#### CX Futures Exchange, L.P. Rule 40.2 New Contract Submission—Daily Aggregate Snowfall Index Swaps Contract Submission #2018-8

October 25, 2018

CX Futures Exchange, L.P. ("CX" or "Exchange") hereby certifies its listing of the following new contract: Daily Aggregate Snowfall Index ("DASI") Swaps Contract. This submission is being made in accordance with Section 5c(c)(1) of the Commodity Exchange Act, as amended, 7 U.S.C. §1 et seq. ("Act") and Commodity Futures Trading Commission ("Commission") Rule 40.2 thereunder:

- 1. The text of the proposed contract terms and conditions is attached.
- 2. The proposed listing date of the contract will be within 45 days of the effective date of the terms and conditions of the contract, but no less than two days following receipt by the Commission of this submission.
- 3. Attached, please find a certification that: (1) the contract complies with the Commodity Exchange Act, and the Commission's regulations thereunder; and (2) that CX posted on its website a notice of this pending product certification with the Commission and a copy of the submission, concurrent with the filing of this submission with the Commission.
- 4. A concise explanation and analysis of the product and its compliance with applicable provisions of the Act, including core principles, and the Commission's regulations thereunder, appears below.
- 5. Confidentiality for this submission is not requested.

# CONCISE EXPLANATION AND ANALYSIS OF THE PRODUCT AND ITS COMPLIANCE WITH APPLICABLE PROVISIONS OF THE ACT, INCLUDING CORE PRINCIPLES AND THE COMMISSION'S REGULATIONS THEREUNDER

Pursuant to Commission Rule 40.2(a)(3)(v), the following is a concise explanation and analysis of the product and its compliance with the Act and Commission rules.

#### I. Introduction

CX Futures Exchange, Inc. ("CX"), is adding a new swaps contract to its complex of weather-related contracts. This contract is a swap (cash-settled option) on snowfall. Specifically, Daily Aggregate Snowfall Index ("DASI") Swaps Contracts are swaps (cash-settled options) that offer a contingent claim payout dependent upon, and as a function of, the daily aggregate snowfall amount measured by the U.S. National Weather Service at various locations (typically airports) near major U.S. metropolitan areas. As with CX's other weather-related contracts, including its

named storm and rainfall contracts, the DASI contract will provide an opportunity for participants to hedge commercial risks arising from specified weather conditions.

The great majority of the contract specifications and trading mechanics of the snowfall contract follow those already applicable to other CX weather-related contracts. For example, the amount to enter a bid on a single DASI contract (the "notional size") is \$1<sup>1</sup> and the minimum price increment is \$0.01. These retain the CX standard sizes applicable to its other weather contracts. The trading mechanics and final settlement methodology for the DASI contract are substantially similar to those of CX's Atlantic Named Stormed contract. However, as discussed in greater detail below, the payout on the DASI contract is modified somewhat from the payout associated with CX's classic binary options. Unlike a classic binary option where the pay-out remains the same regardless of how far the underlying index is from the Strike Level, the payout on the CX DASI snowfall contract varies as a function of how distant the index is from the Strike Level.

Each daily contract settles to the DASI, which is calculated from daily snowfall measurements at each location on the specified Final Settlement Date. The daily expiration cycle is similar to another complex of contracts listed on CX (i.e. daily foreign exchange binary options). After the DASI measurement is finalized, DASI positions are assigned a factor by Strike Level from 1.00 (at-the-money) to .01 (out-of-the-money). This factor is then used to calculate the Final Settlement Price.

Like all other CX contracts, trading is on a principles-only basis, and all participants are selfclearing. Like all CX contracts, the Original Margin amount for the contract always equals the maximum at-risk amount. Accordingly, the risk position of all participants is fully margined in accordance with the CX Clearinghouse, L.P. (the "Clearinghouse") Order of Registration and its rules.

The DASI contracts are not the first contracts based on measured snowfall amounts.<sup>2</sup> Nevertheless, CX developed the DASI contract in conjunction with meteorological experts at AccuWeather, making a number of changes from previously existing snowfall contracts. CX is confident that the DASI contract is in accordance with the standards of the Commission's Guideline 1, now found in Appendix C to Part 38 of the Commission's rules, including as described in greater detail below, the ability to use the snowfall contract on more than an occasional basis for mitigating commercial risk.

CX has considered the Core Principles and Commission rules thereunder. Features in the DASI contract that differ from contracts previously listed by CX or other DCMs are explained in greater detail in Section II and Section III below. With this background, in accordance with the requirements of Commission Rule 40.2, CX notes that:

#### II. **Core Principle 3**

Core Principle 3 and Rule 38.200 provides that a DCM shall not list for trading contracts that are readily susceptible to manipulation. The DASI contract is a cash settled contract based upon the

<sup>1</sup> As explained below, this amount increases somewhat during the last 7 days of trading. <sup>2</sup> In 2006, the Chicago Mercantile Exchange ('CME") listed a suite of snowfall futures and options contracts.

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objective determination of the daily aggregate snowfall amount occurring at a specific location on a specific calendar day.

The cash settlement index of the DASI contract is not readily susceptible to manipulation due to its objective nature and its determination by a government agency. The National Weather Service is an agency of the U.S. government and the CLI report(s) used as the primary settlement source are publicly available, published within 24 hours of the contract's Final Settlement Date and based on objective information. No individual can manipulate or distort this information. Nor is any individual able to affect prices on CX by manipulating these reports. Thus, the cash settlement determination is based upon publicly available, timely information that is reliable and widely accepted as an authoritative source for this information.

As with its existing weather-related contracts, CX has retained authority to use other sources of information for determining the settlement number, i.e., the snowfall amount in its discretion, if the best interest of the market so requires. This authority would only be used in the unforeseen event that National Weather Service reports were unavailable, or transmission of such report was corrupted. Such a secondary source would also be objective and verifiable. CX would document any such decision.

The contract's design also renders the contract not readily susceptible to manipulation through abusive trading strategies. First, the contract is not readily susceptible to spoofing or similar forms of trade practice abuse because bids, once submitted may not be withdrawn (although they may be modified.) This renders spoofing an ineffective strategy. Similarly, excessively bidding one Strike Level in an effort to affect the price is discouraged because the size of the payment cannot be unduly influenced by one trader; the relative size of the counter positions taken by other market participants primarily determines the Final Settlement Price. Additionally, the Final Settlement Price methodology employed removes any possible distortion of Final Settlement Prices due to excessively large bids by providing for a minimum .01 DASI Conversion Factor on all "out-of-the-money" positions; algorithmically this caps payouts at a maximum of 100:1 ratio. In light of the low dollar value of the contract, this limitation effectively limits the incentive to attempt to manipulate the market in this way.

The DASI contract has specified delivery dates that correspond to the calendar day at the snowfall measurement reporting station. Each DASI contract will be available for trading until 5:00 PM Eastern Time on the Trading Day prior to the Final Settlement Date.

CX has provided for a position accountability level of 10,000 contracts for all DASI Contracts combined.

#### A. Risk mitigation purpose of the contract

CX designed the DASI contract with the assistance of informed experts in the field and looked at the experiences of other weather-related contracts that have been listed on CX and other designated contract markets. The design of the terms and conditions is intended to mitigate the financial risks related to snowfall. The salient features of the contract are designed to enable the contract to be used on more than an occasional basis for the mitigation of commercial risks relating to snowfall, to reduce basis risk, to increase liquidity, and to ensure that the contract is not readily susceptible to manipulation.

Another designated contract market has explained that snowfall contracts enable "energy and tourism companies as well as state and local governments to more effectively manage their exposure to snowfall by providing a means to transfer their inherent risk." In addition to those risks, other risks that can be hedged by the DASI contract include costs for snowfall related services, such as snow removal, revenue losses due to lower customer traffic, such as retail shopping establishments, and losses due to the disruption of the physical transportation and other infrastructure, such as taxi receipts or highway toll collections. In particular, due to its smaller contract size, the DASI contract is intended to provide snowfall risk mitigation opportunities to small businesses that have financial risks due to snowfall.

Specifically, the DASI contract is designed to mitigate economic risk arising from snowfalls in excess of a threshold amount, i.e. the "Strike Level". Examples include a business that has costs associated with paying a plowing company for snow removal services to clear a parking lot if it snows an inch or more, but none if the snowfall is less than that; a retail store or movie theater that has lost revenue due to decreased foot traffic when snowfall exceeds 6"; or a traveler whose flight is delayed or cancelled when snowfall exceeds 3". Inversely, by purchasing options with a zero Strike Level, the operator of the snow plow company is able to hedge its risk that snowfall will not occur, depressing its revenues, despite the company's on-going fixed expenses to maintain ploughs and inventories of ice-melt or road salt.

These risks align closely with short term snowfall risk at dollar amounts affecting smaller businesses or individuals. This highlights two key design elements of the DASI contract: the daily contract expiration cycle and the \$1 minimum contract size. As explained in relation to CX's other weather-related contracts, there is no common contract size that is consistent with customary usage in any cash market and the \$1 contract size reduces basis risk for smaller businesses by enabling the participant to more closely match contract size (when traded in multiples) to its hedging needs. Certainly, snowfall risks vary widely by users of the DASI contract. Therefore, a \$1 minimum contract size is used as this maximizes market access, provides hedging granularity appropriate for smaller risk amounts and allows fine tuning of positions.

CX and AccuWeather determined that daily settlement would expand the usefulness of a snowfall contract and enable businesses to respond to the more accurate near-term snowfall forecasts that directly impact their financial interests. Furthermore, because the DASI contract permits trading until the day prior to settlement, businesses can manage their snowfall risk exposure more precisely.

#### 1. Delivery location

Although each measurement location is analogous to a specific "delivery point," deliverable supplies are not a relevant consideration for this contract nor is location relevant to construction of a pricing index. CX will list contracts at locations that have a NWS measuring station and which issue the relevant daily snowfall reports. Additional factors that may be considered are: (1) whether snowfall is likely to be a meaningful factor in commercial activity for that area; (2) metropolitan area population; (3) representative geographical diversity; and (4) market liquidity

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<sup>&</sup>lt;sup>3</sup> See, CME "Snowfall Futures and Options Fact Card."

limitations. Except for New York's Central Park reporting location, the DASI contract's measurement locations are major airports located in proximity to the listed city. These locations are well defined and almost immediately recognizable for most commercial market users.

CX intends to list approximately 25 locations at the time of market launch and will add locations in its discretion as market demand dictates. All delivery locations will be published on the CX website and made available via the Cantor Direct System. This initial list of about 25 locations provides highly localized hedging opportunities and reduces basis risk both by more precisely capturing the affected area of each snowfall and permits individual commercial interests to customize and balance the concentration of geographical risk that their business profile might inherently have.

#### 2. Contract pricing

CX uses a synchronous two-sided market mechanism to determine the price at which a contract is entered for many of the contracts that it lists for trading. However, CX also offers an alternative method for price formation, which it uses for its Atlantic Named Storm contract. During its Primary Trading Period, that contract operates as an asynchronous one-sided call market. The primary difference in these two models is that in a synchronous two-sided market, the buyer and the seller must be present in the market simultaneously in order to establish a price that is agreeable to both. In contrast, the asynchronous one-sided call market enables each participant to submit bids that are matched at the end of the call market period. This enhances liquidity in otherwise low volume markets.<sup>4</sup>

CX examined both types of pricing systems that it offers and determined that the asynchronous, single-sided call market mechanism offers greater potential benefits for participants in the DASI contract. This market structure is especially efficacious where there is no tradeable underlying instrument such as contingent claims for economic statistics releases and meteorological measurements such as snowfall. Specifically, the advantages of this market mechanism for contingent claims includes: (1) the premiums paid are exactly sufficient to satisfy all "in-themoney" payments; (2) liquidity is enhanced because there is no requirement for a simultaneous order match between at least one buyer and one seller; (3) market efficiency is increased as liquidity providers (i.e. "market makers") are not able to extract a liquidity premium from market participants; (4) there is no opportunity for riskless arbitrage between Strike Levels due to uninformed or nefarious trading.

As implemented for the DASI contract, the one-sided call market provides participants an opportunity to place bids into the market (and at that time depositing Original Margin equal to the maximum at-risk amount) with all bids converted into contract positions upon Termination of Trading. Once placed, bids may not be withdrawn and a contract position, once established, can be liquidated only by final cash settlement.<sup>5</sup> All DASI contract positions open at the time of

<sup>&</sup>lt;sup>4</sup> This operational difference is reflected in market terminology. In the case of a synchronous market, a "buyer" and "seller" must be present simultaneously and agree on price. In an asynchronous market, all participants can be referred to as "buyers," even though at settlement, some will have in-the-money positions and others will be out-of-the money, that is, have opposing settlement outcomes.

<sup>&</sup>lt;sup>5</sup> Because of the asynchronous nature of the single-sided call auction mechanism, once a position is established, it may only be exited via the DASI contract's Final Settlement process. This is designed to mitigate the detrimental effects on market information and pricing of traders placing large bids in the market and then cancelling such bids.

Final Settlement will be automatically exercised through book entry with no action necessary on the part of the holder.

The current value of each Strike Level, based on current bids in the market, will be displayed on CX's web-based trading interface. For bids placed 7 or more days before contract expiration, the DASI contract provides that all bid contract premium prices and required Original Margin deposits are \$1.00 per contract, which is also its notional value. Because the forecast accuracy of expected snowfall amounts improves significantly as the expiration date draws to within the 7-day forecast window (unlike for Atlantic Named Storms), to compensate for the accretive value contained in this information, the DASI contract provides for an increasing contract premium price per contract, and corresponding Original Margin deposit, inside of the 7-day forecast window. Table 1 shows this relationship.

The increase in Original Margin deposit is not designed to precisely account for differences in forecast accuracy, which is statistically indeterminate and unstable across time, but rather provides a known schedule that market participants will utilize to determine the timing of their bid placement. CX will monitor how market participants utilize the differentials in Table 1 and, if necessary, modify them in subsequent contract filings. Nevertheless, in all cases the amount in Original Margin will be no less than the at-risk amount.

After placing a bid, market participants may adjust their positions by switching from the current position's Strike Level to another Strike Level for the same delivery day and location by depositing any additional margin that may be required for the contract. This will enable participants to fine-tune their hedges after they obtain a position at a given Strike Level and shift their positions between Strike Levels as snow forecasts or market prices change. This includes, if desired, positions switching from a "snow" Strike Level to the zero "no snow" Strike Level. This ability to modify bid Strike Levels will assist the price discovery process and further hedging efficacy.

#### 3. Payout for losses

The payout structure for these snowfall options is more complex than for the classic CX binary option. To achieve a payout structure that satisfies the "equal to or above the Strike Level" condition, CX was required to develop a methodology for the DASI contract that would provide for payouts to be distributed across Strike Levels. That is, the payout must take into account the relative probability of snowfall at the various Strike Levels. Otherwise, all bids would be for the single, lowest Strike Level. Greater hedging efficiency (at a more reasonable cost) can be achieved however, by listing a number of Strike Levels geared to the possible severity of the snowfall.

Any such methodology must exhibit monotonically increasing payouts; that is, as Strike Levels increase (i.e. requiring more snowfall) market payouts should also increase since the probability of increasing snowfall amounts is progressively less. For example, if it is in-the-money, the payout for the 2" strike, must always have a higher payout than the 1" strike.

Moreover, depending on the snowfall forecast and market expectations, the relative payouts of adjacent strike levels should vary. For example, if 2.1" of snow is expected, the payout of the 2"

strike relative to its cost may be double that of the 1" strike<sup>6</sup>. Alternatively, market expectations of a 20" mega-storm should lead to a condition where the payouts of these two low-snowfall Strike Levels are relatively close to each other.

In other words, when the measured snowfall amount lies near two Strike Levels, the payout ratio between those options should be greater than when the market expectation lies far away from those Strike Levels. Such payouts are consistent with binary markets; deep-in-the-money binary options with different Strike Levels have virtually the same payout to cost ratios; alternatively, a binary option with an at-the-money strike will have a more favorable payout to cost ratio than the next nearby in-the-money strike.

The DASI contract achieves this as shown in Tables 2 and 3 by factoring payouts. Factors are approximately inversely proportional to the difference, measured in inches, by which the DASI snowfall amount exceeds the Strike Level.<sup>7</sup>

#### **III.** Core Principle 9—Execution of Transactions

As noted above, the trading mechanics for the DASI contract, the asynchronous single-sided call market is highly similar to that used for the Atlantic Named Storm contract. Each DASI contract opens at 5:00 PM Eastern Time on the first Trading Day. The Final Settlement Date for each contract may be any calendar day that is not more than ninety-one (91) days and not less than one (1) day from the current Trading Day as made available to Participants on the CX Direct System. Termination of Trading for each contract occurs at 5:00 PM ET on the Trading Day that precedes the Final Settlement Date. The system is available continuously (24 hours x 7 days per week) except that CX may reduce its availability for the purposes of technology maintenance, abbreviated holiday schedules, and as otherwise required by market or environmental considerations. Any such changes shall be posted on the Exchange website.

During the open period, market participants may bid for contracts by specifying the Ticker Symbol and DASI Strike Level of the contract. All bids will be at the contract premium price per contract specified in Table 1 and require Original Margin to be deposited with the Clearinghouse equal to the per-contract amount. Any such bids, once accepted by CX, may not be canceled. However, the Strike Levels of bids received by CX may be modified provided that it is still for the same measurement station and Final Settlement Date. The price difference, if any, between the original bid price and the contract premium price per contract in effect at the time of the bid modification (as specified in Table 1) must also be placed as Original Margin on deposit with the Clearinghouse.

Upon the Termination of Trading all bids are converted into positions and await completion of the Final Settlement process. This process begins as soon as the DASI is calculated and the

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<sup>&</sup>lt;sup>6</sup> This analysis can be mathematically converted to price terms and is related to binary option payouts. The relationship shown in this example is roughly equivalent to the 1" strike have a price of \$0.50 and the 2" strike having a price of \$0.25. In this case the 1" strike would return \$2 per \$1 invested whereas the 2" strike would return double that amount, that is, \$4 per \$1 invested.

<sup>&</sup>lt;sup>7</sup> Factors are roughly approximated by using the formula 1/(Actual Snowfall Amount – Strike Level). For simplicity, the actual factors are grouped into one-inch buckets and rounded down to the nearest .01.

Strike Levels that are in-the-money can be identified and offset against Strike Levels that are out-of-the-money.

The Final Settlement Price of the positions at various Strike Levels is a function of how many positions are aggregated at each Strike Level versus the total number of positions. Strike Levels that are in-the-money and closer to the DASI will have a higher Final Settlement Price than positions that are in-the-money but further from the DASI (as determined by Tables 2 and 3).

By way of example, if there are 100 contracts bid at a price of \$1.00 in each of the "0.0", "0.1", "1.0" and "2.0" Strike Levels, and if the DASI is 1.5", then the following payout table would apply:

- The "0.0" Strike Level has a Final Settlement Price of \$0.02.
- The "0.1" Strike Level has a Final Settlement Price of \$1.31.
- The "1.0" Strike Level has a Final Settlement Price of \$2.63.
- The "2.0" Strike Level has a Final Settlement Price of \$0.02.

Core Principle 9 and CFTC Rule 38.500 provide that a designated contract market shall provide a competitive, open, and efficient market and mechanism for executing transactions that protects the price discovery process of trading in the centralized market. The DASI contract provides for trading on a centralized, open and competitive market in that all prices are derived from trading on CX and not through pre-arrangement or the private negotiation of two parties<sup>8</sup> on a centralized market that is a "trading facility."

Transactions in the DASI contract occur as the result of the interaction of multiple bids that are matched (and settled) through the operation of a pre-determined, non-discretionary algorithm, clearly meeting prong (ii) of the definition.

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<sup>&</sup>lt;sup>8</sup> The Commission has always analyzed "competitive markets" as those in which the price is determined through the centralized market and not through private negotiations. The Commission has said, "Proposed §38.502 implemented the core principle's requirement that DCMs provide a market and mechanism for executing transactions that protects the price discovery process of trading in its centralized market. The rule proposed a centralized market trading requirement for all contracts listed on a DCM." "Core Principles and Other Requirements for Designated Contract Markets; Final Rule," 77 Fed Reg. 36612 (June 19, 2012)("DCM Rulemaking") at 36643. The price for these contracts, determined at the time of settlement, is determined though the central market and not as a result of any non-competitive trading activity.

<sup>&</sup>lt;sup>9</sup> Id. at 36622. Trading using an asynchronous single-side call mechanism on its face meets the definition of "trading facility." The definition of 'trading facility' under section 1a (51) of the Commodity Exchange Act is: a person or group of persons that constitutes, maintains, provides a physical or electronic facility or system in which multiple participants have the ability to execute or trade agreements, contracts, or transactions—

<sup>(</sup>i) by accepting bids or offers made by other participants that are open to multiple participants in the facility or system; or

<sup>(</sup>ii) through the interaction of multiple bids or multiple offers within a system with a pre-determined non-discretionary matching and execution algorithm.

#### IV. Core Principle 11—Financial Integrity of Transactions

Core Principle 11 and Rule 38.601 require that a contract be subject to mandatory clearing. The DASI Contracts are subject to mandatory clearing on the same terms as all other contracts cleared by the Clearinghouse.

#### V. All Remaining Requirements

All remaining Core Principles are satisfied through operation of CX and the Clearinghouse under the Rules, processes and policies applicable to the other contracts traded thereon. Nothing in this contract requires any change from current rules, policies, or operational processes.

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Based on the above analysis, CX certifies the Daily Aggregate Snowfall Index Swaps Contract as consistent with, and in accordance with the Core Principles of Section 5 of the Commodity Exchange Act, and rules thereunder.

# CERTIFICATIONS PURSUANT TO SECTION 5c OF THE COMMODITY EXCHANGE ACT, 7 U.S.C. §7A-2 AND COMMODITY FUTURES TRADING COMMISSION RULE 40.2, 17 C.F.R. §40.2

## I hereby certify that:

- (1) the Daily Aggregate Snowfall Index Swaps Contract complies with the Commodity Exchange Act, and the Commodity Futures Trading Commission's regulations thereunder; and
- (2) concurrent with this submission, CX Futures Exchange, L.P. posted on its website: a notice of this pending product certification with the Commission and a copy of this submission, concurrent with the filing of this submission with the Commission.

By: Nolan Glantz

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Title: COO

Date: 10/25/2018

#### CX FUTURES EXCHANGE, L.P. CHAPTER IX CONTRACTS

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#### IX-3300. DAILY AGGREGATE SNOWFALL INDEX SWAPS

#### (a) Scope and Underlying

- (i) These Contract Rules govern the trading on CX Futures Exchange, L.P. (the "Exchange") of the DAILY AGGREGATE SNOWFALL INDEX SWAPS CONTRACT ("DASI Contract") and are "Contract Specifications" under Rule IX-1 of the Rules of the Exchange. In general, the DASI Contract is a swap (having the characteristics of a cash-settled option on an underlying index) that will settle based upon the snowfall measurement on each calendar day (midnight to midnight local time of the given location) and will pay a dollar amount per contract to each position holder as calculated by applying the conversion factor as calculated in Tables 2 and 3 (the "DASI Conversion Factor").
- (ii) Clearing of the DASI Contract will be governed by the rules of the CX Clearinghouse, L.P. (the "Clearinghouse"). These Contract Rules constitute "Contract Rules" Under Rule I-7 of the Rules of the Clearinghouse.
- (iii) Capitalized terms used, but not defined herein, have the meanings ascribed to them in the Rules of the Exchange or the Rules of the Clearinghouse, as applicable.

#### (b) Calculation and Quotation of the Index

- (i) The Daily Aggregate Snowfall Index ("DASI") represents the total snowfall measured, typically in tenths of inches, by specific measuring stations during each station's local calendar day (midnight to midnight, local time).
- (ii) Each index point shall be quoted to the nearest one-tenth of a point and each point represents one inch of reported snowfall at the specified location (e.g. a KNYC index value of 5.5 indicates that station KNYC has reported 5.5 inches of snowfall).
- (iii) For the avoidance of doubt, any report of snowfall less than 0.1", including "trace" or similar reports of snowfall that are insufficient for measurement will result in a DASI value of zero (0).
- (iv) The DASI will be calculated by the Exchange relying primarily on data published by the National Weather Service ("NWS") in its Climate Report ("CLI"). Other weather products reported by the NWS may be used as necessary to supplement or confirm data appearing in the CLI. The Exchange makes no warranties with respect to the accuracy of the data published by the NWS and the Exchange in its discretion may use other public and private weather reporting sources to determine the value of the Daily Aggregate Snowfall Index when doing so is in the best interest of the marketplace.

#### (c) Placement of Bids

- (i) Immediately after a DASI Contract is listed, Participants, through the Exchange, will be able to bid for contracts by specifying the Ticker Symbol of the contract. All bids will be at the contract premium price per contract specified in Table 1 and require Original Margin to be deposited equal to the per-contract amount with the Clearinghouse.
- (ii) Bids may not be cancelled once entered onto the CX Direct System; provided however, the Strike Level of a bid that has been entered may be modified if (A) the modified bid is for the same measurement station and Final Settlement Date as the original bid and (B) the price difference, if any, between the original bid and the contract premium price per contract in effect at the time that the bid is modified (as specified in Table 1) is deposited as Original Margin with the Clearinghouse.
- (iii) Once a position is created by the CX Direct System the position may not be liquidated except by Final Settlement as provided under Rule IX-3300(e).

#### (d) [Reserved]

#### (e) Determination of Final Settlement Prices for each Strike Level

Each DASI position holder will receive a payout on his or her position equal to the number of contracts at each Strike Level times the respective Final Settlement Price for each contract. The Final Settlement Price for each contract at each Strike Level is calculated using the procedure in subparagraphs (i) to (iii) below and the values in Tables 2 and 3, with a minimum Final Settlement Price for any contract of \$0.01 and a maximum Final Settlement Price of \$99.99.

- (i) After the DASI is determined for each measuring station for a given Final Settlement Date, then the Exchange will determine the DASI Conversion Factor applicable to each Strike Level for that measuring station on that date as shown in Table 2. If the DASI Conversion Factor applicable to every Strike Level is 0.01, then the lowest Strike Level (in the sequence "0", "0.1", "1", et al) will have a DASI Conversion Factor of one (1.00) and all other Strike Levels will have a DASI Conversion Factor of 0.01.
- (ii) The Exchange will multiply the number of contracts bid at each Strike Level by the DASI Conversion Factor and sum these values across all Strike Levels to obtain the contract's total Residual Bid Interest.
- (iii) The Final Settlement Price for each Strike Level will equal that Strike Level's DASI Conversion Factor times the total Original Margin applicable to the contract divided by the total Residual Bid Interest, and rounded down to the nearest one cent (\$0.01).
- (iv) After determination of the Final Settlement Price for each contract as provided above, the Exchange will post for each Strike Level (A) the bid interest; (B) the Residual Bid Interest after application of the DASI Conversion Factor; and (C) the Final Settlement Price for each Strike Level.
- (v) Final Settlement of open positions in each contract will occur as soon as practical after the Exchange's calculation and verification of each day's Daily Aggregate Snowfall Index;

for the avoidance of doubt, such time is generally not later than noon of the first Business Day following the Final Settlement Date.

#### (f) Ticker Symbols

Each DASI Contract will be uniquely identified by a "Ticker Symbol" that is composed of (A) station code (e.g. KNYC), (B) Final Settlement Date and (C) Strike Price. By way of example, for a contract on at least 2 inches of snowfall in New York City on December 10, 2018, the Ticker Symbol would be WXSNOW\_KNYC20181210\_020.

#### (g) Final Settlement Date and Termination of Trading

- (i) The Final Settlement Date for each contract may be any calendar day that is not more than ninety one (91) days and not less than one (1) day from the current Trading Day as made available to Participants on the CX Direct System.
- (ii) Termination of Trading will occur at 5:00 PM ET on the Trading Day that precedes the Final Settlement Date. For example, all contracts that have a February 15th Final Settlement Date will terminate trading at 5:00 PM ET on February 14th.

#### (h) Trading Hours

Trading Hours shall begin at 5:00 PM ET on the First Trading Day and be available continuously until the Termination of Trading except that The Exchange may permit modifications to these Trading Days and Trading Hours for the purposes of (A) scheduled technology maintenance, (B) abbreviated holiday trading schedules, and (C) as required by market or environmental considerations. All such changes shall be posted on the Exchange website.

#### (i) Contract Locations

The Exchange may list contracts for any location that has adequate weather reporting capabilities to calculate the Daily Aggregate Snowfall Index. The complete list of such locations may be found on the Exchange website.

#### (j) Valid Strike Levels

The valid Strike Levels for DASI Contracts will be 0.0", 0,1" and whole 1.0" increments thereafter. From 1.0" and beyond, the full set of possible Strike Levels are made available to traders on the CX Direct System.

#### (k) Minimum Price Increment

The minimum price increment of each DASI Contract is one cent (\$0.01).

#### (1) Position Accountability Levels

The position accountability level shall be  $10,\!000$  contracts for all DASI contracts combined.

### (m) Original Margin Requirements

Original Margin shall be sufficient to cover the maximum possible loss a Participant could incur upon liquidation or expiration of a contract.

Table 1				
Trading Days prior to Final Settlement	Contract Premium and Original Margin per Contract	Per Contract Exchange Fee		
7 or more	\$1.00	\$0.02		
6	\$1.25	\$0.03		
5	\$1.50	\$0.04		
4	\$1.75	\$0.05		
3	\$2.00	\$0.06		
2	\$2.25	\$0.08		
1	\$2.50	\$0.10		

Table 2					
	Final Settlement DASI Index Value				
Strike Level	0.0"	0.1" to 0.9"	1" or more		
0.0"	1.00	0.01	0.01		
0.1"	0.01	1.00	Subtract Strike Level From DASI Index then use Table 3.		
1" or more	0.01	0.01	For Strike Level 0.1", add 0.1 to difference.		

Table 3				
	Subtract Strike Level from DASI	DASI Conversion Factor		
Final Settlement DASI Index minus Strike Level (Add 0.1 for Strike 0.1)	Strike is Above	0.01		
	0.0" to 0.9"	1.00		
	1.0" to 1.9"	0.50		
	2.0" to 2.9"	0.33		
	3.0" to 3.9"	0.25		
	4.0" to 4.9"	0.20		
	5.0" to 5.9"	0.16		
	6.0" to 6.9"	0.14		
	7.0" to 7.9"	0.12		
	8.0" to 8.9"	0.11		
	9.0" to 9.9"	0.10		
	10.0" to 10.9"	0.09		
	11.0" to 11.9"	0.08		
	12" or more	0.07		

NOTE: If after applying Table 2 and Table 3 all strikes with Open Interest have a DASI Conversion Factor of 0.01, then the lowest Strike Level (in sequence 0.0, 0.1, 1.0, et al) with Open Interest shall have a DASI Conversion Factor of 1.00 and all other Strike Levels shall have a DASI Conversion Factor of 0.01.