

SUBMISSION COVER SHEET

IMPORTANT: Check box if Confidential Treatment is requested

Registered Entity Identifier Code (optional): 21-004 (4 of 4)

Organization: New York Mercantile Exchange, Inc. ("NYMEX")

Filing as a: **DCM** **SEF** **DCO** **SDR**

Please note - only ONE choice allowed.

Filing Date (mm/dd/yy): 01/21/21 **Filing Description:** Initial Listing of Four (4) Japanese Power Futures Contracts

SPECIFY FILING TYPE

Please note only ONE choice allowed per Submission.

Organization Rules and Rule Amendments

- Certification § 40.6(a)
- Approval § 40.5(a)
- Notification § 40.6(d)
- Advance Notice of SIDCO Rule Change § 40.10(a)
- SIDCO Emergency Rule Change § 40.10(h)

Rule Numbers:

New Product

Please note only ONE product per Submission.

- Certification § 40.2(a)
- Certification Security Futures § 41.23(a)
- Certification Swap Class § 40.2(d)
- Approval § 40.3(a)
- Approval Security Futures § 41.23(b)
- Novel Derivative Product Notification § 40.12(a)
- Swap Submission § 39.5

Product Terms and Conditions (product related Rules and Rule Amendments)

- Certification § 40.6(a)
- Certification Made Available to Trade Determination § 40.6(a)
- Certification Security Futures § 41.24(a)
- Delisting (No Open Interest) § 40.6(a)
- Approval § 40.5(a)
- Approval Made Available to Trade Determination § 40.5(a)
- Approval Security Futures § 41.24(c)
- Approval Amendments to enumerated agricultural products § 40.4(a), § 40.5(a)
- "Non-Material Agricultural Rule Change" § 40.4(b)(5)
- Notification § 40.6(d)

Official Name(s) of Product(s) Affected:

Rule Numbers:

January 21, 2021

VIA ELECTRONIC PORTAL

Mr. Christopher J. Kirkpatrick
Office of the Secretariat
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, DC 20581

Re: CFTC Regulation 40.2(a) Certification. Notification Regarding the Initial Listing of Four (4) Japanese Power Futures Contracts. NYMEX Submission No. 21-004 (4 of 4)

Dear Mr. Kirkpatrick:

New York Mercantile Exchange, Inc. (“NYMEX” or “Exchange”) is notifying the Commodity Futures Trading Commission (“CFTC” or “Commission”) that it is self-certifying the initial listing of four (4) Japanese Power futures contracts (the “Contracts”) for trading on the CME Globex electronic trading platform and for submission for clearing via CME ClearPort, effective Sunday, February 7, 2021 for trade date Monday, February 8, 2021, as more specifically described below.

Contract Title	Japanese Power (Day-Ahead) Tokyo Base-Load Futures	Japanese Power (Day-Ahead) Tokyo Peak-Load Futures
Commodity Code	JBT	JPT
Rulebook Chapter	796	797
Settlement Type	Financial	Financial
Contract Size	1 MWh per hour x 24 hours x # of days in the contract month	1 MWh per hour x 12 hours x # of Japanese business days in the contract month
Listing Schedule	Monthly contracts listed for 24 consecutive months.	Monthly contracts listed for 24 consecutive months.
Minimum Price Fluctuation	¥0.001 Japanese Yen per KWh	¥0.001 Japanese Yen per KWh
Value per tick	Contract Size times ¥0.001 times 1,000 (MWh to KWh Adjustment Factor)	Contract Size times ¥0.001 times 1,000 (MWh to KWh Adjustment Factor)
First Listed Month	March 2021	March 2021
Block Trade Minimum Threshold	5 contracts - subject to a 15-minute reporting window	5 contracts - subject to a 15-minute reporting window
Termination of Trading	Trading terminates on the last Japanese business day prior to the last day of the contract month. If such day is not an Exchange business day,	Trading terminates on the last Japanese business day prior to the last Japanese business day of the contract month. If such day is not an Exchange

	trading shall terminate on the preceding Exchange business day.	business day, trading shall terminate on the preceding Exchange business day.
CME Globex Matching Algorithm	First-In, First-Out (FIFO)	First-In, First-Out (FIFO)
CME Globex	Sunday - Friday 6:00 p.m. - 5:00 p.m. Eastern Time/ET (5:00 p.m. - 4:00 p.m. Central Time/CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT)	Sunday - Friday 6:00 p.m. - 5:00 p.m. Eastern Time/ET (5:00 p.m. - 4:00 p.m. Central Time/CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT)
CME Globex Pre-Open	Sunday 5:00 p.m. – 6:00 p.m. ET (4:00 p.m. - 5:00 p.m. CT). Monday – Friday 5:45 p.m. – 6:00 p.m. ET (4:45 p.m. - 5:00 p.m. CT)	Sunday 5:00 p.m. – 6:00 p.m. ET (4:00 p.m. - 5:00 p.m. CT). Monday – Friday 5:45 p.m. – 6:00 p.m. ET (4:45 p.m. - 5:00 p.m. CT)
CME ClearPort	Sunday - Friday 6:00 p.m. - 5:00 p.m. ET (5:00 p.m. - 4:00 p.m. CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT)	Sunday - Friday 6:00 p.m. - 5:00 p.m. ET (5:00 p.m. - 4:00 p.m. CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT)

Contract Title	Japanese Power (Day-Ahead) Kansai Base-Load Futures	Japanese Power (Day-Ahead) Kansai Peak-Load Futures
Commodity Code	JBK	JPK
Rulebook Chapter	798	799
Settlement Type	Financial	Financial
Contract Size	1 MWh per hour x 24 hours x # of days in the contract month	1 MWh per hour x 12 hours x # of Japanese business days in the contract month
Listing Schedule	Monthly contracts listed for 24 consecutive months.	Monthly contracts listed for 24 consecutive months.
Minimum Price Fluctuation	¥0.001 Japanese Yen per KWh	¥0.001 Japanese Yen per KWh
Value per tick	Contract Size times ¥0.001 times 1,000 (MWh to KWh Adjustment Factor)	Contract Size times ¥0.001 times 1,000 (MWh to KWh Adjustment Factor)
First Listed Month	March 2021	March 2021
Block Trade Minimum Threshold	5 contracts - subject to a 15-minute reporting window	5 contracts - subject to a 15-minute reporting window
Termination of Trading	Trading terminates on the last Japanese business day prior to the last day of the contract month. If such day is not an Exchange business day, trading shall terminate on the preceding Exchange business day.	Trading terminates on the last Japanese business day prior to the last Japanese business day of the contract month. If such day is not an Exchange business day, trading shall terminate on the preceding Exchange business day.
CME Globex Matching Algorithm	First-In, First-Out (FIFO)	First-In, First-Out (FIFO)
CME Globex	Sunday - Friday 6:00 p.m. - 5:00 p.m. Eastern Time/ET (5:00 p.m. - 4:00 p.m. Central Time/CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT)	Sunday - Friday 6:00 p.m. - 5:00 p.m. Eastern Time/ET (5:00 p.m. - 4:00 p.m. Central Time/CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT)

CME Globex Pre-Open	Sunday 5:00 p.m. – 6:00 p.m. ET (4:00 p.m. - 5:00 p.m. CT). Monday – Friday 5:45 p.m. – 6:00 p.m. ET (4:45 p.m. - 5:00 p.m. CT)	Sunday 5:00 p.m. – 6:00 p.m. ET (4:00 p.m. - 5:00 p.m. CT). Monday – Friday 5:45 p.m. – 6:00 p.m. ET (4:45 p.m. - 5:00 p.m. CT)
CME ClearPort	Sunday - Friday 6:00 p.m. - 5:00 p.m. ET (5:00 p.m. - 4:00 p.m. CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT)	Sunday - Friday 6:00 p.m. - 5:00 p.m. ET (5:00 p.m. - 4:00 p.m. CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT)

Exchange Fees:

Japanese Power (Day-Ahead) Tokyo Base-Load Futures and Japanese Power (Day-Ahead) Kansai Base-Load Futures Contract

	Member	Non-Member
CME Globex	\$4.50	\$5.00
EFP	\$4.50	\$5.00
Block	\$4.50	\$5.00
EFR/EOO	\$4.50	\$5.00
Processing Fees		
Facilitation Fee	\$0.60	
Give-Up Surcharge	\$0.05	
Position Adjustment/Position Transfer	\$0.10	

Japanese Power (Day-Ahead) Tokyo Peak-Load Futures and Japanese Power (Day-Ahead) Kansai Peak-Load Futures Contract

	Member	Non-Member
CME Globex	\$1.80	\$2.00
EFP	\$1.80	\$2.00
Block	\$1.80	\$2.00
EFR/EOO	\$1.80	\$2.00
Processing Fees		
Facilitation Fee	\$0.60	
Give-Up Surcharge	\$0.05	
Position Adjustment/Position Transfer	\$0.10	

The Exchange is also notifying the CFTC that it is self-certifying the insertion of the terms and conditions for the Contracts into the Position Limit, Position Accountability and Reportable Level Table and Header Notes located in the Interpretations and Special Notices Section of Chapter 5 of the NYMEX Rulebook in relation to the listing of the Contracts. The terms and conditions establish the all month/anyone-month accountability levels, expiration month position limit, reportable level, and aggregation allocation for the new contract. Please see Exhibit B, attached under separate cover.

NYMEX is also notifying the CFTC that it is self-certifying block trading on the Contracts with a minimum block threshold of 5 contracts which is comparable to the Exchange's similar futures contracts.

The Exchange reviewed the designated contracts market core principles ("Core Principles") as set forth in the Commodity Exchange Act ("CEA" or "Act") and identified that the Contract may have some bearing on the following Core Principles:

- **Compliance with Rules:** Trading in the Contracts will be subject to the rules in Rulebook Chapter 4 which includes prohibitions against fraudulent, noncompetitive, unfair and abusive practices. Additionally, trading in the Contracts will also be subject to the full panoply of trade practice rules, the majority of which are contained in Chapter 5 and Chapter 8 of the Rulebook. As with all products listed for trading on one of CME Group's designated contract markets, activity in the new product will be subject to extensive monitoring and surveillance by CME Group's Market Regulation Department. The Market Regulation Department has the authority to exercise its investigatory and enforcement power where potential rule violations are identified.
- **Contract Not Readily Subject to Manipulation:** The Contracts are based on cash price series that are reflective of the underlying cash market and are commonly relied on and used as a reference price by cash market brokers and commercial market participants.
- **Prevention of Market Disruption:** Trading in the Contracts will be subject to Rulebook Chapters 4 and 7 which include prohibitions on manipulation, price distortion and disruptions of the delivery or cash-settlement process. As with all products listed for trading on one of CME Group's designated contract markets, activity in the new products will be subject to extensive monitoring and surveillance by CME Group's Market Regulation Department.
- **Position Limitations or Accountability:** The speculative position limits for the Contracts as demonstrated in this submission are consistent with the Commission's guidance.
- **Availability of General Information:** The Exchange will publish information on the Contracts' specifications on its website, together with daily trading volume, open interest and price information.
- **Daily Publication of Trading Information:** The Exchange will publish information on the Contracts' specifications on its website, together with daily trading volume, open interest and price information.
- **Execution of Transactions:** The Contracts will be listed for trading on the CME Globex electronic trading and for clearing through CME ClearPort. The CME Globex trading venue provides for competitive and open execution of transactions. CME Globex affords the benefits of reliability and global connectivity.
- **Trade Information:** All required trade information is included in the audit trail and is sufficient for the Market Regulation Department to monitor for market abuse.
- **Financial Integrity of Contract:** All contracts traded on the Exchange will be cleared by the CME Clearing House which is a registered derivatives clearing organization with the Commission and is subject to all Commission regulations related thereto.
- **Protection of Market Participants:** Rulebook Chapters 4 and 5 contain multiple prohibitions precluding intermediaries from disadvantaging their customers. These rules apply to trading on all of the Exchange's competitive trading venues and will be applicable to transactions in this product.
- **Disciplinary Procedures:** Chapter 4 of the Rulebook contains provisions that allow the Exchange to discipline, suspend or expel members or market participants that violate the rules. Trading in this contract will be subject to Chapter 4, and the Market Regulation Department has the authority to exercise its enforcement power in the event rule violations in these products are identified.
- **Dispute Resolution:** Disputes with respect to trading in the Contracts will be subject to the arbitration provisions set forth in Chapter 6 of the Rulebook. The rules in Chapter 6 allow all nonmembers to submit a claim for financial losses resulting from transactions on the Exchange to arbitration. A member named as a respondent in a claim submitted by a nonmember is required

to participate in the arbitration pursuant to the rules in Chapter 6. Additionally, the Exchange requires that members resolve all disputes concerning transactions on the Exchange via arbitration.

Pursuant to Section 5c(c) of the Act and CFTC Regulations 40.2(a), the Exchange hereby certifies that listing the Contract complies with the Act, including regulations under the Act. There were no substantive opposing views to the proposal.

The Exchange certifies that this submission has been concurrently posted on the CME Group website at <http://www.cmegroup.com/market-regulation/rule-filings.html>.

Should you have any questions concerning the above, please contact the undersigned at (212) 299-2200 or via e-mail at CEGSubmissionInquiry@cmegroup.com.

Sincerely,

/s/ Christopher Bowen
Managing Director and Chief Regulatory Counsel

Attachments: Exhibit A: NYMEX Rulebook Chapter 796, 797, 798 and 799
Exhibit B: Position Limits, Position Accountability and Reportable Level Table in Chapter 5 of the NYMEX Rulebook (attached under separate cover)
Exhibit C: NYMEX Rule 588.H. – (“Globex Non-Reviewable Trading Ranges”) Table
Exhibit D: Cash Market Overview and Analysis of Deliverable Supply

Exhibit A

NYMEX Rulebook Chapter 796

Japanese Power (Day-Ahead) Tokyo Base-Load Futures

796100. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

796101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is based on the 30-minute price for Tokyo Day-Ahead market by Japan Electricity Power Exchange for each Base-load Hours during the contract month. The Base-load Hours consists of 48 30-minute prices for all hours in each calendar day in the contract month. Floating Price shall be the arithmetic average of all such 30-minute prices in the contract month.

796102. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

796102.A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

796102.B. Trading Unit

The contract quantity shall be 1 MWh per hour in the contract period. Each contract shall be valued as the contract quantity multiplied by the settlement price.

796102.C. Price Increments

Prices shall be quoted in Japanese Yen per KWh. The minimum price fluctuation shall be 0.001 Yen per KWh. There shall be no maximum price fluctuation.

796102.D. Position Limits, Exemptions, Position Accountability and Reportable Levels

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.

A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.

Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

796102.E. Termination of Trading

Trading terminates on the last Japanese business day prior to the last day of the contract month. If such day is not an Exchange business day, trading shall terminate on the preceding Exchange business day.

796103. FINAL SETTLEMENT

Final settlement under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

Chapter 797

Japanese Power (Day-Ahead) Tokyo Peak-Load Futures

797100. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

797101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is based on the 30-minute price for Tokyo Day-Ahead market by Japan Electricity Power Exchange for each Peak-load Hours during the contract month. The Peak-load Hours consists of 24 30-minute prices for the hours between local time 08:00 and 20:00 in each business day in the contract month. Floating Price shall be the arithmetic average of all such 30-minute prices in the contract month.

797102. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

797102.A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

797102.B. Trading Unit

The contract quantity shall be 1 MWh per hour in the contract period. Each contract shall be valued as the contract quantity multiplied by the settlement price.

797102.C. Price Increments

Prices shall be quoted in Japanese Yen per KWh. The minimum price fluctuation shall be 0.001 Yen per KWh. There shall be no maximum price fluctuation.

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Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

797102.E. Termination of Trading

Trading terminates on the last Japanese business day prior to the last day of the contract month. If such day is not an Exchange business day, trading shall terminate on the preceding Exchange business day.

797103. FINAL SETTLEMENT

Final settlement under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

Chapter 798

Japanese Power (Day-Ahead) Kansai Base-Load Futures

798100. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

798101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is based on the 30-minute price for Kansai Day-Ahead market by Japan Electricity Power Exchange for each Base-load Hours during the contract month. The Base-load Hours consists of 48 30-minute prices for all hours in each calendar day in the contract month. Floating Price shall be the arithmetic average of all such 30-minute prices in the contract month.

798102. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

798102.A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

798102.B. Trading Unit

The contract quantity shall be 1 MWh per hour in the contract period. Each contract shall be valued as the contract quantity multiplied by the settlement price.

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Prices shall be quoted in Japanese Yen per KWh. The minimum price fluctuation shall be 0.001 Yen per KWh. There shall be no maximum price fluctuation.

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Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

798102.E. Termination of Trading

Trading terminates on the last Japanese business day prior to the last day of the contract month. If such day is not an Exchange business day, trading shall terminate on the preceding Exchange business day.

798103. FINAL SETTLEMENT

Final settlement under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

Chapter 799

Japanese Power (Day-Ahead) Kansai Peak-Load Futures

799100. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

799101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is based on the 30-minute price for Kansai Day-Ahead market by Japan Electricity Power Exchange for each Peak-load Hours during the contract month. The Peak-load Hours consists of 24 30-minute prices for the hours between local time 08:00 and 20:00 in each business day in the contract month. Floating Price shall be the arithmetic average of all such 30-minute prices in the contract month.

799102. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

799102.A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

799102.B. Trading Unit

The contract quantity shall be 1 MWh per hour in the contract period. Each contract shall be valued as the contract quantity multiplied by the settlement price.

799102.C. Price Increments

Prices shall be quoted in Japanese Yen per KWh. The minimum price fluctuation shall be 0.001 Yen per KWh. There shall be no maximum price fluctuation.

799102.D. Position Limits, Exemptions, Position Accountability and Reportable Levels

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.

A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.

Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

799102.E. Termination of Trading

Trading terminates on the last Japanese business day prior to the last day of the contract month. If such day is not an Exchange business day, trading shall terminate on the preceding Exchange business day.

799103. FINAL SETTLEMENT

Final settlement under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

Exhibit B

**NYMEX Rulebook
Chapter 5
("Trading Qualifications and Practices")**

Position Limits, Position Accountability and Reportable Level Table
(attached under separate cover)

Exhibit C

**NYMEX Rulebook
Chapter 5
("Trading Qualifications and Practices")**

Rule 588.H. – ("Globex Non-Reviewable Trading Ranges") Table

(additions are underscored)

Instrument	Globex Symbol	Outrights		
		Globex Non-Reviewable Ranges (NRR)	NRR: Globex Format	NRR:Minimum Ticks
<u>Japanese Power (Day-Ahead) Tokyo Base-Load Futures</u>	<u>JBT</u>	<u>¥ .2 per KWh</u>	<u>200</u>	<u>200</u>
<u>Japanese Power (Day-Ahead) Tokyo Peak-Load Futures</u>	<u>JPT</u>	<u>¥ .2 per KWh</u>	<u>200</u>	<u>200</u>
<u>Japanese Power (Day-Ahead) Kansai Base-Load Futures</u>	<u>JBK</u>	<u>¥ .2 per KWh</u>	<u>200</u>	<u>200</u>
<u>Japanese Power (Day-Ahead) Kansai Peak-Load Futures</u>	<u>JPK</u>	<u>¥ .2 per KWh</u>	<u>200</u>	<u>200</u>

Exhibit D Cash Market Overview and Analysis of Deliverable Supply

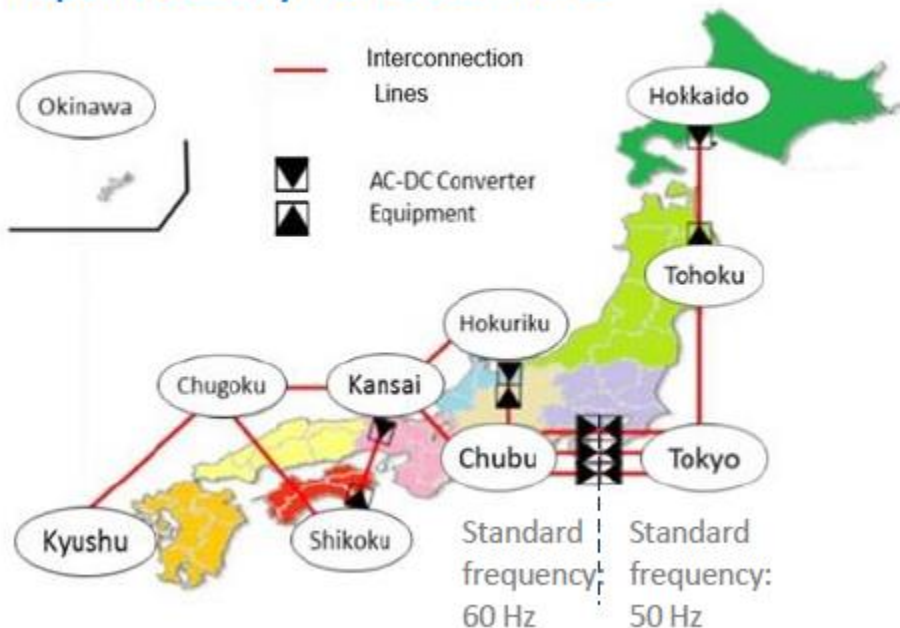
Japan Power Market

Japan is the largest liberalized power market in APAC region with about 1,000 TWh consumption per annum. This is about twice as large as Germany power market, and 4 times of the Australian power market. Japan's electricity generation heavily depends on fossil fuels, especially since the 2011 East Japan earthquake. Utilization of thermal power has increased to account for about two-third of total power generation due to the shutdown of nuclear plants.

The liberalization of Japan power market first took place in 1995 when a law was passed to enable independent power producers to participate in the wholesale market. Then in 2000 the distribution network was partially liberalized when the extra high voltage market was open to allow large-scale users like factories and hospitals to freely purchase electricity. Later in 2004 and 2005, this was further expanded to cover medium size businesses and buildings. The final step of liberalization of Japan power market was then completed in 2016 when the market was opened for retailers to compete in low voltage electricity market for homes and small shops.

Japan power market is divided into 10 zones which includes Tokyo, Tohoku, Hokkaido in the east, and Kansai, Chubu, Shikoku, Chugoku, Kyushu, Hokuriku in the west, as well as Okinawa. Power generated in the east part of Japan runs at 50 Hz while the western Japan, including Okinawa, runs at 60 Hz. The difference in the frequency creates two sub Japan power markets and power is moved between the regions through frequency converters. Among these zones, Tokyo and Kansai are the two largest markets.

Japan electricity market structure:



Source: OCCTO

The Japan Electricity Power Exchange (JEPX) is Japan's only wholesale spot electricity market. JEPX functions as a platform for power producers and retailers to trade electricity, and to hence competition as well as improve efficiency in the Japan electricity market.

JEPX commence its trading in April 2005. Its day-ahead market allows market participants to trade power delivered for the next day which consists of 48 thirty-minute timeframes. Delivery of electricity traded at the exchange is carried out through the transmission and distribution network operated by the Organization for Cross-regional Coordination of Transmission Operators (OCCTO).

Below table contains the monthly electricity energy requirement for Tokyo and Kansai region for the period of April 2017 to March 2020. According to the data by OCCTO, monthly consumption in Tokyo averaged 23,904 GWh, and 12,504 GWh in Kansai for the three-year period.

Monthly Electricity Energy Requirement for Tokyo and Kansai by OCCTO¹

Unit: GWh

Month	Tokyo	Kansai
Apr-17	21,207	10,783
May-17	20,999	10,762
Jun-17	21,733	11,009
Jul-17	26,843	13,819
Aug-17	25,731	13,839
Sep-17	22,328	11,386
Oct-17	22,158	11,187
Nov-17	22,766	11,545
Dec-17	26,578	13,514
Jan-18	27,809	14,095
Feb-18	25,535	13,043
Mar-18	23,806	12,184
Apr-18	20,762	10,514
May-18	21,348	11,000
Jun-18	22,570	11,299
Jul-18	28,795	14,331
Aug-18	28,083	14,187
Sep-18	22,928	11,462
Oct-18	22,040	10,872

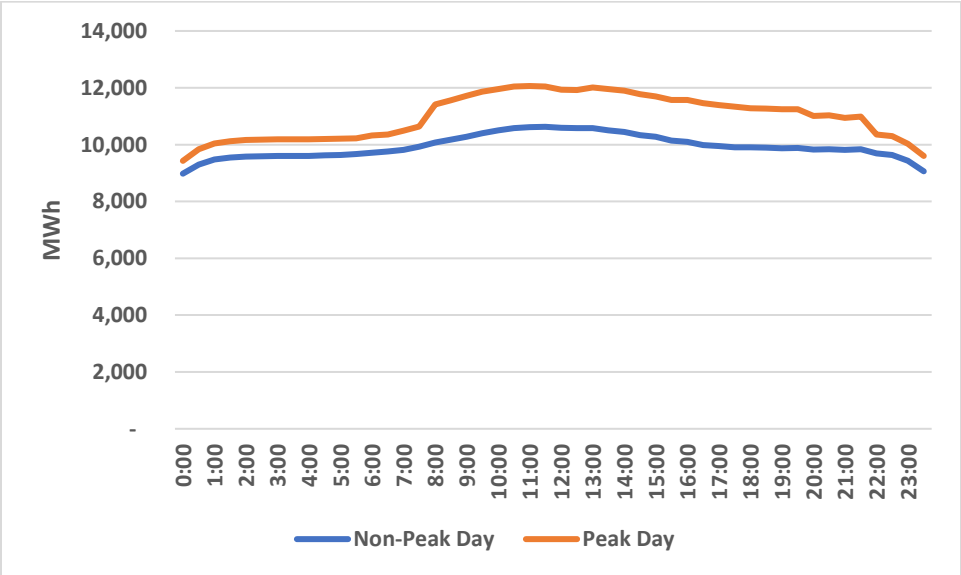
¹ https://www.occto.or.jp/en/information_disclosure/outlook_of_electricity_supply-demand/files/200918_outlook_of_electricity.pdf FY 2019
http://www.occto.or.jp/en/information_disclosure/outlook_of_electricity_supply-demand/files/190909_outlook_of_electricity.pdf FY 2018
https://www.occto.or.jp/en/information_disclosure/outlook_of_electricity_supply-demand/files/181210_outlook_of_electricity.pdf FY 2017

Table 1-4

Nov-18	21,700	11,015
Dec-18	25,794	12,668
Jan-19	27,320	13,465
Feb-19	24,290	12,084
Mar-19	23,758	12,100
Apr-19	21,382	10,844
May-19	20,903	10,616
Jun-19	21,655	11,132
Jul-19	24,608	12,763
Aug-19	27,921	13,775
Sep-19	24,048	12,206
Oct-19	21,896	11,065
Nov-19	21,961	10,740
Dec-19	25,567	12,356
Jan-20	26,228	12,548
Feb-20	23,946	12,142
Mar-20	23,559	11,605
Average	23,904	12,054

JEPX provides data on 30-minute auction volume for Japan day-ahead power market. This data can be used to estimate market size for peak-load contracts. Chart below shows the average volume by hour for peak days (Japan business day) and non-peak days during the 36-month period from April 2017 to March 2020. During the 36-month period, total volume was 559,744,912 MWh, while the volume for the peak hours (08:00 to 20:00 on business days) was 206,539,872 MWh, which represents 36.9% of the total power market volume.

Average Transaction Volume of Day-Ahead Market by Delivery Hours by JEPX



Source: JEPX

In addition, the table below provides monthly price series data applicable to the related underlying market used to settle the four (4) Japanese Power Futures. The prices are in Japanese Yen per kWh. The latest data is available for up to November 2020.

Monthly Price Series Data for Japanese Power Futures Contracts

Date	Tokyo Peak-Load	Kansai Peak-Load	Tokyo Base-Load	Kansai Base-Load
2018 Jan	12.371	15.726	11.750	13.554
2018 Feb	15.420	16.580	14.807	14.954
2018 Mar	10.061	9.236	9.903	8.890
2018 Apr	8.553	7.862	8.434	7.841
2018 May	9.352	8.613	8.941	8.276
2018 Jun	10.222	9.329	9.453	8.865
2018 Jul	16.482	16.024	13.422	12.688
2018 Aug	17.268	14.707	13.866	12.190
2018 Sep	11.583	9.645	10.543	8.619
2018 Oct	10.887	9.109	10.585	9.053
2018 Nov	10.854	9.047	10.569	8.993
2018 Dec	11.566	8.951	10.965	8.559
2019 Jan	11.350	8.506	11.010	8.437
2019 Feb	11.061	6.991	10.661	7.023
2019 Mar	9.734	5.581	9.607	5.841
2019 Apr	11.269	6.692	10.934	7.001
2019 May	9.031	6.519	8.651	6.744
2019 Jun	9.261	7.544	8.566	7.180
2019 Jul	9.591	7.436	8.463	6.859
2019 Aug	16.320	10.110	12.735	8.600
2019 Sep	11.354	10.000	9.762	8.380
2019 Oct	10.461	8.408	9.317	7.770
2019 Nov	9.371	6.929	9.030	6.982
2019 Dec	8.575	7.537	8.166	7.288
2020 Jan	7.636	6.244	7.589	6.360
2020 Feb	7.480	4.825	7.478	5.061
2020 Mar	6.716	3.701	6.854	4.196
2020 Apr	5.797	3.254	5.750	3.630
2020 May	6.356	5.137	5.568	4.658
2020 Jun	5.661	4.757	4.832	4.035
2020 Jul	10.145	9.866	7.534	7.228
2020 Aug	8.069	9.429	6.303	7.209
2020 Sep	5.586	6.068	5.013	5.542
2020 Oct	5.555	6.565	5.346	6.320

2020 Nov	10.173	15.576	10.021	13.011
2020 Dec	6.706	5.933	6.287	6.066

Tokyo and Kansai Power Market Deliverable Supply Estimation

The final settlement prices for the new Japanese Power futures contracts are based on the arithmetic average of the 30-minute price published by JEPX for the relevant region. The base-load contracts represent the average of all prices during the contract month, while the peak-load contract will settle against the average of the prices for 08:00 to 20:00 during business days in the month. The multiplier for the contracts size is 1 MW. For example, a base-load contract will carry a contract size of 720 MWh for a 30-day month ($30 \times 24 = 720$). Similarly, a peak-load contract for a 21-business day month will represent a total of 252 MWh ($21 \times 12 = 252$).

The average monthly power consumption in Tokyo was 23,904 GWh, or 23,904,000 MWh for the last three years. Assuming a 720-hour month, the proposed **Japanese Power (Day-Ahead) Tokyo Base-Load Futures** will carry a contract size of 720 MWh. The deliverable supply of 23,904,000 MWh equates to 33,200 contract equivalents. The Exchange proposes a spot month position limit of 3,000 lots for the **Japanese Power (Day-Ahead) Tokyo Base-Load Futures**. This is approximately 9% of the total deliverable supply.

The peak-load hours represent 36.9% of the total market, therefore the deliverable supply of the peak-load hours is about 8,820,576 MWh. Assuming a 21-business day month, the proposed **Japanese Power (Day-Ahead) Tokyo Base-Load Futures** will carry a contract size of 252 MWh. The deliverable supply of 8,820,576 MWh equates to 35,002 contract equivalents. Exchange proposes a spot month position limit of 3,000 lots for the **Japanese Power (Day-Ahead) Tokyo Peak-Load Futures**. This is approximately 8.6% of the total deliverable supply.

The monthly power requirement in Kansai was 12,054 GWh, or 12,054,000 MWh for the last three years. Assuming a 720-hour month, the proposed **Japanese Power (Day-Ahead) Kansai Base-Load Futures** will carry a contract size of 720 MWh. The deliverable supply of 12,054,000 MWh equates to 16,742 contract equivalents. The Exchange proposes a spot month position limit of 1,500 lots for the **Japanese Power (Day-Ahead) Kansai Base-Load Futures**. This is approximately 9% of the total deliverable supply.

The peak-load hours represent 36.9% of the total market, therefore the deliverable supply of the peak-load hours is about 4,447,926 MWh. Assuming a 21-business day month, the proposed **Japanese Power (Day-Ahead) Kansai Base-Load Futures** will carry a contract size of 252 MWh. The deliverable supply of 4,447,926 MWh equates to 17,651 contract equivalents. Exchange proposes a spot month position limit of 1,500 lots for the **Japanese Power (Day-Ahead) Kansai Peak-Load Futures**. This is approximately 8.5% of the total deliverable supply.