each credit in the J-Credit Scheme

(Reference) Table of Trading Categories (2/3)

- TSE will establish standardized trading categories based on the properties and other conditions of carbon credits on the Market, taking into consideration price formation and supply and demand for carbon credits.
- Specified third layer will not be traded under the specification.
- Within the Second layer, TSE will establish standardized trading categories based on the actual amount of energy conservation, renewable energy (electricity) and renewable energy (heat) held by the respective transfer credits.

First layer	Second layer	Third layer	Outline
Scheme	Main Category	Subcategory	
J-Credit	Agriculture (Extension of mid-drying period)	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 1 and are certified using only the agricultural methodologies (limited to the “Extension of mid-drying period in paddy rice cultivation” methodology) specified in the J-Credit Scheme.
	Agriculture (Biochar)	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 1 and are certified using only the agricultural methodologies (limited to the “Application of biochar in farm land” methodology) specified in the J-Credit Scheme.
	Forest sink	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 1 and are certified using only the forest sink methodologies specified in the J-Credit Scheme.
	Other	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 1 and do not fit into any of the above categories.

(Reference) Table of Trading Categories (3/3)

- TSE will establish standardized trading categories based on the properties and other conditions of carbon credits on the Market, taking into consideration price formation and supply and demand for carbon credits.
- Specified third layer will not be traded under the specification.
- Within the Second layer, TSE will establish standardized trading categories based on the actual amount of energy conservation, renewable energy (electricity) and renewable energy (heat) held by the respective transfer credits.

First layer	Second layer	Third layer	Outline
Scheme	Main Category	Subcategory	
Transferred from Domestic Credit Scheme	Domestic credits	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 2.
Transferred from J-VER Scheme	J-VER (forest sink)	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 3 and are certified using only the forest sink methodologies specified in the J-VER Scheme.
	J-VER (other)	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 3 and do not fit into any of the above categories.
Regional J-Credits, J-VERs (not yet transferred), regional J-VERs (not yet transferred), domestic credits (not yet transferred)	Regional J-Credits	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 4.
	J-VER (not yet transferred) forest sink	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with zero (0) and are certified using only the forest sink methodologies specified in the J-VER Scheme.
	J-VERs (not yet transferred) other	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with zero (0) and do not fit into any of the above categories.
	Regional J-VERs (not yet transferred)	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 9.
	Domestic credits (not yet transferred)	(Not specified)	A category consisting of J-Credits that have a seven-digit certification number beginning with 8.
GX credit	(Not specified)	(Not specified)	A GX credit as prescribed in Article 3 of the GX League regulations specified by the GX League secretariat.

TSE intends to provide invoices to buyers in its own name as an intermediary on behalf of sellers, based on the special provisions for intermediary delivery under Article 70-12 of the Enforcement Order of the Consumption Tax Law.

- In the same way as settlement by delivery in the commodity markets, TSE will provide a qualified invoice to the buyer including TSE's company name and registration number, as well as a record of the invoice (a settlement statement omitting the buyer information) to the seller as is required from intermediaries by the law.
- The above invoice provision will be carried out using a system separate from the Carbon Credit Market System.
- Note: Buyers must store qualified invoices, and sellers and intermediaries (TSE) must store records of qualified invoices (settlement statements).

