

**SUBMISSION COVER SHEET**

**IMPORTANT:** Check box if Confidential Treatment is requested

Registered Entity Identifier Code (optional): 19-386 (16 of 22)

Organization: Chicago Mercantile Exchange Inc. ("CME")

Filing as a:  DCM  SEF  DCO  SDR

Please note - only ONE choice allowed.

Filing Date (mm/dd/yy): 11/06/2019

Filing Description: Initial Listing of Twenty-Two (22) Portland and Tokyo Weather Futures and Options 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

Official Product Name: See filing.

**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:

November 6, 2019

**VIA ELECTRONIC PORTAL**

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

**Re: CFTC Regulation 40.2(a) Certification. Notification Regarding the Initial Listing of Twenty-Two (22) Portland and Tokyo Weather Futures and Options Contracts. CME Submission No. 19-386 (16 of 22)**

Dear Mr. Kirkpatrick:

Chicago Mercantile Exchange Inc. (“CME” or “Exchange”) hereby notifies the Commodity Futures Trading Commission (“CFTC” or “Commission”) that it is self-certifying the initial listing the CME Degree Days Index Futures – Portland HDD/CDD contract and a Pacific Rim Index Futures – Tokyo CAT contract (the “Contracts”), and their related option contracts for trading on the CME Globex electronic platform and for submission for clearing via CME ClearPort as more specifically described below effective on Sunday, November 24, 2019 for trade date Monday, November 25, 2019. Only the options contracts will be available for trading on the CME trading floor.

<i>Contract Title/Commodity Code/Rulebook Chapter</i>	<i>Commodity Code</i>	<i>CME Rulebook Chapter</i>
<b>CME Degree Days Index Futures - PORTLAND CDD</b>	K7	403
<b>CME Degree Days Index Options - PORTLAND CDD</b>	K7	403A
<b>CME Seasonal Strip Degree Days Index Futures - PORTLAND CDD MAY</b>	K7K	405
<b>CME Seasonal Strip Degree Days Index Options - PORTLAND CDD MAY</b>	K7K	405A
<b>CME Seasonal Strip Degree Days Index Futures - PORTLAND CDD JUL</b>	K7N	405
<b>CME Seasonal Strip Degree Days Index Options - PORTLAND CDD JUL</b>	K7N	405A
<b>CME Degree Days Index Futures - PORTLAND HDD</b>	H7	403
<b>CME Degree Days Index Options - PORTLAND HDD</b>	H7	403A
<b>CME Seasonal Strip Degree Days Index Futures - PORTLAND HDD NOV</b>	H7X	405
<b>CME Seasonal Strip Degree Days Index Options - PORTLAND HDD NOV</b>	H7X	405A
<b>CME Seasonal Strip Degree Days Index Futures - PORTLAND HDD DEC</b>	H7Z	405
<b>CME Seasonal Strip Degree Days Index Options - PORTLAND HDD DEC</b>	H7Z	405A
<b>Pacific Rim Index Futures - TOKYO CAT</b>	G6	411
<b>Pacific Rim Index Options - TOKYO CAT</b>	G6	411A

Pacific Rim Seasonal Strip Index Futures - TOKYO CAT MAY	G6K	412
Pacific Rim Seasonal Strip Index Options - TOKYO CAT MAY	G6K	412A
Pacific Rim Seasonal Strip Index Futures - TOKYO CAT JUL	G6N	412
Pacific Rim Seasonal Strip Index Options - TOKYO CAT JUL	G6N	412A
Pacific Rim Seasonal Strip Index Futures - TOKYO CAT NOV	G6X	412
Pacific Rim Seasonal Strip Index Options - TOKYO CAT NOV	G6X	412A
Pacific Rim Seasonal Strip Index Futures - TOKYO CAT DEC	G6Z	412
Pacific Rim Seasonal Strip Index Options - TOKYO CAT DEC	G6Z	412A

The following “Contract Specification” sections of CME Weather Rulebook Chapters will be amended to include Portland, Oregon:

*CME Rulebook Chapter 403 CME Degree Days Index Futures*  
*CME Rulebook Chapter 405 CME Seasonal Strip Degree Days Index Futures*

The following new CME Rulebook Weather Chapters to be added for Tokyo, Japan:

*Chapter 411 CME Pacific Rim Index Futures*  
*Chapter 411A Options on CME Pacific Rim Index Futures*  
*Chapter 412 CME Pacific Rim Seasonal Index Futures*  
*Chapter 412A Options on CME Pacific Rim Seasonal Index Futures.*

In what follows:

- Section 1 summarizes contract terms and conditions.
- Section 2 describes administration and governance of the settlement prices.
- Section 3 addresses compliance of the Contract terms and conditions certified herein with the pertinent Core Principles for Designated Contract Markets (“Core Principles”) set forth in the Act.

The CME Rulebook chapters governing contract terms and conditions for all other Contracts certified herein appear in Exhibits A through F. Exhibit G addresses the applicable position limits and reportable position levels pursuant to Chapter 5 of the CME Rulebook and Exhibit H provides the market overview and analysis of deliverable supply in support of the related position limits. Exhibit I sets forth the applicable CME Globex non-reviewable trading ranges as prescribed in CME Rule 588.H.

## Section 1: Contract Terms and Conditions

### Contract Specifications:

<i>Contract Title/Commodity Code/Rulebook Chapter</i>	<i>Commodity Code</i>	<i>CME Rulebook Chapter</i>
<b>CME Degree Days Index Futures - PORTLAND CDD</b>	K7	403
<b>CME Degree Days Index Options - PORTLAND CDD</b>	K7	403A
<b>CME Seasonal Strip Degree Days Index Futures - PORTLAND CDD MAY</b>	K7K	405
<b>CME Seasonal Strip Degree Days Index Options - PORTLAND CDD MAY</b>	K7K	405A

	<b>CME Seasonal Strip Degree Days Index Futures - PORTLAND CDD JUL</b>	K7N	405
	<b>CME Seasonal Strip Degree Days Index Options - PORTLAND CDD JUL</b>	K7N	405A
	<b>CME Degree Days Index Futures - PORTLAND HDD</b>	H7	403
	<b>CME Degree Days Index Options - PORTLAND HDD</b>	H7	403A
	<b>CME Seasonal Strip Degree Days Index Futures - PORTLAND HDD NOV</b>	H7X	405
	<b>CME Seasonal Strip Degree Days Index Options - PORTLAND HDD NOV</b>	H7X	405A
	<b>CME Seasonal Strip Degree Days Index Futures - PORTLAND HDD DEC</b>	H7Z	405
	<b>CME Seasonal Strip Degree Days Index Options - PORTLAND HDD DEC</b>	H7Z	405A
	<b>Pacific Rim Index Futures - TOKYO CAT</b>	G6	411
	<b>Pacific Rim Index Options - TOKYO CAT</b>	G6	411A
	<b>Pacific Rim Seasonal Strip Index Futures - TOKYO CAT MAY</b>	G6K	412
	<b>Pacific Rim Seasonal Strip Index Options - TOKYO CAT MAY</b>	G6K	412A
	<b>Pacific Rim Seasonal Strip Index Futures - TOKYO CAT JUL</b>	G6N	412
	<b>Pacific Rim Seasonal Strip Index Options - TOKYO CAT JUL</b>	G6N	412A
	<b>Pacific Rim Seasonal Strip Index Futures - TOKYO CAT NOV</b>	G6X	412
	<b>Pacific Rim Seasonal Strip Index Options - TOKYO CAT NOV</b>	G6X	412A
	<b>Pacific Rim Seasonal Strip Index Futures - TOKYO CAT DEC</b>	G6Z	412
	<b>Pacific Rim Seasonal Strip Index Options - TOKYO CAT DEC</b>	G6Z	412A
<i>Trading Unit</i>	<b>Portland CDD/HDD</b>	\$20 (US Dollars) times the respective CME Degree Day Index	
	<b>Tokyo CAT</b>	¥2,500 (Japanese Yen) times the respective CME Pacific Rim Index	
<i>Options Strike Price Intervals</i>	<b>Portland CDD/HDD</b>	CDD: 1 index point in a range of 0 to 1500 index points HDD: 1 index point in a range 0 to 3200 index points	
	<b>Portland Seasonal CDD/HDD</b>	CDD: 1 index point in a range of 0 to 7500 index points HDD: 1 index point in a range of 0 to 16,000 index points	
	<b>Tokyo CAT</b>	.01 index points in a range of 0 to 1500 index points	
	<b>Tokyo Seasonal CAT</b>	.01 index points in a range 0 to 8500 index points	
<i>Listing Schedule</i>	<b>Portland CDD/HDD</b>	CDD: May, Jun, Jul, Aug, Sep HDD: Nov, Dec, Jan, Feb, Mar, Oct, Apr	
	<b>Portland Seasonal CDD/HDD</b>	CDD: May-Sep, Jul-Aug HDD: Nov-Mar, Dec-Feb	
	<b>Tokyo CAT</b>	12 consecutive months	
	<b>Tokyo Seasonal CAT</b>	May-Sep, Jul-Aug, Nov-Mar, Dec-Feb	
<i>Options Exercise Procedure</i>	European Style		
<i>Initial Listing Months</i>	November 2019 – November 2020		
<i>Trading and Clearing Hours</i>	CME Globex and CME ClearPort	Sunday - Friday 5:00 p.m. - 4:00 p.m. Central Time/CT with a 60-minute break each day beginning at 4:00 p.m. CT	
	Trading Floor (Options only)	Monday - Friday 8:30 am - 3:15 pm CT	
<i>Minimum Price Increments</i>	<b>Portland CDD/HDD</b>	1 index point (= \$20 per contract)	
	<b>Tokyo CAT</b>	.01 index point (= ¥25 per contract)	
<i>Termination of Trading</i>	9:00 AM CT on the first business day that is at least 2 calendar days after the last calendar day of the month		

Options trading shall terminate on the same date and time as the underlying futures contract

<i>Final Settlement</i>	<b>Portland CDD/HDD</b>	<p>CDD: The final settlement price of Monthly Cooling Degree Days (CDD) Index Futures is based on the respective CME CDD Index reported by MDA Information Systems, Inc. The CME CDD Index is equal to the sum of the average degrees that the outside air temperature rises above the base temperature of 65°F (or 18°C for non-U.S. cities) in the specified city each day in the contract month.</p> <p>HDD: The final settlement price of Monthly Heating Degree Days (HDD) Index Futures is based on the respective CME HDD Index reported by MDA Information Systems, Inc. The CME HDD Index is equal to the sum of the average degrees that the outside air temperature drops below the base temperature of 65°F (or 18°C for non-U.S. cities) in the specified city each day in the contract month.</p> <p>Final settlement occurs on the second business day after the contract month for U.S. cities and on the fifth business day after the contract month for international cities.</p>
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<b>Tokyo CAT</b>	<p>The daily average temperature is defined as the arithmetic average accumulated over a twenty-four (24) hour period as reported by MDA Information Systems, Inc using data received from the Japan Meteorological Agency for the following meteorological station:</p> <ul style="list-style-type: none"> <li>• Toyko, Japan (WMO 47662): Between 0100 and 2400 JST the current day.</li> </ul> <p>Each particular CME Pacific Rim CAT Index is the accumulation of the daily average temperatures over a calendar month. The accumulation period of each CME Pacific Rim CAT Index futures contract begins with the first calendar day of the contract month and ends with the last calendar day of the contract month.</p> <p>All futures contracts remaining open at the termination of trading shall be settled using the CME Pacific Rim Index reported by MDA Information Systems, Inc. for that contract month, using the methodology in effect on that date, on the first Exchange Business Day that is at least two calendar days after the futures contract month. For example, on June 4, 2007, the May 2007 futures contract on the Tokyo Index would have been settled at 467.20 degrees.</p>
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<i>Position Limits and Reportable Levels</i>		<b>Single Month Accountability Level</b>	<b>Reportable Levels</b>
	<b>Portland CDD/HDD</b>	10,000	25
	<b>Tokyo CAT</b>	10,000	25
<i>Block Trade Minimum Threshold (Futures and Options) and Reporting Window</i>	Minimum Threshold	20 contracts	
	Reporting Window	15 minutes	

As noted, CME is also notifying the CFTC that it is self-certifying block trading in the Contracts with a minimum block threshold level of 20 contracts.

The Exchange is also self-certifying pre-execution communication via the G-Cross and R-Cross protocols in the Contracts during CME Globex electronic trading hours as currently noted in CME Rule 539.C. ("Crossing Protocols Table").

**Trading and Clearing Hours:**

CME Globex and CME ClearPort	Sunday - Friday 5:00 p.m. - 4:00 p.m. Central Time/CT with a 60-minute break each day beginning at 4:00 p.m. CT
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Open Outcry (Options)	Monday - Friday 8:30 am - 3:15 pm CT
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### Exchange Fees:

Membership Type	Venue/Transaction Type	Fee
Individual Members Clearing Members Rule 106.J Equity Member Firms & Rule 106.J Qualified Subsidiaries Rule 106.I Members & Rule 106.I Qualified Affiliates Rule 106.S Member Approved Funds	Open Outcry	\$0.02
	CME Globex	\$0.15
	EFP	\$0.46
	EFR	\$0.46
	Block	\$0.46
	Delivery	\$0.02
	Exe Asn Future From	\$0.07
Rule 106.D Lessees Rule 106.F Employees	Open Outcry	\$0.07
	CME Globex	\$0.20
	EFP	\$0.51
	EFR	\$0.51
	Block	\$0.51
	Delivery	\$0.07
	Exe Asn Future From	\$0.12
Rule 106.R Electronic Corporate Members (For other than CME Globex - Non-Member rates apply)	CME Globex	\$0.44
Rule 106.H and 106.N Firms	Open Outcry	\$0.12
	CME Globex	\$0.25
	EFP	\$0.56
	EFR	\$0.56
	Block	\$0.56
	Delivery	\$0.12
	Exe Asn Future From	\$0.17
International Incentive Program (IIP) and International Volume Incentive Program (IVIP) Participants (Open Outcry at same rate as CME Globex for Interest Rate products only)	CME Globex	\$0.25
Central Bank Incentive Program (CBIP), Emerging Markets Bank Incentive Program (EMBIP), Latin American Fund Manager Incentive Program (FMIP), Participants (For other than CME Globex - Non-Member rates apply)	CME Globex	\$0.54
CBOE Members (For S&P products only; for all other products - Non-Member rates apply)	Open Outcry	\$0.16
	CME Globex	\$0.54
	EFP	\$0.60
	EFR	\$0.60
	Block	\$0.60
	Delivery	\$0.16
	Exe Asn Future From	\$0.21
CTA/Hedge Fund Incentive Program Participants (For other than FX CME Globex - Non-Member rates apply)	CME Globex	\$0.54
Members Trading Outside of Division (For other than CME Globex During ETH - Non-Member rates apply)	CME Globex During ETH Only	\$0.29
Non-Members	Open Outcry	\$0.16
	CME Globex	\$0.54
	EFP	\$0.60
	EFR	\$0.60
	Block	\$0.60
	Delivery	\$0.16

Processing Fees	Fee
106.D Lessee/106.H Brokerage	\$0.13
106.F Employee Brokerage	\$0.13
Floor / "New" Brokerage	\$0.04
Position Adjustment/Position Transfer	\$0.10
Give-Up Surcharge	\$0.05
Facilitation Fee	\$0.40

## Section 2: Price Reporting Agency

CME Group Inc. has entered into an agreement with MDA Information Systems, LLC ("MDA") to supply our daily weather data and within the agreements it also states that the employees of the data vendor shall be prohibited against trading directly or indirectly any futures and options contracts based on the data.

The official weather data that is used to settle our contracts is published by government weather agencies. In the case of the United States, the National Weather Service is responsible for the measurement, recording and issuance of the data. Weather stations used for CME weather contracts are located at major airports or government owned properties having 24 hour/365 day security measures in place to insure the accuracy of the data being reported.

These weather stations serve a vital function to air traffic safety around the world. Data readings from these stations are used to determine such things as flying and de-icing conditions. Therefore, the accuracy and security of these instruments are a high priority for these government agencies. Instrument placement is usually out on the property in remote secure locations, so as not to be affected by jet engine or tarmac heat radiation and most importantly human tampering.

Listed below is the method used by the vendor to assure real time quality control of observed elements.

**Decoding Data** - Each day MDA decodes the respective data transmission feeds to determine what data exist for each reporting station for which there is a corresponding futures and options contract, plus additional surrounding stations.

**Data Recovery** – Upon determining that data is missing for a station for which there is a corresponding futures/options contract, the vendor attempts to recover this data from alternative data sources, such as Climate Summary Reports, contacting the local NWS office or local media reports, as appropriate. If data cannot be recovered, the site is flagged and proprietary estimation techniques are used to estimate the missing data.

**Screening for Erroneous Values by Computer Algorithm** – All observations are screened a second time by meteorologists to ensure that the data is meteorologically acceptable. This analysis involves an online interactive environment for analysis.

**Creation of Estimates by Vendor Meteorologists** - Meteorologists will replace observations that have been flagged as missing or erroneous. The methods used for filling of missing or erroneous observations are dependent upon the situation and may include the following:

- Surrounding station observations may be used as guidance
- Known biases between stations may be applied

- Alternative data, hourly data, 6-hourly reports, partial observations, or other methods may be used to piece together missing observations

In summary, as weather data is being released, a number of weather data suppliers are monitoring the data for any unusual readings. If a reading were to be an outlier or missing it would be reported to the issuing agency to verify for accuracy and/or correction. Weather data suppliers such as MDA, not only monitor the specific CME weather locations, but also surrounding weather stations. They use surrounding weather stations as one means to verify for the accuracy of data being issued by the reporting agency. MDA does this for all of the listed futures and options locations.

Not only is MDA checking the government agencies numbers for accuracy, but they are also checking other's reported data for errors. So, there are a number of checks in place within the industry to verify that the data being published and used for settlement are in fact accurate. MDA is one of the largest suppliers of weather-related data to the futures and OTC markets.

### Section 3: Compliance with Core Principles

The Exchange reviewed the designated contract market core principles ("Core Principles") as set forth in the Commodity Exchange Act ("CEA" or "Act") and identified that the following Core Principles may be impacted by this initiative as follows:

- **Compliance with Rules:** Trading in the Contracts will be subject to all CME Rules, including prohibitions against fraudulent, noncompetitive, unfair and abusive practices as outlined in CME Rule Chapter 4, the Exchange's trade practice rules, the majority of which are contained in Chapter 5 and Chapter 8 of the CME Rulebook, and the dispute resolution and arbitration procedures of CME Rule Chapter 6. As with all products listed for trading on one of CME Group's designated contract markets, trading activity in the Contract will be subject to 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.
- **Contracts not Readily Subject to Manipulation:** The Contracts are not readily subject to manipulation because of their structural attributes and reliance on government supplied data. Final settlements are based on official weather data that is published by government weather agencies and supplied to the Exchange by a single PRA, MDA Information Systems, Inc. In the case of the United States, the National Weather Service is responsible for the measurement, recording and issuance of the data. Weather stations used for CME weather contracts are located at major airports or government owned properties having 24 hour/365 day security measures in place to insure the accuracy of the data being reported. The Exchange has signed licensing agreements with MDA to supply our daily weather data and within the agreements it also states that the employees of the data vendor shall be prohibited against trading directly or indirectly any futures and options contracts based on the data.
- **Prevention of Market Disruption:** Trading in the Contracts will be subject to the rules of the Exchange, which include prohibitions on manipulation, price distortion, and disruption to the cash settlement process. As with any new product listed for trading on a CME Group designated contract market, trading activity in the option contract proposed herein will be subject to 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.
- **Emergency Authority:** As with all CME Group futures and options product, the Exchange shall have full authority to act appropriately and as necessary in emergency situations.



- **Availability of General Information:** The Exchange will publish on its website information in regard to contract specifications, terms, and conditions, as well as daily trading volume, open interest, and price information for the Contracts. The Exchange will issue a Special Executive Report (“SER”) regarding the launch of the Contracts. The SER will also be posted on the CME Group website.
- **Daily Publication of Trading Information:** The Exchange will publish contract trading volumes, open interest levels, and price information daily on its website and through quote vendors for the Contracts.
- **Execution of Transactions:** The Contracts will be listed for trading on the CME Globex and for submission of clearing through the CME ClearPort platform. The CME Globex trading venue provides for competitive and open execution of transactions and affords the benefits of reliability and global connectivity. The CME ClearPort platform provides a competitive, open and efficient mechanism for the novation of transactions that are competitively executed by brokers. The related option contracts will be available for trading on the CME trading floor and for submission for clearing via CME ClearPort.
- **Trade Information:** All requisite trade information for the Contracts will be included in the audit trail and is sufficient for the Market Regulation Department to monitor for market abuse.
- **Financial Integrity of Contracts:** The Contracts will be cleared by the CME Clearing, a derivatives clearing organization registered with the CFTC and subject to all CFTC Regulations related thereto.
- **Protection of Market Participants:** CME Rulebook Chapters 4 and 5 set forth multiple prohibitions that preclude intermediaries from disadvantaging their customers. These rules apply to trading in all of the Exchange’s competitive trading venues.
- **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 Rulebook. Trading in the Contracts 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 Contract will be subject to the arbitration provisions set forth in Chapter 6 of the Rulebook. Chapter 6 allows all non-members 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 non-member is required to participate in the arbitration pursuant to 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 Regulation 40.6(a), the Exchange hereby certifies that the listing of the Contracts complies with the Act, including regulations under the Act. There were no substantive opposing views to this proposal.

The Exchange certifies that this submission has been concurrently posted on the Exchange’s 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 [CMEGSubmissionInquiry@cmegroup.com](mailto:CMEGSubmissionInquiry@cmegroup.com).

Sincerely,

/s/ Christopher Bowen  
Managing Director and Chief Regulatory Counsel

Attachments: Exhibit A – CME Rulebook Chapter 403  
Exhibit B – CME Rulebook Chapter 405  
Exhibit C – CME Rulebook Chapter 411  
Exhibit D – CME Rulebook Chapter 411A  
Exhibit E – CME Rulebook Chapter 412  
Exhibit F – CME Rulebook Chapter 412A  
Exhibit G – Position Limit, Position Accountability, and Reportable Level Table in  
Chapter 5 of the CME Rulebook (attached under separate cover)  
Exhibit H – Position Limit/Accountability Levels and Market Overview  
Exhibit I – CME Rule 588.H. – (“Globex Non-Reviewable Trading Ranges”) Table

## **Exhibit A**

### **CME Rulebook**

(additions underscored)

#### **Chapter 403 CME Degree Days Index Futures**

##### **40300. SCOPE OF CHAPTER**

This chapter is limited in application to CME Degree Days Index futures: the CME Heating-DegreeDays (CME-HDD) Index and the CME Cooling-Degree-Days (CME-CDD) Index. In addition to this chapter, CME Degree Days Index futures shall be subject to the general rules and regulations of the Exchange insofar as applicable.

For purposes of this chapter, unless otherwise specified, times referred herein shall refer to and indicate Chicago time.

##### **40301. CONTRACT SPECIFICATIONS**

###### **1. Heating Degree Days and Cooling Degree Days**

The daily average temperature is defined as the arithmetic average of the maximum and minimum temperature recorded between midnight and 11:59 p.m. as reported by MDA Information Systems, Inc.

For each day, Heating-Degree-Days (HDD) is the greater of (1) zero, (2) 65 degrees Fahrenheit minus the daily average temperature.

For each day, Cooling-Degree-Days (CDD) is the greater of (1) zero, (2) the daily average temperature minus 65 degrees Fahrenheit.

###### **2. The CME Degree Days Indexes and Listing Cities**

Each particular CME Degree Days index, is the accumulation of like Degree Days over a calendar month. The accumulation period of each CME-HDD or CME-CDD Index Futures contract begins with the first calendar day of the contract month and ends with the last calendar day of the contract month.

The temperature for a particular city is reported from a specific automated weather station. The table below lists the cities and their corresponding weather stations:

###### **Listing Cities and Corresponding Automated Weather Stations**

Atlanta Hartsfield International Airport (WBAN 13874)  
Chicago O'Hare International Airport (WBAN 94846)  
Cincinnati Northern Kentucky (Covington) Airport (WBAN 93814)  
Dallas-Fort Worth International Airport (WBAN 03927)  
Las Vegas McCarran International Airport (WBAN 23169)  
Minneapolis-St. Paul International Airport (WBAN 14922)  
New York La Guardia Airport (WBAN 14732)  
Portland International Airport (WBAN 24229)  
Sacramento Executive Airport (WBAN 23232)

##### **40302. TRADING SPECIFICATIONS**

###### **40302.A. Trading Schedule**

Futures contracts shall be scheduled for trading and delivery during such hours in such months as may be determined by the Exchange.

**40302.B. Trading Unit**

The size of the unit of trading shall be \$20 times the respective CME Degree Days Index.

**40302.C. Price Increments**

The minimum price fluctuation on the respective CME Degree Days Index futures shall be 1 index point and have a value of \$20.

**40302.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.

**40302.E. [Reserved]****40302.F. [Reserved]****40302.G. Termination of Trading**

Futures trading shall terminate at 9:00 a.m. on the second Exchange Business Day after the futures contract month.

**40302.H. [Reserved]****40302.I [Reserved]****40303. SETTLEMENT PROCEDURES****40303.A. Final Settlement Price**

All futures contracts remaining open at the termination of trading shall be settled using the respective CME Degree Days Index reported by MDA Information Systems, Inc. for that city for that contract month, using the methodology in effect on that date, on the second Exchange Business Day after the futures contract month. For example, on January 5, 1999, the December 1998 futures contract on the CME Chicago HDD Index would have been settled at 940.5 Heating Degree Days.

**40303.B. Final Settlement**

Clearing members holding open positions in a CME Degree Days Index futures contract at the termination of trading in that contract shall make payment to or receive payment from the Clearing House in accordance with normal variation performance bond procedures based on a settlement price equal to the final settlement price.

**40304. [RESERVED]****40305. - 06.[RESERVED]**

(End Chapter 403)

**INTERPRETATIONS AND SPECIAL NOTICES  
RELATING TO CHAPTER 403  
LIMITATION OF LIABILITY AND DISCLAIMER**

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## **Exhibit B**

### **CME Rulebook**

(additions underscored)

#### **Chapter 405**

### **CME Seasonal Strip Degree Days Index Futures**

#### **40500. SCOPE OF CHAPTER**

This chapter is limited in application to CME Seasonal Strip Degree Days Index futures: the CME Seasonal Strip Heating-Degree-Days (CME SSHDD) Index and the CME Seasonal Strip Cooling Degree-Days (CME SSCDD) Index. In addition to this chapter, CME Seasonal Strip Degree Days Index futures shall be subject to the general rules and regulations of the Exchange insofar as applicable.

For purposes of this chapter, unless otherwise specified, times referred herein shall refer to and indicate Chicago time.

#### **40501. CONTRACT SPECIFICATIONS**

##### **1. Heating Degree Days and Cooling Degree Days**

The daily average temperature is defined as the arithmetic average of the maximum and minimum temperature recorded between midnight and 11:59p .m. as reported by MDA Information Systems, Inc.

For each day, Heating-Degree-Days (HDD) is the greater of (1) zero, (2) 65 degrees Fahrenheit minus the daily average temperature.

For each day, Cooling-Degree-Days (CDD) is the greater of (1) zero, (2) the daily average temperature minus 65 degrees Fahrenheit.

##### **2. The CME Seasonal Strip Degree Days Indexes and Listing Cities**

Each defined CME Seasonal Strip Degree Days index below is the accumulation of like Degree Days over the season.

##### Cooling Degree Days Strips:

- May – September

Atlanta Hartsfield International Airport (WBAN 13874)

Chicago O'Hare International Airport (WBAN 94846)

Cincinnati-Northern Kentucky ( Covington) Airport (WBAN 93814)

Dallas – Ft. Worth International Airport (WBAN 03927)

Las Vegas McCarran International Airport (WBAN 23169)

Minneapolis-St. Paul International Airport (WBAN 14922)

New York La Guardia Airport (WBAN 14732)

Portland International Airport (WBAN 24229)

Sacramento Executive Airport (WBAN 23232)

- July – August

Atlanta Hartsfield International Airport (WBAN 13874)

Chicago O'Hare International Airport (WBAN 94846)

Cincinnati-Northern Kentucky ( Covington) Airport (WBAN 93814)

Dallas – Ft. Worth International Airport (WBAN 03927)

Las Vegas McCarran International Airport (WBAN 23169)

Minneapolis-St. Paul International Airport (WBAN 14922)

New York La Guardia Airport (WBAN 14732)

Portland International Airport (WBAN 24229)

Sacramento Executive Airport (WBAN 23232)

Heating Degree Days Strips:

- November – March  
Atlanta Hartsfield International Airport (WBAN 13874)  
Chicago O'Hare International Airport (WBAN 94846)  
Cincinnati-Northern Kentucky (Covington) Airport (WBAN 93814)  
Dallas – Ft. Worth International Airport (WBAN 03927)  
Las Vegas McCarran International Airport (WBAN 23169)  
Minneapolis-St. Paul International Airport (WBAN 14922)  
New York La Guardia Airport (WBAN 14732)  
Portland International Airport (WBAN 24229)  
Sacramento Executive Airport (WBAN 23232)
- December – February  
Atlanta Hartsfield International Airport (WBAN 13874)  
Chicago O'Hare International Airport (WBAN 94846)  
Cincinnati-Northern Kentucky (Covington) Airport (WBAN 93814)  
Dallas – Ft. Worth International Airport (WBAN 03927)  
Las Vegas McCarran International Airport (WBAN 23169)  
Minneapolis-St. Paul International Airport (WBAN 14922)  
New York La Guardia Airport (WBAN 14732)  
Portland International Airport (WBAN 24229)  
Sacramento Executive Airport (WBAN 23232)

A separate futures contract shall be listed for each strip. The accumulation period of each CME SSHDD or CME SSCDD begins with the first calendar day of the first month of the strip, and ends with the last calendar day of the last month of the defined strip.

**40502. TRADING SPECIFICATIONS**

**40502.A. Trading Schedule**

Futures contracts shall be scheduled for trading and delivery during such hours in such months as may be determined by the Exchange.

**40502.B. Trading Unit**

The size of the unit of trading shall be \$20 times the respective CME Seasonal Strip Degree Days Index.

**40502.C. Price Increments**

The minimum price fluctuation on the CME Seasonal Strip Degree Days Index futures shall be 1 index point and have a value of \$20.

**40502.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.

**40502.E. [Reserved]**

**40502.F. [Reserved]**

**40502.G. Termination of Trading**

Futures trading shall terminate at 9:00 a.m. on the second Exchange Business Day after the last calendar day of the last month of the defined strip.

**40502.H. [Reserved]**

**40502.I. [Reserved]**

**40503. SETTLEMENT PROCEDURES**

**40503.A. Final Settlement Price**

All futures contracts remaining open at the termination of trading shall be settled using the respective CME Seasonal Strip Degree Days Index reported by MDA Information Systems, Inc. for that city for that contract period, using the methodology in effect on that date, on the second Exchange Business Day after the last calendar day of the last month of the defined strip. For example, on April 3, 2001, the November 2000 - March 2001 futures contract on the CME Chicago Nov-Mar '01 SSHDD Index would have been settled at 5660.0 Heating Degree Days. 40503.B. Final Settlement Clearing members holding open positions in a CME Seasonal Strip Degree Days Index futures contract at the termination of trading in that contract shall make payment to or receive payment from the Clearing House in accordance with normal variation performance bond procedures based on a settlement price equal to the final settlement price.

**40504. [RESERVED]**

**40505 - 06 [RESERVED]**

(End Chapter 405)

**INTERPRETATIONS & SPECIAL NOTICES  
RELATING TO CHAPTER 405  
LIMITATION OF LIABILITY AND DISCLAIMER**

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## **Exhibit C**

### **CME Rulebook**

(additions underscored)

### **Chapter 411** **CME Pacific Rim CAT Index Futures**

#### **41100. SCOPE OF CHAPTER**

This chapter is limited in application to CME Pacific Rim CAT Index futures. In addition to this chapter, CME Pacific Rim CAT Index futures shall be subject to the general rules and regulations of the Exchange insofar as applicable.

For purposes of this chapter, unless otherwise specified, times referred herein shall refer to and indicate Chicago time.

#### **41101. CONTRACT SPECIFICATIONS**

##### **1. Cumulative Average Temperature (CAT)**

The daily average temperature is defined as the arithmetic average accumulated over a twenty-four (24) hour period as reported by MDA Information Systems, Inc using data received from the Japan Meteorological Agency for the following meteorological station:

- Toyko, Japan (WMO 47662): Between 0100 and 2400 JST the current day.

##### **2. The CME Pacific Rim CAT Indexes**

Each particular CME Pacific Rim CAT Index is the accumulation of the daily average temperatures over a calendar month. The accumulation period of each CME Pacific Rim CAT Index futures contract begins with the first calendar day of the contract month and ends with the last calendar day of the contract month.

#### **41102. TRADING SPECIFICATIONS**

##### **41102.A. Trading Schedule**

Futures contracts shall be scheduled for trading and delivery during such hours in such months as may be determined by the Exchange.

##### **41102.B. Trading Unit**

The size of the unit of trading shall be ¥2,500(Japanese Yen) times the CME Pacific Rim CAT Index.

##### **41102.C. Price Increments**

The minimum price fluctuation of each CME Pacific Rim CAT Index futures contract shall be .01 index point and have a value of ¥25 (Japanese Yen).

##### **41102.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.

##### **41102.E. Termination of Trading**



Futures trading shall terminate at 9:00 a.m. on the fifth Exchange Business Day after the futures contract month.

#### **41103. SETTLEMENT PROCEDURES**

##### **41103.A. Final Settlement Price**

All futures contracts remaining open at the termination of trading shall be settled using the CME Pacific Rim Index reported by MDA Information Systems, Inc. for that contract month, using the methodology in effect on that date, on the first Exchange Business Day that is at least two calendar days after the futures contract month. For example, on June 4, 2007, the May 2007 futures contract on the Tokyo Index would have been settled at 467.20 degrees.

##### **41103.B. Final Settlement**

Clearing members holding open positions in a CME Pacific Rim CAT Index futures contract at the termination of trading in that contract shall make payment to or receive payment from the Clearing House in accordance with normal variation performance bond procedures based on a settlement price equal to the final settlement price.

(End Chapter 411)

#### **INTERPRETATIONS & SPECIAL NOTICES RELATING TO CHAPTER 411 LIMITATION OF LIABILITY AND DISCLAIMER**

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## **Exhibit D**

### **CME Rulebook**

(additions underscored)

### **Chapter 411A** **Options on CME Pacific Rim CAT Index Futures**

#### **411A00. SCOPE OF CHAPTER**

This chapter is limited in application to options on CME Pacific Rim CAT Index futures. In addition to this chapter, options on CME Pacific Rim CAT Index futures shall be subject to the general rules and regulations of the Exchange insofar as applicable.

For purposes of this chapter, unless otherwise specified, times referred herein shall refer to and indicate Chicago time.

#### **411A01. OPTIONS CHARACTERISTICS**

##### **411A01. A. Contract Months and Trading Hours**

Options contracts shall be listed for such contract months and scheduled for trading during such hours as may be determined by the Exchange.

##### **411A01. B. Trading Unit**

The trading unit shall be an option to buy, in the case of the call, or to sell, in the case of the put, one respective CME Pacific Rim CAT Index futures contract as specified in Chapter 411.

##### **411A01.C. Minimum Fluctuations**

The price of an option shall be quoted in terms of the respective CME Pacific Rim Seasonal Index. Each Seasonal Index point represents ¥25 (Japanese Yen). For example, a quote of 2 index points represents ¥50 (Japanese Yen). The minimum fluctuation shall be .01 index point (also known as one tick), equal to ¥25 (Japanese Yen).

##### **411A01.D. Exercise Prices**

Exercise prices shall be stated in terms of the respective CME Pacific Rim CAT Index futures contract. In addition, exercise prices shall also be at intervals of .01 index points (e.g., 25.10, 25.11, 25.12, etc.).

At the commencement of option trading in a contract month, the Exchange shall list put and call options at intervals of .01 index points in a range of 0 to 1500 index points upon demand evidenced in the options pit. New options may be listed for trading up to and including the termination of trading.

The Exchange may modify the provisions governing the establishment of exercise prices as it deems appropriate.

##### **411A01.E. 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.

##### **411A01.F. Termination of Trading**

Options trading shall terminate on the same date and time as the underlying futures contract.

#### **4011A02. EXERCISE AND ASSIGNMENT**

In addition to the applicable procedures and requirements of Chapter 7, the following shall apply to the exercise of the CME Pacific Rim CAT options.

**411A02.A. Exercise of Option by Buyer**

An option may be exercised by the buyer only on the termination of Trading Day. To exercise an option the clearing member representing the buyer shall present an exercise notice to the Clearing House by 7:00 p.m. on the day of exercise.

An option that is in the money and has not been liquidated prior to the termination of trading shall, in the absence of contrary instructions delivered to the Clearing House by 7:00 p.m. on the day of expiration by the clearing member representing the option buyer, be exercised automatically.

**411A02.B. Assignment**

Exercise notices accepted by the Clearing House shall be assigned through a process of random selection to clearing members with open short positions in the same series. A clearing member to which an exercise notice is assigned shall be notified thereof as soon as practicable after such notice is assigned by the Clearing House, but not later than 45 minutes before the opening of Regular Trading Hours in the underlying futures contract on the following Business Day.

The clearing member assigned an exercise notice shall be assigned a short position in the underlying futures contract if a call is exercised or a long position if a put is exercised. The clearing member representing the option buyer shall be assigned a long position in the underlying futures contract if a call is exercised and a short position if a put is exercised.

All such futures positions shall be assigned at a price equal to the exercise price of the option and shall be marked to market in accordance with Rule 814 on the Trading Day of acceptance by the Clearing House of the exercise notice.

(End Chapter 411A)

**INTERPRETATIONS & SPECIAL NOTICES**  
**RELATING TO CHAPTER 411A**  
**LIMITATION OF LIABILITY AND DISCLAIMER**

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## **Exhibit E**

### **CME Rulebook**

(additions underscored)

### **Chapter 412** **CME Pacific Rim Seasonal CAT Index Futures**

#### **41200. SCOPE OF CHAPTER**

This chapter is limited in application to CME Pacific Rim Seasonal CAT Index futures. In addition to this chapter, CME Pacific Rim Seasonal Index futures shall be subject to the general rules and regulations of the Exchange insofar as applicable.

For purposes of this chapter, unless otherwise specified, times referred herein shall refer to and indicate Chicago time.

#### **41201. CONTRACT SPECIFICATIONS**

##### 1. Cumulative Average Temperature

The daily average temperature is defined as the arithmetic average of the hourly temperatures accumulated over a twenty-four (24) hour period as reported by MDA Information Systems, Inc. using data received from the Japan Meteorological Agency for the following meteorological station

:

- \_\_\_\_\_ Tokyo, Japan (WMO 47662): Between 0100 and 2400 JST the current day.

##### 2. The Pacific Rim Seasonal CAT Indexes

Each particular CME Pacific Rim Seasonal index is the accumulation of the daily average temperatures over a minimum of two, and a maximum of seven, consecutive calendar months. A separate futures contract shall be listed for each strip. The accumulation period of each CME Pacific Rim CAT strip index begins with the first calendar day of the first month of the strip, and ends with the last calendar day of the last month of the defined strip.

#### **41202. TRADING SPECIFICATIONS**

##### **41202.A. Trading Schedule**

Futures contracts shall be scheduled for trading during such hours and in such months as may be determined by the Exchange.

##### **41202.B. Trading Unit**

The size of the unit of trading shall be ¥2,500 (Japanese Yen) times the respective CME Pacific Rim Seasonal CAT Index.

##### **41202.C. Price Increments**

The minimum price fluctuation on the CME Pacific Rim Seasonal Index futures contract shall be .01 index point and have a value of ¥25 (Japanese Yen).

##### **41202.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.

##### **41202.E. Termination of Trading**

Futures trading shall terminate at 9:00 a.m. on the second Exchange Business Day after the last calendar day of the last month of the defined strip.

### 41203. SETTLEMENT PROCEDURES

#### 41203.A. Final Settlement Price

All futures contracts remaining open at the termination of trading shall be settled using the respective CME Pacific Rim Seasonal Index reported by MDA Information Systems, Inc. for that contract period, using the methodology in effect on that date, on the second Exchange Business Day after the last calendar day of the last month of the defined strip. For example, on October 2, 2007, the July 2007 - September 2007 Osaka Seasonal Index would have been settled at 2571.7 degrees.

#### 41203.B. Final Settlement

Clearing members holding open positions in a CME Pacific Rim Seasonal Index futures contract at the termination of trading in that contract shall make payment to or receive payment from the Clearing House in accordance with normal variation performance bond procedures based on a settlement price equal to the final settlement price.

(End Chapter 412)

### INTERPRETATIONS & SPECIAL NOTICES RELATING TO CHAPTER 412 LIMITATION OF LIABILITY AND DISCLAIMER

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## **Exhibit F**

### **CME Rulebook**

(additions underscored)

#### **Chapter 412A**

#### **Options on CME Pacific Rim Seasonal CAT Index Futures**

##### **412A00. SCOPE OF CHAPTER**

This chapter is limited in application to options on CME Pacific Rim Seasonal Strip CAT Index futures. In addition to this chapter, options on CME Pacific Rim Seasonal Strip CAT Index futures shall be subject to the general rules and regulations of the Exchange insofar as applicable.

For purposes of this chapter, unless otherwise specified, times referred herein shall refer to and indicate Chicago time.

##### **412A01. OPTIONS CHARACTERISTICS**

###### **412A01. A. Contract Months and Trading Hours**

Options contracts shall be listed for such contract months and scheduled for trading during such hours as may be determined by the Exchange.

###### **412A01. B. Trading Unit**

The trading unit shall be an option to buy, in the case of the call, or to sell, in the case of the put, one respective CME Pacific Rim Seasonal Strip CAT Index futures contract as specified in Chapter 412.

###### **412A01.C. Minimum Fluctuations**

The price of an option shall be quoted in terms of the respective CME Pacific Rim Seasonal CAT Index. Each Seasonal Index point represents ¥25 (Japanese Yen). For example, a quote of 2 index points represents ¥50 (Japanese Yen). The minimum fluctuation shall be .01 index point (also known as one tick), equal to ¥25 (Japanese Yen).

###### **412A01.D. Exercise Prices**

Exercise prices shall be stated in terms of the respective CME Pacific Rim Seasonal CAT Index futures contract. Eligible exercise prices shall be at intervals of .01 CME Pacific Rim Seasonal CAT Index point (e.g., 4510.01, 4510.02, 4510.03, etc.).

At the commencement of options trading in a contract month, the Exchange shall list put and call options at intervals of .01 index points in a range 0 to 8500 index points upon demand evidenced in the options pit. New options may be listed for trading up to and including the termination of trading.

The Exchange may modify the provisions governing the establishment of exercise prices as it deems appropriate.

###### **412A01.E. 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.

###### **412A01.F. Termination of Trading**

Options trading shall terminate on the same date and time as the underlying futures contract.

##### **412A02. EXERCISE AND ASSIGNMENT**

In addition to the applicable procedures and requirements of Chapter 7, the following shall apply to the exercise of the CME Pacific Rim Seasonal Strip CAT options.

###### **412A02.A. Exercise of Option by Buyer**

An option may be exercised by the buyer only on the termination of Trading Day. To exercise an option the clearing member representing the buyer shall present an exercise notice to the Clearing House by 7:00 p.m. on the day of exercise.

An option that is in the money and has not been liquidated prior to the termination of trading shall, in the absence of contrary instructions delivered to the Clearing House by 7:00 p.m. on the day of expiration by the clearing member representing the option buyer, be exercised automatically.

**412A02.B. Assignment**

Exercise notices accepted by the Clearing House shall be assigned through a process of random selection to clearing members with open short positions in the same series. A clearing member to which an exercise notice is assigned shall be notified thereof as soon as practicable after such notice is assigned by the Clearing House, but not later than 45 minutes before the opening of Regular Trading Hours in the underlying futures contract on the following Business Day.

The clearing member assigned an exercise notice shall be assigned a short position in the underlying futures contract if a call is exercised or a long position if a put is exercised. The clearing member representing the option buyer shall be assigned a long position in the underlying futures contract if a call is exercised and a short position if a put is exercised.

All such futures positions shall be assigned at a price equal to the exercise price of the option and shall be marked to market in accordance with Rule 814 on the Trading Day of acceptance by the Clearing House of the exercise notice.

(End Chapter 412A)

**INTERPRETATIONS & SPECIAL NOTICES**  
**RELATING TO CHAPTER 412A**  
**LIMITATION OF LIABILITY AND DISCLAIMER**

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**Exhibit G**

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

**Position Limits, Position Accountability and Reportable Level Table**

(attached under separate cover)



## Exhibit H

### **Position Limit/Accountability Levels and Market Overview**

#### **Position Limit/Accountability Levels**

The new Contracts will mirror the currently listed weather futures and options contracts with single month accountability levels of 10,000 contracts. These changes will be reflected in the position accountability table in Chapter 5.

The 10,000 per month contract accountability level has been vetted with the CFTC due to the fact that Section 151 of the Act was vacated and reverted back to Section 150, which does not have an interpretation for position accountability for Alternative products. The CFTC acknowledged that weather is unique and that it is an excluded commodity and has no deliverable supply. In the conversation, CME noted the following: 1) that due to the secured locations of the recording instruments, major airports, that the index is not susceptible to manipulation. 2) A number of weather data suppliers are monitoring the data being released by these governmental agencies and any errors would be reported and corrected promptly by the reporting agencies.

#### **Cash Market and Risk Management Application**

HDD/CDD and CAT contracts are employed by a wide variety of enterprises, largely operating in the context of the energy industry, to manage their temperature related risks.

Energy companies, for example, have been known to sell HDD or CDD contracts to manage the risk of diminished revenues under mild weather conditions, noting that the quantity of energy sold is heavily contingent upon consumer demand driven by temperatures. Large scale energy consumers including automobile manufacturers and large residential building operators may buy HDD or CDD contracts to hedge against the risk of rising utility costs under extreme weather conditions.

Retailers whose sales are sensitive to weather conditions might control inventory costs more effectively through the use of HDD or CDD contracts. Beer consumption reaches a seasonal peak in the summer and cool weather can put a dent in beer sales. “the 2000 Preliminary Report for SABMiller, “History shows that on a summer day with the temperature over 25 degrees Celsius, sales can be more than 50% greater than on a day where the temperature is under 20 degrees...”

Amusement parks rely on favourable weather noting that people stay home if conditions are too hot or cold. It is a simple matter for parks to correlate temperatures to attendance and construct a “collar” to hedge revenues should temperatures fall outside a preferred range.

Let’s focus on the use of temperature contracts on the part of utility companies. Utilities may utilize HDD or CDD contracts to guard against so-called “volumetric risks.” These volumetric risks are based upon the quantity of energy that might be expected to be marketed throughout the course of a heating or cooling season. These transactions rely upon the intuitive and well-documented relationship between power consumption and temperature extremes.

Thus, if the daily average temperatures during the course of a winter season were abnormally high, utility firms might face depressed demand for heating. Utilities have traditionally increased consumer prices to offset lower retail consumption volume. However, intensifying competition caused by ongoing deregulation has made it increasingly difficult for utilities to raise prices arbitrarily. Therefore, it becomes necessary for utility firms to address volumetric risks using other means such as HDD or CDD contracts.

A simple numerical example is presented here to illustrate the hedging application of HDD futures. Let us assume that ABC Utility Co. sells electricity in the Chicago area at \$0.08/Kilowatt hour. Under normal winter weather conditions, ABC may forecast sales of 1 billion Kilowatt-hours (kWh) with a projected revenue of

\$80 million. However, ABC is concerned about the possibility of El Niño weather effects and would like to utilize HDD futures to hedge against the possibility of warmer than expected winter conditions.

In order to construct a hedging strategy, it will become necessary to quantify the relationship between economic outcomes (such as sales revenues) and weather conditions (as implied in weather futures prices). In particular, one wants to find an appropriate hedge ratio (HR) that might balance the anticipated change in revenues (denoted as  $\Delta\text{Revenues}$ ) with the changing value of the subject derivatives contracts ( $\Delta\text{Value of Futures}$ ). A statistical regression between revenues and weather conditions is frequently useful in assessing these quantitative relationships.

Assume that, based on historical regressions, ABC finds that its sales are positively correlated with the CME Group Chicago HDD Index with a sensitivity ratio of 0.80. I.e., a 1% change in HDD may give drive a 0.8% change in ABC's anticipated \$80 million in revenues. Assuming futures are trading at 1,250.00, an effective hedge ratio may be calculated as follows.

$$\begin{aligned} \text{Hedge Ratio (HR)} &= \Delta\text{Revenues} \div \Delta\text{Value of Futures} \\ &= (\$80,000,000 \times 0.8\%) \div (1,250 \times \$20 \times 1\%) \\ &= 2,560 \text{ futures contracts} \end{aligned}$$

This suggests that ABC might sell 2,560 futures to hedge the risks of higher than expected temperatures and lower than expected revenues. Assume that temperatures are mild and that the HDD Index settles at 1,150. This decline of 100 HDDs (8% of original value of 1,250) implies that sales may decline from 1 billion to 936 million kWh for sales of \$74,880,000 ( $\$0.08/\text{kWh} \times 936,000,000 \text{ kWh}$ ). This implies a revenue shortfall of \$5.12 million. But this shortfall is offset by a corresponding \$5.12 million profit in futures.

	Revenues	Futures
Now	Expected Revenues of \$80 million or 1 billion kWh @ \$0.08/kWh	Sell 2,560 futures @ 1,250
Later	Realized Revenues of \$74,880,000	Futures Settled @ 1,150
	Revenue Shortfall of \$5,120,000	Profit of 100 HDDs or \$5,120,000 (= 2,560 x 100 x \$20)

(We should note that this analysis is based upon an assumption that the relationship between sales and temperatures is linear when, in fact, it is more likely that a non-linear relationship exists such that energy demands will increase (decrease) exponentially as a function of rising (falling) HDDs. In other words, the hedge ratio becomes rather dynamic and may therefore require active adjustment in response to changing conditions.)

Proper use of temperature related contracts not only enables utility firms to stabilize revenue streams but may also be used to provide at least a partial hedge to the cost side of the equation. Note that most utility firms operate under inherent capacity limitations. Electricity represents a non-storable commodity. If temperature suddenly rise or decline dramatically, utility firms may need to deploy less efficient generators to meet the sudden jump in demand or may be compelled to purchase electricity from the power grid in the face of soaring demands and rising prices. This implies that energy prices may increase, and transmission costs may grow simultaneously. In this case, utility firms may find both weather derivatives and energy contract useful to stabilize its economic outcomes, i.e., to hedge both volumetric and cost-based risks.

### Weather Market Overview

It has been estimated that weather exerts a significant impact upon approximately one-third (1/3rd) of U.S. economic activity. Noting that the Gross Domestic Product (GDP) of the U.S. totalled some \$20.5 trillion in 2018, this suggests that weather conditions exerted an influence over some \$6.8 trillion in GDP in 2018.

The impact that weather has on businesses such as energy and agriculture is particularly acute. However, not only energy and agriculture observe the weather conditions. The lists of other economic sectors that are affected by the weather include construction and transportation sectors that have to contend with delays and budget overruns. The retail and entertainment sectors have a similar situation when weather turns unfavourable. A retailer may have stocked up on winter clothing only to have the season be unseasonably warm, causing markdowns at the end of the season to move merchandise, and incurring a loss. Entertainment such as concerts, municipal parades, ski resorts, amusement parks etc. can be impacted by rain, cold and heat translating into lost revenue.

Some of the sellers of weather products are insurance and reinsurance companies along with hedge and pension funds that are looking for assets that are uncorrelated to their current portfolio holdings.

## Exhibit I

### CME Rulebook Chapter 5 ("Trading Qualifications and Practices")

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

Instrument Name	Globex Symbol	Outright			Spreads	
		Globex Non-Reviewable Ranges (NRR)	NRR: Globex Format	NRR: Ticks	NRR: Globex Format	NRR: Minimum Outright Ticks
<u>CME Degree Days Index Futures - PORTLAND HDD</u>	<u>H7</u>	<u>25 index points</u>	<u>25</u>	<u>25</u>	<u>N/A</u>	<u>N/A</u>
<u>CME Seasonal Strip Degree Days Index Futures - PORTLAND HDD NOV</u>	<u>H7X</u>	<u>25 index points</u>	<u>25</u>	<u>25</u>	<u>N/A</u>	<u>N/A</u>
<u>CME Seasonal Strip Degree Days Index Futures - PORTLAND HDD DEC</u>	<u>H7Z</u>	<u>25 index points</u>	<u>25</u>	<u>25</u>	<u>N/A</u>	<u>N/A</u>
<u>CME Degree Days Index Futures - PORTLAND CDD</u>	<u>K7</u>	<u>25 index points</u>	<u>25</u>	<u>25</u>	<u>N/A</u>	<u>N/A</u>
<u>CME Seasonal Strip Degree Days Index Futures - PORTLAND CDD MAY</u>	<u>K7K</u>	<u>25 index points</u>	<u>25</u>	<u>25</u>	<u>N/A</u>	<u>N/A</u>
<u>CME Seasonal Strip Degree Days Index Futures - PORTLAND CDD JUL</u>	<u>K7N</u>	<u>25 index points</u>	<u>25</u>	<u>25</u>	<u>N/A</u>	<u>N/A</u>
<u>Pacific Rim Index Futures - TOKYO CAT</u>	<u>G6</u>	<u>100 index points</u>	<u>100</u>	<u>100</u>	<u>N/A</u>	<u>N/A</u>
<u>Pacific Rim Seasonal Strip Index Futures - TOKYO CAT MAY</u>	<u>G6K</u>	<u>100 index points</u>	<u>100</u>	<u>100</u>	<u>N/A</u>	<u>N/A</u>
<u>Pacific Rim Seasonal Strip Index Futures - TOKYO CAT JUL</u>	<u>G6N</u>	<u>100 index points</u>	<u>100</u>	<u>100</u>	<u>N/A</u>	<u>N/A</u>
<u>Pacific Rim Seasonal Strip Index Futures - TOKYO CAT NOV</u>	<u>G6X</u>	<u>100 index points</u>	<u>100</u>	<u>100</u>	<u>N/A</u>	<u>N/A</u>
<u>Pacific Rim Seasonal Strip Index Futures - TOKYO CAT DEC</u>	<u>G6Z</u>	<u>100 index points</u>	<u>100</u>	<u>100</u>	<u>N/A</u>	<u>N/A</u>