



**ICE NGX CANADA INC.
Rule Amendment Submission
May 15, 2020**

1. The text of the amended provisions to the ICE NGX Canada Inc. (“ICE NGX”) Contracting Party Agreement (“CPA”) are attached as the Appendix A to this submission. The text of the amended provisions of the ICE NGX Margin Methodology Guide is attached as Appendix B to this submission. The CPA and Margin Methodology Guide are part of ICE NGX’s rulebook. Additions to the text are underlined and deletions are struck through.
2. The date of intended implementation for these amendments is June 19, 2020 or such later date as determined by ICE NGX.
3. Attached, please find a certification that: (a) these rule amendments comply with the Commodity Exchange Act (the “Act”), and the Commission’s regulations thereunder; and (b) concurrent with this submission, ICE NGX posted on its website: (i) a notice of pending certification of the amendments with the Commission; and (ii) a copy of this submission.
4. A concise explanation and analysis of the operation, purpose, and effect of the amendments appears below.
5. There were no opposing views expressed regarding these amendments.
6. Confidential treatment is not requested.

**CONCISE EXPLANATION AND ANALYSIS OF THE OPERATION, PURPOSE, AND EFFECT
OF THE RULE AMENDMENT AND ITS COMPLIANCE WITH APPLICABLE PROVISIONS OF
THE ACT, INCLUDING CORE PRINCIPLES AND THE COMMISSION’S REGULATIONS
THEREUNDER**

Pursuant to Commission Rule 40.6(a)(7)(vi), the following is a concise explanation and analysis of the operation, purpose, and effect of the amendments to the ICE NGX CPA and Margin Methodology Guide.¹

ICE NGX is making this submission to make the following changes (collectively, the “Amendments”):

- the ICE NGX Contracting Party Agreement (“CPA”), to implement a change to the way ICE NGX determines a Contracting Party’s Risk Limit, and
- the ICE NGX Margin Methodology Guide, to introduce an additional category of initial margin, “Shortfall Margin”.

¹ As a registered FBOT, ICE NGX has submitted contemporaneously with this 40.6 rule amendment self-certification a notification under Commission Rule 48.8(b)(ii)(A) of a material change to its rules (i.e., the CPA and the Margin Methodology Guide).



The text of the amended CPA provisions is attached as Attachment A and the text of the amended Margin Methodology Guide provisions is attached as Attachment B. ICE NGX intends to implement the Amendments on June 19, 2020 (or on such later date as may be designated by ICE NGX).

Advance Notice Discussions

In order to improve ICE NGX's financial resources stress testing and liquidity resources stress testing, ICE NGX is implementing a new Financial Resources Stress Testing and new Liquidity Resources Stress Testing Model, each as previously discussed with Commission staff (collectively, the "Changes"). The Amendments relate to the Changes. ICE NGX is contemporaneously providing notification of the Changes to the Commission pursuant to Commission Rule § 39.18(h)(2). As a registered FBOT, ICE NGX is also contemporaneously filing self-certification of the Amendments pursuant to Commission Rule § 48.8(b)(ii)(B).

In an advance notice letter to the Commission dated April 3, 2020, ICE NGX provided staff of the Commission's Division of Clearing and Risk ("DCR") with supporting material describing the Changes and the Amendments. Through subsequent discussions between ICE NGX staff and DCR staff, DCR staff indicated they had no objections to ICE NGX providing formal notification of the Changes and self-certification of the Amendments.

A corresponding notification regarding the Changes and self-certification regarding the Amendments is also being provided to the Alberta Securities Commission ("ASC"). Through advance notice discussions between ASC staff and ICE NGX staff, ASC staff indicated they had no objections to ICE NGX providing formal notification of the Changes and self-certification of the Amendments.

Background

Implementation of the new Financial Resource Stress Testing Model will facilitate the implementation of Shortfall Margin, an additional category of initial margin designed to protect against the risks associated with Contracting Parties, as aggregated into clearing accounts, building up exposure beyond their credit capacity. Amendments to the Margin Methodology Guide relating to Shortfall Margin are included as Attachment B.

As part of implementing Shortfall Margin, ICE NGX will also change the way it determines and manages the Risk Limit for each Contracting Party. Amendments to the CPA relating to Risk Limits are included as Attachment A.

The Changes were presented to the Risk Committee (the "Risk Committee") of the ICE NGX board of directors (the "Board") on March 20, 2020. The Risk Committee unanimously recommended that the Board approve the related documentation changes. The Board unanimously approved the related documentation changes, including the Amendments, on March 20, 2020. No opposing views were expressed by members of the Risk Committee or the Board.

Compliance with Core Principles

The Amendments comply with Core Principle D - Risk Management and the rules thereunder, as the Amendments enhance ICE NGX's Financial Resource Stress Testing and Liquidity Resource Stress Testing models. Through the implementation of Shortfall Margin, Amendments also enhance



ICE NGX's ability to protect against the risks associated with Contracting Parties, as aggregated into clearing accounts, building up exposure beyond their credit capacity. The Amendments also strengthen the way that ICE NGX determines and manages the Risk Limit for each Contracting Party.



**CERTIFICATIONS PURSUANT TO SECTION 5c OF THE COMMODITY EXCHANGE
ACT, 7 U.S.C. §7A-2 AND COMMODITY FUTURES TRADING COMMISSION RULE 40.6,
17 C.F.R. §40.6**

I hereby certify that:

- (1) the amended provisions of the Contracting Party Agreement and Margin Methodology Guide comply with the Commodity Exchange Act, and the Commodity Futures Trading Commission's regulations thereunder; and
- (2) concurrent with this submission, ICE NGX Canada Inc. posted on its website: (a) a notice of pending certification of these rules with the Commission; and (b) a copy of this submission.

A handwritten signature in black ink, appearing to read 'G. Abbott', written over a horizontal line.

Greg Abbott (May 19, 2020 09:26 MDT)

By: Greg Abbott
Title: President & COO
Date: May 15, 2020

APPENDIX A

AMENDMENTS TO THE ICE NGX CONTRACTING PARTY AGREEMENT RELATING TO RISK LIMITS

AMENDMENTS TO SCHEDULE "C" - RISK MANAGEMENT POLICY

[Note: Insertions are underscored; deletions are struck through]

1. DEFINITIONS

- a. ~~“Adjusted Risk Limit” has the meaning ascribed thereto in section 8(b)(ii);~~

[Note: The numbering of paragraphs in section 1 will be updated to reflect the amendments above.]

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3. DETERMINATION OF MARGIN LIMITS

- a. ~~Exchange will determine the Margin Limit for each Contracting Party based on Collateral provided by such Contracting Party and available to Exchange in the form and as valued by Exchange pursuant to this Schedule "C".~~ The Margin Limit for each Contracting Party is the amount at which the Contracting Party's Initial Margin is equal to eighty percent (80%) of the Contracting Party's Net Equity.
- b. ~~In the event that a Contracting Party wishes to increase its Margin Limit with Exchange, the Contracting Party will be required to provide~~ by providing additional Eligible Collateral Support ~~with~~ to Exchange.

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5. ACTIVATION

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- c. A Contracting Party will be activated on the ICE NGX Trading System and/or ICE NGX Clearing System by Exchange after the Application has been accepted and all pre-requisite requirements have been satisfied under this Section 5 or otherwise under this Agreement and once Exchange has received ~~Collateral~~ Eligible Collateral Support which will be used to establish a Margin Limit for that Contracting Party.

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8. RISK MANAGEMENT

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b. Risk Limits

- ~~(i)(ii) Exchange shall set risk limits that prevent a Contracting Party's Margin Requirement from exceeding two times the Contracting Party's net worth, or two times the net worth of the Specified Entity where such entity has provided Exchange with financial statements, as adjusted by Exchange in its sole discretion (the "Risk Limit"). Exchange shall provide the Contracting Party with notification of its Risk Limit and any related updates that Exchange determines in its sole discretion are appropriate from time to time. The Contracting Party's Risk Limit is equal to the Contracting Party's Margin Limit, established in accordance with section 3 of this Schedule "C".~~
- ~~(iii) Exchange may allow the Contracting Party to exceed the Risk Limit in an amount to be determined in Exchange's sole discretion, relative to the Collateral and in accordance with certain standards to be set by Exchange from time to time (the "Adjusted Risk Limit").~~

APPENDIX B

AMENDMENTS TO THE ICE NGX MARGIN METHODOLOGY GUIDE RELATING TO SHORTFALL MARGIN

[Note: Insertions are underlined.]

4) MARGIN REQUIREMENT

Margin Requirement

ICE NGX's risk measurement model is based on quantifying the default risk of a Contracting Party as a monetary value. This monetary value is known as the Margin Requirement, which represents a measurement of *the probable exposure that a Contracting Party's portfolio might bring to the clearing operation in the event of a default by the Contracting Party.*

The Margin Requirement is made up of the sum of the following three components:

1. **Accounts Receivable ("A/R") Risk** - the value of gas/crude already delivered that generates a net amount owing to NGX;
2. **Variation Margin (mark-to-market)** - a calculation of the price at which an open position could be instantaneously liquidated given current market prices;
3. **Initial Margin (liquidation risk)** - a buffer charged to account for potential adverse changes in market prices (i.e. variation margin) during a liquidation scenario.

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Calculating Initial Margin (Liquidation Risk)

In the event of a performance failure by a Contracting Party, it may be necessary for ICE NGX to liquidate the portfolio of the failing party. The liquidation process removes the market price risk from the failing party's portfolio of open positions and quantifies the risk into an offset gain or loss.

It is possible that the price at which liquidation trades are made may vary from the estimated current market price that is used in the variation margin calculation. This can be defined as the liquidation risk, or market price risk, that NGX faces during the liquidation of a position. The mechanism used to mitigate this risk is the calculation of initial margin as part of the margin requirement. The initial margin acts as a buffer to account for changes in market prices during a liquidation scenario.

Initial margin is calculated by assessing the actual price movements that have occurred in recent history of each product, then applying a Value at Risk ("VaR") model to determine the probability of those price movements occurring during a liquidation period. Initial margin is the result of applying this probability to the current market price of each product for each forward date, and is an estimate of the risk within a certain confidence level.

1. **Model Description**

ICE NGX has transitioned the parametric VaR (Product Level IMR) calculations previously performed at the product level to a weighted historical simulation based VaR calculation at the portfolio level. The portfolio VaR calculation will be repeated for each commodity class within a portfolio. Commodity classes provide the ability to segment certain product categories to limit cross-commodity offsetting. Chargebacks will be added for conservatism to account for correlation breaks, low liquidity and new markets.

$$\text{Portfolio Final Margin Requirement} = \sum_{j=1}^{\text{all commodity classes}} (\text{Portfolio level VaR}_j + \sum_{i=1}^3 CB_{i,j})$$

Positions (product-tenor combinations) must individually meet NGX specified minimum data quality standards to be included in the portfolio VaR calculations. For positions excluded from the portfolio-level VaR calculation, a product-level IMR will be determined and added to the total margin requirement. For excluded positions no margin reductions will be provided for risk reductions toward other positions.

2. **Model Configuration**

ICE NGX configures settings within the model tools to ensure an appropriate amount of conservatism exists to ensure consistently high standards of portfolio margin performance will continue to be met. ICE NGX configures the model parameters to target portfolio-level performance not less than 99% for all 12 month periods within the reviewed historical data set. The historical data set consists of not less than 2 years of price history and a period of stress (currently the “Polar Vortex” in Q1 2014). The data is refreshed at least twice monthly.

3. **Portfolio-level VaR Calculation**

ICE NGX utilizes a non-parametric VaR calculation at the portfolio level based on an age-weighted historical simulation approach widely known as the BRW model (Boudoukh, et al., 1998). Daily portfolio value changes are estimated given current portfolio composition and historical returns for each product and future tenor within the portfolio.

The Historical VaR is estimated directly using the percentile of the empirical distribution, 99%. NGX prorates the result to a 2-day holding period.

4. **Foreign Exchange Exposure Margin**

For portfolios with product currency compositions that differ from the collateral posted currency, ICE NGX utilizes a historical Expected Shortfall model to capture the CAD:USD exchange rate volatility. The historical expected shortfall is calculated using 2 years of historical data with a 99% confidence interval over a two day hold period.

5. **Shortfall Margin**

Shortfall margin is designed to protect against the risks associated with Contracting Parties, as aggregated by clearing accounts, building up exposure beyond their credit capacity. The shortfall margin amount for a clearing account is the amount by which the clearing account's uncollateralized stress exposure exceeds the clearing account's shortfall allowance. The uncollateralized stress exposure is the largest stress loss minus portfolio margin.

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5) INITIAL MARGIN TECHNICAL INFORMATION

This section is intended to provide a technical explanation of the Value at Risk model used to determine ICE NGX's initial margin.

ICE NGX utilizes a non-parametric VaR calculation at the portfolio level based on an age-weighted historical simulation approach widely known as the BRW model (*Boudoukh, et al., 1998*). Daily portfolio value changes are estimated given current portfolio composition and historical returns for each product and forward tenor within the portfolio.

The Historical VaR is estimated directly using the percentile of the empirical distribution, 99%. NGX prorates the result to a 2-day holding period.

BRW Model

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Frequency of Model Update

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Model Implementation

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Chargebacks

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Shortfall Margin

Shortfall margin is designed to protect against Contracting Parties, aggregated by clearing accounts having risk beyond their credit capacity. ICE NGX calculates each clearing account's shortfall margin using the following approach:

1. Determine the stress scenarios for shortfall margin calculation.
All stress scenarios in stress testing calculation are included in the shortfall margin calculation.
2. Determine the amount of each clearing account's uncollateralized stress exposure.
The uncollateralized stress exposure is the largest remaining stress loss of any stress scenario, calculated as the largest stress loss minus PMM.
3. Determine each clearing account's shortfall allowance.
Some of the factors considered in determining the shortfall allowance include: internal ICE credit rating score; deteriorated financial status; non-diversified, concentrated, or illiquid portfolio(s); large exposure versus capital base.

4. Calculate the shortfall margin

The shortfall margin amount for a clearing account is the amount by which the clearing account's uncollateralized stress exposure exceeds the clearing account's shortfall allowance.

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