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August 11, 2008

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Attention: Secretary

Re: Natural Gas Exchange Inc. - Application for Registration as a Derivatives Clearing Organization

Dear Sirs/Mesdames:

Natural Gas Exchange Inc. ("NGX," "we" or "us"), a Canadian corporation, hereby applies to the United States Commodity Futures Trading Commission (the "CFTC" or the "Commission") for registration as a derivatives clearing organization ("DCO") pursuant to Section 5b(b) of the Commodity Exchange Act ("CEA" or the "Act") and Part 39 of the Commission's regulations.

NGX seeks registration as a DCO for physically settled and cash-settled transactions in electricity, natural gas and other energy commodities that are entered into on exempt commercial markets ("ECMs") operated pursuant to CEA Section 2(h)(3) (including NGX's own ECM) or on an over-the-counter ("OTC") basis under CEA Section 2(g) or 2(h)(1).¹

Business Overview

NGX is a leading trading and clearing system for energy products in the North American market. During calendar year 2007, NGX cleared 238,373 transactions with a total quantity of 11,000 Petajoules of natural gas (an aggregate notional value of approximately \$C67 billion (approximately US\$67.8 billion)²) and approximately 18 Terawatt-hours of electricity (an aggregate notional value of approximately \$C1.3 billion (approximately US\$1.32 million)). NGX's head office is located in Calgary, Alberta. NGX was incorporated in 1993 and has operated continuously since 1994.

NGX may also clear spot or forward energy transactions not subject to the CEA.

Conversions of Canadian dollars to US dollars in this application have been made using the exchange rate for December 31, 2007 of \$C0.9881/US\$.

Corporate Structure

NGX is currently a wholly owned subsidiary of TMX Group Inc. ("TMX Group"), which is also the parent company of TSX Inc., which owns and operates the Toronto Stock Exchange. Historically, NGX was comprised of two related legal entities, Natural Gas Exchange Inc. ("Market") and its wholly owned subsidiary NGX Financial Inc. ("Financial"). Market and Financial were amalgamated on November 1, 2002 to form Natural Gas Exchange Inc. ("NGX 2002"). On March 1, 2004, TMX Group acquired 100% of the shares of NGX Canada Inc. from OMHEX AB (the "Acquisition"). Immediately following the Acquisition, 6182224 Canada Inc. (a wholly owned subsidiary of TMX Group) and its then wholly owned subsidiary, NGX Canada Inc., as well as its wholly owned subsidiary, NGX 2002, amalgamated under the Canada Business Corporations Act to form NGX. This amalgamation had the effect of consolidating all of the operations relating to NGX trading and clearing businesses into NGX.

TMX Group is a corporation incorporated under the Business Corporation Act (Ontario) and has its head office in Toronto, Ontario. Its shares have been listed for trading on the Toronto Stock Exchange since November 2002. TMX Group is a reporting issuer in every province and territory of Canada and its financial information is available on Canada's SEDAR system for public company filings, located at www.sedar.ca. As of December 31, 2007, TMX Group's market capitalization was approximately \$C3.5 billion (approximately US\$3.54 billion). TMX Group's key subsidiaries operate cash and derivative markets for multiple asset classes including equities, fixed income and energy products.

In November 2005, NGX incorporated a Delaware company, NGX U.S. Inc. ("NGX US"), as a wholly owned subsidiary of NGX, to facilitate a planned expansion of its business into the United States. NGX may in the future conduct clearing operations for certain products, such as those with U.S. delivery points, through NGX US.⁴

Summary of Trading and Clearing Activities

Marketplace

NGX operates an electronic marketplace (the "Marketplace") based in Calgary, through which NGX contracting parties⁵ ("Participants") may enter into the following types of transactions:

- spot and forward physically settled natural gas contracts for delivery at various Canadian and U.S. pipeline hubs ("Physicals"); and
- swap and option contracts relating to natural gas and electricity and referencing various Canadian and U.S. pricing points ("Financials").

In September 2006, NGX acquired Alberta Watt Exchange, Ltd., a small electricity exchange based in Calgary. The exchange provides an automated procurement mechanism through which the local system operator procures electricity on a standby commitment basis to support the grid. This entity operates as a separate subsidiary and has not been integrated into NGX's trading or clearing business.

NGX recognizes that any such movement of operations into NGX US will require a change in its rules, which must be submitted for approval or self-certified in accordance with CEA Section 5c and Commission regulations.

As discussed below, all Participants must enter into a Contracting Party's Agreement with NGX.

We refer to such Physicals and Financials as "Current Contracts." NGX expects that it will add additional contracts to the Marketplace from time to time, including Physicals and Financials relating to different pricing points or delivery hubs, auction matched contracts, contracts that may settle on a different schedule, and contracts for crude oil and other physical energy commodities and their derivatives.⁶

NGX operates the Marketplace as an ECM under Section 2(h)(3) of the CEA⁷ and pursuant to orders from applicable Canadian provincial regulatory authorities, as described below. NGX is not requesting any change in status with respect to the Marketplace pursuant to this application.

Clearing Services

NGX also provides clearing services (the "Clearing Services") through which it acts as central counterparty for transactions in Current Contracts entered into on the Marketplace ("Marketplace Transactions"), certain transactions in Current Contracts executed in the OTC market ("OTC Transactions") and transactions entered into on a third party ECM pursuant to CEA section 2(h)(3) ("Third Party ECM Transactions" and, together with the Marketplace Transactions and OTC Transactions, the "Transactions").⁸

- Clearing of Transactions. Marketplace Transactions may be automatically cleared through NGX. Individuals authorized to transact on behalf of Participants ("Traders") enter anonymous bids and offers for Current Contracts on the Marketplace. On matching with another party, each Trader/Participant is notified that it has bought or sold the relevant contract from or to NGX, which immediately becomes the counterparty to both sides of the trade. The identity of the other Participant is not disclosed.
- Clearing of OTC Transactions. Participants that have arranged trades in Current Contracts outside of the Marketplace or a Third Party ECM on a bilateral OTC basis, including through an OTC broker, may submit these trades to NGX for clearing in accordance with NGX's rules.
- Clearing of Third-Party ECM Transactions. NGX also clears transactions executed on other ECMs pursuant to CEA Section 2(h)(3). Participants executing Third Party ECM Transactions must have entered into a Contracting Party's Agreement with NGX as discussed below.

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On September 6, 2007, NGX's parent company, TSX Group Inc., purchased an option in March 2009 to acquire NetThruPut Inc. ("NTP"), a Calgary, Alberta-based electronic exchange and clearing house for physically and financially settled crude oil commodity contracts. If the option is exercised, current plans are for TSX Group Inc. to integrate NTP's operations into NGX's business.

See Notification of Operation as Exempt Commercial Market, dated November 5, 2002, from Philip McBride Johnson, Esq. to the Commission; Acknowledgement of Notification, dated January 23, 2004.

NGX announced an alliance with IntercontinentalExchange Inc. ("ICE") on March 28, 2007, which involves an outsourcing by NGX of certain trading services from ICE, and the provision of clearing services by NGX for U.S. physically-settled natural gas contracts traded on the ICE platform. The alliance became operative on February 9, 2008.

For greater clarity, concurrently, with the launch of the NGX/IntercontinentalExchange Inc. alliance, Contracting Parties, if authorized by NGX, may trade in an NGX Product that is cleared by the Contracting Parties themselves as opposed to NGX. Such trades are referred to in the CPA (Appendix A) as "Bilateral Transactions".

NGX acts as a central counterparty for all cleared Transactions. NGX's clearing model does not provide for mutualisation of credit risk among Participants, however. Performance is backed by Participants' margin and a clearing guarantee fund, as described below. All Participants are required to self-clear; Participants are currently not permitted to clear positions on behalf of other Participants.

All Current Contracts are modelled after and are similar to those utilized by market participants for OTC energy derivatives, such as the forms of NAESB and ISDA documentation. The principal difference results from the fact that NGX acts as the central counterparty to all Current Contracts, which requires the addition of certain provisions, such as NGX's standard collateral requirements and liquidation rights described below.

NGX provides for several types of settlement procedures depending on the type of contract. For Financials, final settlement takes place between NGX and each Participant. For all Physicals, NGX, as the central counterparty, guarantees the performance obligations of the parties, including physical and financial settlement. The delivery/receipt mechanisms vary at each natural gas hub depending on the rules established by the hub operator. At certain hubs, NGX will handle the required delivery/receipt arrangements directly with buyers and sellers. At other hubs, NGX will randomly pair buyers and sellers, who will handle the delivery/receipt arrangements between them as required by the hub operator.

The relationship between NGX and Participants is set forth in a Contracting Party's Agreement (the "CPA") entered into between NGX and each Participant, the current form of which is attached as Appendix A. The CPA governs access to the Marketplace and Clearing Services and specifies the terms and conditions of all cleared contracts. The CPA also provides for a detailed framework of rules, including, without limitation, rules regarding Participant eligibility, risk management and default procedures.

Current Regulatory Status

As noted above, from a U.S. legal perspective, NGX operates the Marketplace pursuant to the exemption under CEA Section 2(h)(3). Pursuant to this application, NGX seeks registration on a voluntary basis as a DCO in connection with its Clearing Services.

NGX currently operates both the Marketplace and Clearing Services pursuant to exemptive relief from applicable securities and commodities legislation in the Canadian provinces of Alberta, Saskatchewan, Manitoba, British Columbia, Quebec and Ontario. The primary order, which is issued by the Alberta Securities Commission ("ASC") as principal regulator on behalf of the securities and commodities regulatory authorities in the provinces of Saskatchewan and Manitoba, is MRRS Order No. 1662761 dated December 1, 2004, and has no expiry date (the "Current ASC Order"). ¹¹

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¹⁰ All CPA section references herein are subject to change in future versions of the CPA.

NGX also operates pursuant to exemptions from the British Columbia Securities Commission (Exemption Order (COR #01102) dated September 18, 2001), the Autorité des Marches Financiers in Québec (Decision No. 2002-C-0439 dated November 29, 2002 (as revised on July 27, 2004)) and the Ontario Securities Commission (Interim Order dated November 17, 2006, as extended on November 16, 2007 and again on May 13, 2008). Copies of the relevant

DCO Registration under the CEA

Section 5b(b) of the CEA permits a DCO¹² for derivatives transactions that are excluded or exempt from regulation under the CEA, including pursuant to Sections 2(g) and 2(h), to register as such on a voluntary basis with the Commission.

As described in more detail herein, NGX constitutes a DCO as defined in Section 1a(9) of the CEA and is eligible for registration under CEA Section 5b(b). Specifically, NGX acts as a central counterparty for cleared Transactions and in that capacity enables each participant that is a party to a Transaction to substitute the credit of NGX for the credit of the parties. The Transactions are required to be excluded or exempt from regulation under the CEA pursuant to Section 2(g) or 2(h)(1) (in the case of OTC Transactions) or Section 2(h)(3) (in the case of Marketplace Transactions and Third-Party ECM Transactions).¹³

In order to be registered as a DCO, a clearing organization must demonstrate that it complies with the thirteen core principles set forth in Section 5b(c)(2) of the CEA, which relate to the following subjects: (1) financial, operational and managerial resources, (2) member and product eligibility, (3) risk management, (4) settlement procedures, (5) treatment of funds, (6) default rules and procedures, (7) rule enforcement, (8) system safeguards, (9) reporting, (10) recordkeeping, (11) public information, (12) information sharing and (13) antitrust considerations. The following discussion and the attached appendices demonstrate that NGX and its operations satisfy each of the core principles required under the CEA for registration as a DCO.

Compliance with Core Principles

1. Core Principle B: FINANCIAL RESOURCES—The applicant shall demonstrate that the applicant has adequate financial, operational, and managerial resources to discharge the responsibilities of a derivatives clearing organization.

In addressing Core Principle B, applicants and registered derivatives clearing organizations may describe or otherwise document:

- 1. The resources dedicated to supporting the clearing function:
 - a. The level of resources available to the clearing organization and the sufficiency of those resources to assure that no material adverse break in clearing operations will occur in a variety of market conditions: and
 - b. The level of member/participant default such resources could support as demonstrated through use of hypothetical default scenarios that explain assumptions and variables factored into the illustrations.

exemptive orders are attached as Appendix B. NGX has applications pending with the ASC for recognition as an exchange and clearing agency under the laws of Alberta.

A DCO is defined for this purpose as an entity that, with respect to a transaction, (a) enables each party to the transaction to substitute, through novation or otherwise, the credit of the DCO for the credit of the parties, (b) arranges or provides on a multilateral basis for the settlement or netting of obligations resulting from such transactions executed by participants, or (c) otherwise provides clearing services or arrangements that mutualise or transfer among participants in the DCO the credit risk arising from such transactions.

NGX may also clear spot or forward transactions not subject to regulation under the CEA. NGX does not believe that any provision of the CEA prohibits a registered DCO from clearing such transactions.

- 2. The nature of resources dedicated to supporting the clearing function:
 - a. The type of the resources, including their liquidity and how they could be accessed and applied by the clearing organization promptly;
 - b. How financial and other material information will be updated and reported to members, the public, if and when appropriate, and to the Commission on an ongoing basis; and
 - c. Any legal or operational impediments or conditions to access.

NGX maintains sufficient financial, operational and managerial resources to perform its functions as a DCO under the CEA.

Financial Resources

The primary financial resources that NGX uses to support its clearing activities consist of (a) the collateral NGX collects from Participants in accordance with its risk management policy, as described below (the "Risk Management Policy"), ¹⁴ and in accordance with applicable procedures described in Section 3.2 of the CPA, (b) a credit facility maintained by NGX, and (c) a guarantee fund maintained by NGX.

Collateral

Participants are required to post and maintain with NGX an aggregate amount of collateral sufficient to cover the margin requirement applicable to their NGX positions. The margin requirement is calculated as the sum of initial margin, variation margin and accounts receivable margin, which represents the net potential exposure of the Participant to NGX at any given time. The margin methodology utilized by NGX continues to evolve as market conditions change, new risk measurement techniques are developed and new products become eligible for the Clearing Services. Pursuant to the CPA, NGX has the right to amend its margin methodology as it determines necessary by providing notice to the Participants. This section describes the margin methodology currently applicable to the Transactions cleared through NGX.

Because Participants utilize NGX often for Physicals that have a long underlying settlement cycle, the accounts receivable margin is typically the largest factor in setting collateral requirements at NGX. Initial margin, which acts as security coverage to protect NGX against adverse market movements that would affect open positions in a portfolio through a liquidation period, is typically the second largest factor in setting collateral requirements. As discussed in more detail in section 3 below, NGX calculates initial margin requirements for each contract based on its Risk Management Policy, taking into account different liquidation periods and historical price volatility. Initial margins are established to cover commodity price movements during a liquidation event and are currently calculated using 2.7 standard deviations (a 99.5% confidence interval) from the last mark-to-market price (calculated using historical volatility data) over a minimum of a two-day hold (liquidation) period. Variation margin reflects the daily mark-to-market value of the relevant positions.

Acceptable forms of collateral include cash and letters of credit from an A-rated bank in Canadian or U.S. currency. Accounts payable from NGX to the relevant Participant and variation margin reflecting mark-to-market values in favor of the Participant are used as margin offsets and therefore reduce a Participant's overall collateral requirement. To use the Clearing Services, a Participant

The Risk Management Policy is set forth as a Schedule to the CPA as amended from time to time.

must post collateral or sell and deliver sufficient quantities of natural gas to generate a receivable from NGX that covers margin requirements. The minimum amount of collateral required is \$C500,000 (approximately US\$506,000), although lower amounts are acceptable under certain conditions (Risk Management Policy, Section 6.0). As of December 31, 2007, NGX held approximately \$C2.5 billion (approximately US\$2.53 billion) of collateral. In the case of Financials, the amount of posted collateral must cover initial and variation margins until the day of settlement price or index publication and determination of accounts payable/receivable. Financials generally settle on the sixth business day of the month of delivery 15. In the case of Physicals, the amount of posted collateral must cover initial and variation margin until released on each day during the delivery month with respect to the portion of the contract settled on that day. Margin is thereafter required to the extent of any amounts payable to NGX. NGX believes, based on its calculations and operating experience, that it has ready access to the required amounts of collateral to close out any Participant's positions in the event of a default by such Participant.

In an effort to collect collateral in advance of an increase in margin requirements, NGX has instituted a series of margin triggers based on a Participant's margin requirement as compared to its collateral on deposit. When the margin requirement reaches a threshold percentage of such Participant's collateral on deposit, NGX will advise the Participant and will typically request additional collateral. If such collateral is not forthcoming in a form or time frame acceptable to NGX, NGX may restrict that Participant's ability to enter into Transactions on the Marketplace or to use the Clearing Services. In certain circumstances, if the Participant is unable or unwilling to provide additional collateral as determined by NGX, NGX will provide notice of "Failure to Provide Collateral" and may invoke liquidation procedures pursuant to Section 5.6 of the CPA.

NGX's Clearing Department monitors the status of each Participant's margin requirements, collateral posted and available margin in real time and provides a daily report to NGX's Clearing Committee (which consists of the Vice-President of Clearing & Compliance and the President) identifying Participants that have reached any margin trigger. NGX's Clearing Department documents and secures daily approval from NGX's Clearing Committee for any exceptions to these general requirements. In determining whether to grant an exception, the Clearing Committee examines a number of factors, including the total amount of collateral posted by the Participant, upcoming delivery or settlement responsibilities and the time of the month in relation to those responsibilities, the level of diversification of the Participant's portfolio and the Participant's creditworthiness and track record with NGX.

Credit Facility

NGX maintains a daylight overdraft credit facility (the "Credit Facility") with a clearing and settlement bank to facilitate movements of funds on settlement days, and a line of credit from the bank to cover overnight imbalances. A copy of the Credit Facility is attached as Appendix C. The collateral arrangements and monitoring mechanisms set forth in the Risk Management Policy have been reviewed by NGX's principal lender and found to provide an acceptable level of security against a material adverse break in clearing operations due to Participant default.¹⁶

See "Additional Information Regarding Credit Facilities" (Appendix M).

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¹⁵ Settlement dates may vary depending on the type of contract and as NGX's business evolves.

Guarantee Fund

NGX maintains a \$U.S.100 million fund (the "Guarantee Fund") which only Participants (not NGX or its non-Participant creditors) may access in the event that NGX defaults on its obligations under the CPA. The Guarantee Fund is in the form of a letter of credit issued by its clearing and settlement bank under the Credit Facility and deposited with an independent trustee (currently CIBC Mellon Trust) pursuant to a deposit agreement, a copy of which is attached as Appendix D (the "Deposit Agreement"). NGX's reimbursement obligation to its clearing and settlement bank with respect to the letter of credit is supported by an unsecured guarantee from TMX Group in the amount of \$U.S.100 million. The Guarantee Fund is held for the benefit of all Participants.¹⁷

Based on its operating experience since 1994, NGX believes that these financial resources are adequate to support its operations under an appropriate range of reasonably foreseeable market conditions and Participant default scenarios. NGX has to date experienced no defaults in performance by any Participant that were beyond its capacity to remedy within its financial resources. As discussed below, NGX engages in regular stress testing to monitor its ability to handle Participant defaults under adverse market conditions.

We note that unlike some clearing organizations, NGX does not provide for mutualisation of risk among Participants. Under no circumstance would a Participant become liable for, or have to make additional contributions to NGX to cover, the loss or default of another Participant. The CEA does not require mutualisation of risk as a form of credit or financial support for registered DCOs (indeed, the definition of DCO clearly contemplates organizations that do not provide for mutualisation of risk). NGX believes that its non-mutualised, self-clearing model is sufficient to support its activities consistent with the business requirements and objectives of its Participants, which are largely commercial market participants rather than the futures commission merchants or other financial intermediaries that serve as clearing members in more traditional mutualised clearinghouses.

Managerial Resources

NGX employs an executive management team with specialized expertise in energy markets and energy clearing and system operations. The management team is located in Calgary. The current management team consists of a President, a Vice-President for Clearing & Compliance, a Vice-President of Finance & Administration, a Vice-President of Marketing, a Vice-President of U.S. Business Development, a Vice President of Corporate Development, a Vice President of IT, and Chief Legal Counsel. Reporting to the Vice-President for Clearing & Compliance are an Operations Manager, who oversees daily physical settlement operations, and a Credit Manager, who oversees real-time risk monitoring. A list of the names and contact information for the current members of the senior management team is provided in Appendix E. The management team is subject to the supervision of the Board of Directors, which has the authority to change management structure and personnel from time to time. At present, NGX has 44 employees, of which 41 are based in Calgary, one in Ontario and three in Texas.

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See "Additional Information Regarding Guarantee Fund" (Appendix N).

See Capital Adequacy Memo (Appendix J).

Operational Resources

NGX maintains office space in Calgary where all clearing-related staff works. NGX's U.S. subsidiary has acquired office space in the United States.

NGX routinely retains the services of independent consultants in support of certain areas of its business, such as IT development, risk management, legal advice, business development and marketing. NGX has historically engaged Towers Perrin Risk Capital and has currently engaged Deloitte Touche LLP as a consultant to support the quantitative analysis involved in NGX's margin model. Deloitte has extensive experience in modeling value-at-risk and portfolio management and provides quantitative support to NGX in the development and ongoing assessment of the initial margin model, backtesting of initial margin rates, reviews of margin methodology change proposals and various related quantitative tasks. NGX uses the services of an established bank as clearing bank for maintaining segregated accounts for Participants and fund transfer arrangements for all margin and settlement payments.

NGX's communications and IT systems, including the servers, switches and routers on which the clearing system operates, are located at its office in Calgary. As a safeguard against hardware malfunctions and failures, a secondary set of hardware is hosted by a third party at a second site in Calgary. The two systems operate such that failure of any hardware at one site would result in a rapid switch to the other site, as described in more detail below.

In addition, NGX maintains and periodically tests a Business Continuity Plan (the "BCP"), which is designed to ensure that the Clearing Services will not be significantly affected in the event of operational problems at our primary data site, inability to access the office space, and/or significant staffing problems. These arrangements involve a combination of alternate computer and office sites, the ability to operate systems remotely and extensive cross-training of employees.

2. <u>Core Principle C: PARTICIPANT AND PRODUCT ELIGIBILITY—The applicant shall establish (i) appropriate admission and continuing eligibility standards (including appropriate minimum financial requirements) for members of and participants in the organization; and (ii) appropriate standards for determining eligibility of agreements, contracts, or transactions submitted to the applicant.</u>

In addressing Core Principle C, applicants and registered derivatives clearing organizations may describe or otherwise document:

- 1. Member/participant admission criteria:
 - a. How admission standards for its clearing members/participants would contribute to the soundness and integrity of operations; and
 - b. Matters such as whether these criteria would be in the form of organization rules that apply to all clearing members/participants, whether different levels of membership/participation would relate to different levels of net worth, income, and credit-worthiness of members/participants, and whether margin levels, position limits and other controls would vary in accordance with these levels.
- 2. Member/participant continuing eligibility criteria:
 - a. A program for monitoring the financial status of its members/participants; and
 - b. Whether and how the clearing organization would be able to change continuing eligibility criteria in accordance with changes in a member's/participant's financial status.
- 3. Criteria for instruments acceptable to clearing:
 - a. The criteria, and the factors considered in establishing the criteria, for the types of agreements, contracts, or transactions it will clear; and

- b. How those criteria take into account the different risks inherent in clearing different agreements, contracts, or transactions and how they affect maintenance or assets to support the guarantee function in varying risk environments.
- 4. The clearing function for each instrument the organization undertakes to clear.

NGX has established admission and continuing eligibility criteria for Participants, as well as standards for determining the eligibility of contracts for clearing.

Participant Eligibility

As of December 31, 2007, NGX had approximately 154 Participants, of which 59 are organized in the United States. While the majority of Participants are commercial energy market participants, there has been a gradual increase in the participation of financial institutions and hedge funds and similar investment vehicles. Each Participant is required to execute the CPA.

Admission Requirements

The CPA requires Participants to meet certain initial admission requirements designed to evidence their institutional status and sophistication in energy markets. Participation is not open to the "retail" market. NGX believes that these limitations are consistent with the requirements for an ECM and help ensure the soundness and integrity of the Clearing Services.

A Participant must be a corporate or other business entity that has total tangible assets exceeding \$C25 million (approximately US\$25.3 million) or a net worth exceeding \$C5 million (approximately US\$ 5.1 million), or be a majority owned subsidiary of an entity or have a credit support provider meeting such requirements (CPA, Section 2.3 and Risk Management Policy). Natural persons may not be Participants. If the Participant satisfies this requirement only as a subsidiary of an entity meeting the asset/net worth test, the parent entity may be required to provide a guarantee as determined in NGX's discretion in an amount at least equal to \$C5 million (CPA, Risk Management Policy, Section 5.0). Each Participant must represent that it meets this requirement when it enters into the CPA (CPA, Section 2.5). In addition, a Participant must post collateral as required in the CPA and described above. These financial requirements are designed to limit participation to sophisticated commercial entities. NGX reviews the admission requirements periodically and, if appropriate, may modify them or adopt additional or alternative requirements.

As part of the application process, NGX provides prospective Participants with a copy of the CPA, a copy of the Deposit Agreement, and the required trader application form. NGX also requests all required financial information from the applicant and responds to any queries regarding these documents. Applications are reviewed by the NGX Clearing & Compliance staff and legal staff. NGX may request any additional information it reasonably requires in order to assess sophistication and risk regarding an applicant (CPA (Appendix A), Section 2.3 and Risk Management Policy, Section 5.0). Absent significant countervailing reasons, NGX typically approves any applicant that satisfies the eligibility requirements to become a Participant. Participants are able to access and view the NGX system after they have signed the CPA. In order to be authorized for trading on the Marketplace and/or for using the Clearing Services, Participants must also complete the required trader application form, which designates which individuals are

authorized to trade on behalf of the Participant, for which products and to what order size limits, and must post sufficient collateral.

A Participant may only trade or clear Transactions through NGX as principal, and not as agent or in a fiduciary or similar capacity. To the extent required by law, each Participant must also be an "eligible swap participant" as defined in Part 35 of the Commission's regulations, an "eligible contract participant" as defined in CEA Section 1a(12), and an "eligible commercial entity" as defined in CEA Section 1a(11). Participants that wish to engage in Physicals must at all times have the capacity to satisfy their obligations to deliver or receive the relevant commodity through the relevant pipeline or hub operator (CPA, Section 2.6).

Continuing Eligibility Requirements

Each Participant is deemed to reaffirm that it meets the initial admission requirements described above each time it clears a Transaction on NGX (CPA, Section 2.5). NGX currently conducts a rolling annual review of all Participants to ensure ongoing compliance with the eligibility requirements. Upon NGX's request, each Participant is required to file (a) audited consolidated financial statements for its fiscal year within 140 days of the end of such fiscal year (or substitute statements acceptable to NGX), (b) additional financial information reasonably necessary for the administration by NGX of the Risk Management Policy, and (c) reasonable confirmation with respect to the representations and warranties made by the Participant. Each Participant is obligated to notify NGX of any material adverse change in its financial condition or the financial condition of its credit support provider and agrees to NGX's conducting investigations, inquiries and credit checks (CPA, Section 3.1). In addition, NGX may restrict a Contracting Party's ability to transact or take any other reasonable actions with respect to a Contracting Party where its actions increase the credit exposure or pose additional risks to NGX's business (CPA (Appendix A), Risk Management Policy, Section 9.0).

Product Eligibility

NGX clears products that have been authorized in accordance with its procedures and incorporated into the CPA through an amendment. In addition to the Current Contracts, NGX contemplates that it may from time to time add new Physicals or Financials or other products relating to natural gas or electricity at different delivery or price points in the United States and Canada. In addition, it may elect to begin clearing other physical energy commodities and derivatives thereof.

Prospective new products must be approved by NGX's senior management in consultation with risk management, legal and other relevant personnel. Prior to adding a new product, NGX must determine that a reliable source of daily settlement information is available and must establish initial margin requirements and market pricing information to allow the calculation of variation margin for the new product. For Physicals, NGX must also determine that appropriate delivery procedures are in place, including nomination arrangements as required by the hub operator. New products must also be approved by its clearing and settlement bank under the Credit Facility and by

its insurer under an insurance policy (described in further detail in the Capital Adequacy Memo, Appendix J). 19

Once approved, the terms and conditions of the new product are added to the CPA by means of an amendment and posted on NGX's website. Any amendments to the CPA are provided to the ASC promptly on becoming effective.

A list of the Current Contracts may be found in the CPA.

3. <u>Core Principle D: RISK MANAGEMENT—The applicant shall have the ability to manage the risks</u>
<u>associated with discharging the responsibilities of a derivatives clearing organization through the use of appropriate tools and procedures.</u>

In addressing Core Principle D, applicants and registered derivatives clearing organizations may describe or otherwise document:

- 1. Use of risk analysis tools and procedures:
 - a. How the adequacy of the overall level of financial resources would be tested on an ongoing periodic basis in a variety of market conditions:
 - b. How the organization would use specific risk management tools such as stress testing and value at risk calculations; and
 - c. What contingency plans the applicant has for managing extreme market events.
- 2. Use of collateral:
 - a. What forms and levels of collateral would be established and collected;
 - b. How amounts would be adequate to secure prudentially obligations arising from clearing transactions and, where applicable, performing as a central counterparty;
 - c. The factors considered in determining appropriate margin levels for an instrument cleared and for clearing members/participants;
 - d. The appropriateness of required or allowed forms of margin given the liquidity and related requirements of the clearing organization;
 - e. How the clearing organization would value open positions and collateral assets; and
 - f. The proposed margin collection schedule and how it would relate to changes in the value of market positions and collateral values.
- 3. Use of credit limits:

If systems would be implemented that would prevent members/participants and other markets participants from exceeding credit limits and how they would operate.

NGX has the ability to manage the risks that arise in connection with its operations as a DCO through the use of a variety of tools and procedures, including (a) risk analysis with respect to margin levels and potential exposure to open positions, (b) use of margin, (c) valuation procedures for positions and collateral, and (d) credit and position limits. The basic principles of risk management used by NGX are set forth in the Risk Management Policy.

Risk Analysis

NGX evaluates its credit and liquidity exposures on an ongoing basis. Initial margin rates for Current Contracts are updated at least monthly and more often as needed.

NGX acknowledges the requirements applicable to accepting new contracts for clearing under Section 5c of the CEA and Part 39 of the Commission's regulations.

NGX performs periodic stress testing in Physicals and Financials (including swaps and options) by increasing and decreasing market prices to locate stress points at which exceptions occur in large open positions, i.e., prices at which the potential loss exceeds the total collateral held. The stress points and number of exceptions are recorded and reviewed by management. This periodic stress testing is designed to enable NGX to identify stress points in a simulated market environment of extreme price movement, adjust initial margin rates, if deemed necessary, and address any potential credit and liquidity exposures before they arise. In conducting the stress testing, NGX assumes adverse price movements of the relevant Current Contracts and then calculates the required variation margin for the positions in each Participant's portfolio using the real-time risk monitoring system described below. An exception will be noted when NGX's uncollateralized exposure to a Participant under the assumptions (the amount of any required margin over the amount posted as collateral) would exceed the Participant's initial margin. The results of the stress testing will be used to determine if the initial margin rates should be increased or decreased to ensure that NGX holds adequate collateral amounts in the context of changing market conditions. NGX continues to develop and enhance its stress testing program on an ongoing basis.

Individual margin rates for a subset of key products, such as those for which large positions are held, are backtested on a regular basis to validate the adequacy of the underlying data used to determine the volatility history of each relevant product and time period. Daily price changes through the quarter are compared to those assumed for purposes of determining initial margin to determine the number of cases in which market movements exceeded those assumed and to ensure that the number of exceptions in a dataset (a) does not pose a material risk that would jeopardize the collateral coverage of a portfolio and (b) does not fall outside of the expectation for exceptions.

Use of Margin

NGX's principal credit risk management tool is its use of collateral. NGX engages in real-time risk monitoring through an electronic system that compares the amount of required collateral for each Participant's positions with the amount of collateral actually on deposit for that Participant.

NGX calculates an aggregate margin requirement for each Participant, which is composed of (a) initial margin for all positions, (b) variation margin for all positions, (c) net amounts payable to NGX in respect of Physicals in the delivery phase and (d) net amounts payable to NGX in respect of the settlement of Financials. Participants must post sufficient collateral to cover their margin requirement, utilizing any combination of the acceptable forms of collateral and offsets.²⁰

An example of a margin calculation for a Physical is set forth in Appendix F.

NGX believes that these margin requirements and related procedures provide sufficient protection against the risk of default or insolvency of a Participant even under adverse market conditions.

Valuation of Positions and Collateral

NGX values open positions for margin purposes on the basis of the relevant settlement price or current market prices for each Current Contract, as set forth in the Risk Management Policy. Due

See "Additional Information Regarding Use of Margin" (Appendix O).

to the liquid nature of the collateral (letter of credit from an A-rated bank or better, or cash), NGX values all collateral at full face value without any haircut or other reduction.

Credit and Position Limits

NGX sets an aggregate margin limit, or credit limit, for each Participant in accordance with the Risk Management Policy based on each Participant's collateral on deposit. NGX also has the right under the CPA to impose limits on open positions held by Participants (CPA, Section 3.5) but currently does not impose limits other than the margin limit. In addition to open positions with NGX, each Participant may have multiple positions in OTC Transactions for which NGX does not have information and therefore is unable to determine such Participant's net aggregate open positions. Hence NGX does not apply position limits based on open positions with NGX held by a Participant. NGX has the right to restrict further trading if it determines that a Participant is unable to provide additional collateral as required, or if it believes a position would be too large to liquidate in an orderly fashion in the event of Participant default.

NGX currently maintains a credit watch list for certain Participants based on NGX's assessment of the possibility that a Participant's financial condition could result in a future default. The watch list is confidential, is used for internal monitoring purposes only and does not directly affect any Participant's margin limit. NGX typically conducts a review of the financial status of any Participant placed on the watch list.

4. <u>Core Principle E: SETTLEMENT PROCEDURES—The applicant shall have the ability to (i) complete</u> settlements on a timely basis under varying circumstances; (ii) maintain an adequate record of the flow of funds associated with each transaction that the applicant clears; and (iii) comply with the terms and conditions of any permitted netting or offset arrangements with other clearing organizations.

In addressing Core Principle E, applicants and registered derivatives clearing organizations may describe or otherwise document:

- 1. Settlement timeframe:
 - a. Procedures for completing settlements on a timely basis during times of normal operating conditions; and
 - b. Procedures for completing settlements on a timely basis in varying market circumstances including during a period when one or more significant members/participants have defaulted.
- 2. Recordkeeping:
 - a. The nature and quality of the information collected concerning the flow of funds involved in clearing and settlement; and
 - b. How such information would be recorded, maintained and accessed.
- 3. Interfaces with other clearing organizations:

How compliance with the terms and conditions of netting or offset arrangements with other clearing organizations would be met, including, among others, common banking or common clearing programs.

NGX has established procedures for completing settlements on a timely basis under varying circumstances and maintains an adequate record of the flow of funds associated with each cleared transaction.

As described above, many Marketplace Transactions are automatically cleared through NGX. In addition, Participants that have arranged transactions in the Current Contracts outside of NGX, either bilaterally or through an OTC broker, may submit these trades to NGX for clearing.

Submission currently takes place through telephone conversations or email correspondence with NGX. NGX may develop additional options for electronic submission of such transactions. In addition, NGX clears transactions executed on other ECMs. Upon acceptance of any transactions for clearing, each Participant will be deemed to have entered into an offsetting contract with NGX.

Settlement procedures vary depending on the type of contract and may change with the addition of new types of contracts. As a general matter, payment and delivery obligations between NGX and each Participant are determined on a net basis.²¹

For cash-settled Transactions, such as Financials, final settlement payments are made between the Participant and NGX through the parties' respective clearing accounts at its clearing and settlement bank. Settlement of Financials currently occurs on the sixth business day of the relevant month, in accordance with the CPA. Settlement of option contract premiums currently occurs within two business days of the transaction date.

Because NGX nets physical delivery obligations, physical Transactions currently can effectively be closed out through another transaction (including an OTC transaction) that offsets the delivery obligations in whole or in part. Transactions that are closed attract realized gains/losses that are settled on the settlement dates specified in the CPA, currently the 25th of the month following delivery.

Transactions in Current Contracts that are not closed or are partially closed as described above have a delivery/receipt obligation. The mechanics for delivery or receipt are outlined in the relevant schedule to the CPA but in all cases require the hub operator's confirmation that the delivery/receipt obligations have been performed on a daily basis.

For Physicals, NGX currently offers two methods of settlement depending on the type of contract: NGX-mediated settlement and assigned delivery settlement.²²

Banking records are kept in paper form for a period of at least five years and can be accessed by NGX's Vice-President of Finance & Administration as well as by designated staff members in NGX's Finance Department.

Because NGX does not enter into a Transaction without entering into a matching offsetting Transaction, the total settlement amounts from all Transactions net to a zero balance (absent default), except for the payment of fees and taxes to NGX.

NGX does not currently maintain and does not in the near term contemplate entering into any netting or offset arrangements with other clearing organizations.

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NGX recognizes that any material modifications to its clearing and settlement operations to accommodate new contracts, including without limitation, more traditional futures-style cleared products, will require a change in its rules, which must be submitted for approval or self-certified in accordance with CEA Section 5c and Commission regulations.

See "Additional Information Regarding Settlement Procedures" (Appendix P).

5. <u>Core Principle F: TREATMENT OF FUNDS—The applicant shall have standards and procedures designed</u> to protect and ensure the safety of member and participant funds.

In addressing Core Principle F, applicants and registered derivatives clearing organizations may describe or otherwise document:

- 1. Safe custody:
 - a. The safekeeping of funds, whether in accounts, in depositories, or with custodians, and how it would meet industry standards of safety;
 - b. Any written terms regarding the legal status of the funds and the specific conditions or prerequisites for movement of the funds; and
 - c. The extent to which the deposit of funds in accounts in depositories or with custodians would limit concentration of risk.
- 2. Segregation between customer and proprietary funds:

Requirements or restrictions regarding commingling customer funds with proprietary funds, obligating customer funds for any purpose other than to purchase, clear, and settle the products the clearing organization is clearing, or procedures regarding customer funds which are subject to cross-margin or similar agreements, and any other aspects of customer fund segregation.

- 3. Investment standards:
 - a. How customer funds would be invested consistent with high standards of safety; and
 - b. How the organization will gather and keep associated records and data regarding the details of such investments.

NGX has established procedures designed to ensure the safekeeping of Participant funds deposited as collateral. Since clearing takes place only between Participants acting in a principal capacity, and not on behalf of other entities, NGX does not hold (and accordingly the CPA does not address the treatment of) funds of Participants' customers.

The CPA, together with related arrangements between NGX and its settlement bank, provides for the safekeeping of cash collateral posted by Participants. NGX deposits all cash collateral posted by a Participant in an interest-bearing account at its clearing and settlement bank that is segregated from the corporate funds of NGX and any of its affiliates or subsidiaries. Each Participant's cash collateral is held in a separate such account.²³

6. <u>Core Principle G: DEFAULT RULES AND PROCEDURES—The applicant shall have rules and procedures designed to allow for efficient, fair, and safe management of events when members or participants become insolvent or otherwise default on their obligations to the derivatives clearing organization.</u>

In addressing Core Principle G, applicants and registered derivatives clearing organizations may describe or otherwise document:

- 1. Definition of default:
 - i. The events that will constitute member or participant default:
 - ii. What action the organization would take upon a default and how the organization would otherwise enforce the definition of default; and
 - iii. How the organization would address situations related to but which may not constitute an event of default, such as failure to comply with certain rules, failure to maintain eligibility standards, actions taken by other regulatory bodies, or other events.
- 2. Remedial action:

The authority pursuant to which, and how, the clearing organization may take appropriate action in the event of the default of a member/participant which may include, among other things, closing out positions, replacing positions, set-off, and applying margin.

See "Additional Information Regarding Treatment of Funds" (Appendix Q).

3. Process to address shortfalls:

Procedures for the prompt application of clearing organization and/or member/participant financial resources to address monetary shortfalls resulting from a default.

4. Use of cross-margin programs:

How cross-margining programs would provide for clear, fair and efficient means of covering losses in the event of a program participant default.

5. Customer priority rule:

Rules and procedures regarding priority of customer accounts over proprietary accounts of defaulting members/participants and, where applicable, in the contest of specialized margin reduction programs such as cross-margining or trading links with other exchanges.

NGX has rules and procedures in place to allow for the efficient, fair, and safe management of Participant defaults and insolvencies. As described above, Participants are only permitted to "self-clear" and cannot carry positions at NGX on behalf of customers. Therefore, NGX's default procedures do not address issues related to customer accounts in the event of a Participant's default.

Definition of Default²⁴

A Participant will be deemed to be in default under the CPA if (a) it fails to make delivery when required under a contract, (b) if fails to take delivery when required under a contract, (c) it fails to make payments required under a contract, (d) it fails to deposit collateral when required or (e) an "Event of Default" has occurred and is continuing.

Under Section 3.9 of the CPA, an Event of Default in respect of a Participant will be deemed to have occurred upon the occurrence and continuation of one of the following events:

- a. Credit Support Default:
 - i. failure by the Participant or any credit support provider to comply with or perform any agreement or obligation under any instrument provided in relation to collateral (a "credit support document") after any applicable grace period has elapsed;
 - ii. the expiration or termination of such credit support document or the failing or ceasing of such credit support document to be in full force and effect for the purpose of the CPA;
- b. Misrepresentation: A representation of the Participant (or a guarantor) in the CPA or any credit support document proves to have been incorrect or misleading in any material respect;
- c. Bankruptcy: The Participant or any credit support provider is insolvent or is the subject of certain bankruptcy proceedings; or
- d. Merger Without Assumption: The Participant or any credit support provider consolidates or amalgamates with, or merges with or into, or transfers all or substantially all its assets to, another entity and:

As discussed previously, terms and conditions of the CPA are amended from time to time.

- i. the resulting, surviving or transferee entity fails to assume all of the Participant's obligations or the obligations of such credit support provider under the CPA or any credit support document; or
- ii. the benefits of any credit support document fail to extend to the performance by such resulting, surviving or transferee entity of its obligations under the CPA.

With respect to Financials, failure by a Participant to perform its obligations thereunder or breach by a Participant of a material representation or warranty thereunder will also constitute a default.

Remedies and Procedures on a Participant's Default

NGX's rights exercisable upon the occurrence of a default are described in Section 5.5 of the CPA, with respect to physically settled Transactions, and Section 8.2 of the CPA, with respect to Financials. In general, in the case of a default, NGX actions may include:

- Request additional collateral.
- Suspend the Participant's rights to enter into Transactions through NGX until such time as the Default is remedied to the full satisfaction of NGX. The Participant would remain obligated to perform under any existing Transactions during the suspension.
- Accelerate, terminate and net existing Transactions.
- Enter into liquidation or close out Transactions to offset obligations of the defaulting Participant.
- Realize upon the Participant's collateral.
- Terminate the CPA with the Participant.

Upon NGX's exercise of any of these remedies, any amount payable under any contract by the defaulting Participant becomes immediately due and payable.

If NGX determines to offset, in whole or in part, obligations of the defaulting Participant, it may enter into liquidation or close out Transactions for the account of the defaulting Participant as set forth in Sections 5.6 and 8.3 of the CPA. Any such Transactions are offset against the defaulting Participant's other outstanding positions. Following such allocation, NGX determines a net settlement amount owing to or by such Participant, which becomes due and payable immediately. If any net settlement amount is owed to the defaulting Participant, NGX pays such amount and assumes all of the rights of such Participant under the offsetting Transactions.

NGX is also entitled to specified damages in the case of a failure to make or take delivery or a failure to pay under physically settled contracts (CPA Sections 5.1-5.3). In the event of a failure to deliver by a seller, for example, the seller is obligated to pay to NGX an amount equal to the reasonable direct costs and damages incurred by NGX as a result of the seller's failure to deliver, including the cost of purchasing a replacement quantity of the relevant commodity, costs imposed by the pipeline or hub as a result of the failure, interest and, in certain cases, for example during a system constraint period (defined as a potential constraint at a particular hub, determined by NGX in its sole discretion), additional liquidated damages. Similar damage calculations apply in the event of a failure to pay or a failure to take by the buyer.

The CPA also specifies Participants' remedies in the event of a default by NGX. In the case of a failure to pay, failure to deliver or failure to take delivery for a physically settled contract, the CPA specifies a damage measure similar to that in the case of a Participant's default (CPA Sections 5.1-5.3). In the case of a default by NGX with respect to a swap transaction, the Participant would have all rights under applicable law. In any of the foregoing cases, if performance is not made within five business days, the Participant may, as described above, file a demand under the Guarantee Fund. NGX may direct the trustee not to pay if (a) the five business day period has not elapsed, (b) less than 20 days have passed since either the claiming Participant or NGX initiated mediation proceedings, (c) either the claiming Participant or NGX has initiated arbitration proceedings in which a decision has not yet been issued, or (d) the amount with respect to the Participant's claim has been satisfied. The Participant may reinstate its claim after the relevant period or the conclusion of any arbitration proceeding.

In addition, in the case of NGX's insolvency, the Participant is entitled to accelerate, terminate and net all outstanding Transactions. Upon such termination, NGX will calculate the net mark-to-market value of the relevant Transactions using bids obtained for replacement Transactions from qualifying market participants. Following such calculation, either NGX or the Participant, as the case may be, will be required to pay the relevant net mark-to-market amount to the other in settlement of all such Transactions. If a Participant terminates its Transactions in this manner, NGX will have the right to terminate all or a portion of Transactions with other Participants. ²⁶

Since NGX's default procedures were adopted in substantially their current form in 2001, NGX has experienced one material Participant default. In that case, NGX successfully used the available remedies and did not default on its obligations as a result of the Participant's failure. Several other defaults by Participants have been addressed without the need to invoke NGX's liquidation remedies (including cases where the Participant performed its obligations to NGX notwithstanding the default).

NGX does not currently participate in cross-margining arrangements with other clearing organizations.

7. <u>Core Principle H: RULE ENFORCEMENT—The applicant shall (i) maintain adequate arrangements and resources for the effective monitoring and enforcement of compliance with rules of the applicant and for resolution of disputes; and (ii) have the authority and ability to discipline, limit, suspend, or terminate a member's or participant's activities for violations of rules of the applicant.</u>

In addressing Core Principle H, applicants and registered derivatives clearing organizations may describe or otherwise document:
Surveillance:

- 1. Arrangements and resources for the effective monitoring of compliance with rules relating to clearing practices and financial surveillance.
- 2. Enforcement:

 Arrangements and resources for the effective enforcement of rules and authority and ability to discipline and limit or suspend a member's/participant's activities pursuant to clear and fair standards.
- 3. Dispute resolution:

²⁵ NGX believes Transactions entered into pursuant to the CPA qualify as eligible financial contracts ("EFCs") which have specific protections in an insolvency or bankruptcy under certain Canadian laws. Legal analysis of Transactions as EFCs is provided under separate cover.

²⁶ See Appendix K for a description of how Canadian insolvency laws apply to an NGX insolvency and its Participants.

Where applicable, arrangements and resources for resolution of disputes between customers and members/participants, and between members/participants.

NGX maintains adequate arrangements and resources for the effective monitoring and compliance with NGX's rules by Participants and for the resolution of disputes that arise from Transactions traded or cleared through NGX. NGX has the authority and ability to discipline, limit, suspend or terminate a Participant's use of the Clearing Services for violations of NGX's rules.

Code of Conduct

Section 6 of the CPA establishes a code of conduct applicable to Participants, which prohibits fraud, dishonest conduct, manipulation or attempted manipulation of prices (including by spreading inaccurate information or reporting false transactions) and other activities detrimental to the market. In the case of a violation, NGX may suspend the breaching Participant and exercise the default remedies described above.

In addition, NGX may exercise its right to suspend a Participant if it determines, in its sole discretion, that (a) an adverse change in the Participant's financial condition has occurred, (b) marketing irregularities have been caused by the Participant, including manipulation and false reporting, or (c) an event or circumstance has occurred which may detrimentally affect a Participant's regulatory approvals in respect of its performance under the CPA. If a Participant is suspended, NGX may prevent it from clearing any transactions (or specified transactions) and exercise the default remedies described above.

Monitoring

NGX monitors both the Marketplace and the Clearing Services. Marketplace monitoring is conducted by NGX marketing and operations staff largely by tracking current market prices, both in other marketplaces and the OTC markets, for actively traded Current Contracts in real time. Such market price information is used to resolve trades in error and to assist with end-of-day settlement prices in Current Contracts. Clearing Services monitoring is conducted by NGX's clearing staff to ensure compliance with the Risk Management Policy and with delivery and settlement responsibilities. The clearing staff is aided by detailed reports and information provided by its clearing and settlement bank and various hub operators.

Section 6.8 of the CPA provides staff members designated by NGX with broad authority to investigate, examine documents and take such other actions as are reasonably necessary or advisable to verify compliance by all Participants with the CPA or to review any matter that has resulted in a suspension. Each Participant is required to provide copies of any documents and records directly related to its activities upon request and to make a person knowledgeable of the matter under investigation available.

Dispute Resolution

NGX has established mediation and arbitration procedures with respect to disputes involving the CPA or any Transaction executed or cleared on NGX. Participants agree that all disputes in respect of a material amount or with a material consequence to the initiating party and which arise in respect of the CPA or any transaction executed or cleared on NGX will be referred to mediation.

If the dispute is not resolved by mediation within 20 days, it will be referred to binding arbitration. (CPA, Schedule B)

8. <u>Core Principle I: SYSTEM SAFEGUARDS—The applicant shall demonstrate that the applicant (i) has established and will maintain a program of oversight and risk analysis to ensure that the automated systems of the applicant function properly and have adequate capacity and security; and (ii) has established and will maintain emergency procedures and a plan for disaster recovery, and will periodically test backup facilities sufficient to ensure daily processing, clearing, and settlement of transactions.</u>

In addressing Core Principle I, applicants and registered derivatives clearing organizations may describe or otherwise document:

- 1. Oversight/risk analysis program:
 - a. Whether a program addresses appropriate principles and procedures for the oversight of automated systems to ensure that its clearing systems function properly and have adequate capacity and security. The Commission believes that the guidelines issued by the International Organization of Securities Commissions (IOSCO) in 1990 and adopted by the Commission on November 21, 1990 (55 FR 48670), as supplemented in October 2000, are appropriate guidelines for an automated clearing system to apply.
 - b. Emergency procedures and a plan for disaster recovery; and
 - c. Periodic testing of back-up facilities and ability to provide timely processing, clearing, and settlement of transactions.
- 2. Appropriate periodic objective system reviews/testing:
 - a. Any program for the periodic objective testing and review of the system, including tests conducted and results; and
 - b. Confirmation that such testing and review would be performed or assessed by a qualified independent professional.

NGX has established an oversight and risk analysis program for its electronic systems, for both the Marketplace and Clearing Services, to ensure that they function properly and have adequate capacity and security. NGX has developed emergency procedures and a disaster recovery plan and conducts periodic testing of key system functions.

Oversight/Risk Analysis Program

NGX has designed its computer systems with target availability in excess of 99% during trading hours. During 2007, system availability was approximately 99.88%.

NGX has developed and maintains its automated systems in a manner consistent with the principles set forth in the Commission's Policy Statement Concerning the Oversight of Screen-Based Trading Systems.²⁷ NGX notes in particular, as these principles relate to the Clearing Services, that:

- (a) The system meets all applicable legal standards, regulatory policies and/or market custom.
- (b) The system is designed to operate in a manner that is equitable for all Participants. As noted above, there is only one class of Participants, and all Participants have equal access to the system.

55 Fed. Reg. 48670 (adopting the "Principles for the Oversight of Screen-Based Trading Systems for Derivative Products" formulated by eight jurisdictions which comprised Working Party 7 of the Technical Committee of IOSCO), as supplemented by IOSCO in October 2000.

- (c) NGX has analyzed, and continues to analyze, the system to address vulnerabilities (including risks of unauthorized access, internal failures, attacks and natural catastrophes).
- (d) Applicable procedures under the CPA have been established to ensure the competence, integrity and authority of system users and to ensure that access is not arbitrarily denied. In particular, NGX has established procedures for Participants to designate persons entitled to access the system (CPA, Section 3.1)
- (e) The CPA contains detailed statements and disclaimers concerning the status of the electronic systems and the limitations on NGX's liability to Participants for system failures.

Under the CPA, NGX undertakes to use commercially reasonable efforts to implement and maintain security systems and procedures designed to prevent unauthorized access to its electronic systems through any network connections between the Participant and NGX. NGX monitors the system and has agreed to take commercially reasonable steps to prevent fraud and breaches of security. Upon discovering any fraud or breach of security, NGX has agreed to notify the affected Participant and take all commercially reasonable measures to remedy the situation, including halting the Participant's access to the system. (CPA, Section 3.3(j)). In accordance with this undertaking, NGX has implemented a number of security measures. Electronic communications between client software and NGX host software are protected by an encryption protocol. Virtual and direct remote access to NGX's system is permitted only through NGX's password-protected business network and requires an additional level of authentication. Network devices such as firewalls and routers are strictly controlled through secure protocols and can only be accessed from within the network or over a secure VPN (Virtual Private Network) connection. In addition, NGX performs regular vulnerability threat assessments.

NGX's primary data center is located in a controlled-access computer room facility at NGX's office in Calgary, while the secondary site is located in a secure "card access only" building maintained by Telus, the largest telecommunications company in Western Canada and the second largest in the country. The methods and processes employed by NGX with respect to security have been reviewed by TMX Group and have been determined to meet TMX Group's standards. In addition, NGX uses the COBIT (Control Objectives for Information and Related Technology) standards as a guide in the maintenance of its security environment.

Emergency Procedures and Disaster Recovery

NGX operates a parallel, duplicate network in a separate physical location that is updated on a real-time basis. As a result, in the event of a malfunction in one network, NGX can continue to operate its Marketplace and Clearing Services with a minimum of interruption and loss of data. As a general matter, the system is designed so that in the event of a network failure, the system can be switched to an alternate network in a reasonable period of time. The primary server and the duplicate network are connected through a direct fiberlink. Each site has an independent internet connection, supplied by different internet providers. Either site can fully support the NGX trading and clearing system.

NGX also performs regular back ups of data in the automated systems. A complete back up is produced once a week, with incremental back ups being carried out on a daily basis. The back ups are removed and stored off-site on a weekly basis.

As noted above, NGX has developed a BCP and Disaster Recovery Plan designed to ensure the continued functioning of the Trading System and the Clearing Services in the event of certain disasters and emergencies, such as inaccessibility to the NGX premises or office, power outages, illness or evacuation. NGX has a "BCP Team" designed to handle all crucial business functions for the immediate period following a disaster. Employees have been issued company laptops, that are updated regularly, to use during disaster scenarios, and an alternative work site has been established to accommodate employees if NGX is not accessible. NGX employees can also access the NGX network over either one of two VPN connections; one being located at the primary NGX office site and the other being located at the off-site data centre location, each running on connections supplied by different internet providers. TMX Group provides independent oversight of NGX's BCP and conducts an annual internal audit. Pursuant to the BCP and in conjunction with NGX's ongoing reporting obligations to TMX Group relating to internal controls, NGX engages in regular testing of its BCP and reviews and updates the BCP each quarter.²⁸

Testing

NGX has established procedures for quality assurance and system testing that relate to system connectivity, order volumes, trade volumes and the overall integrity of the automated aspects of the Marketplace and Clearing Services. NGX conducts quality assurance and system testing for both the Marketplace and the Clearing Services. Testing of the Marketplace focuses on client software performance and testing for the Clearing Services focuses on the reports generated by NGX's electronic systems in connection with those services.

9. <u>Core Principle J: REPORTING—The applicant shall provide to the Commission all information necessary for the Commission to conduct the oversight function of the applicant with respect to the activities of the derivatives clearing organization.</u>

In addressing Core Principle J, applicants and registered derivatives clearing organizations may describe or otherwise document:

- 1. Information available to or generated by the clearing organization that will be made routinely available to the Commission, upon request and/or as appropriate, to enable the Commission to perform properly its oversight function, including information regarding counterparties and their positions, stress test results, internal governance, legal proceedings, and other clearing activities;
- 2. Information the clearing organization will make available to the Commission on a non-routine basis and the circumstances which would trigger such action;
- 3. The information the organization intends to make routinely available to members/participants and/or the general public; and
- 4. Provision of information:

- a. The manner in which all relevant routine or non-routine information will be provided to the Commission, whether by electronic or other means; and
- b. The manner in which any information will be made available to members/participants and/or the general public.

²⁸ Further details regarding NGX's BCP and Disaster recovery plan are contained in Appendix L "NGX Business Continuity Planning Responses Memo" and the plans themselves provided to the Commission under separate cover.

NGX agrees to provide to the Commission, upon request, all information necessary for the Commission to conduct its oversight function of NGX's activities as a DCO. This includes information regarding Participants and their positions cleared through NGX, stress testing results, internal governance, legal proceedings and other clearing activities. Pursuant to Section 9.5 of the CPA, Participants acknowledge that NGX may disclose otherwise confidential information to regulatory authorities. NGX will make such information available to the Commission in a form acceptable to both parties.

Information concerning trading and clearing activities is also regularly provided to the ASC through the annual audit process conducted by the ASC.

All information pertaining to each individual Participant's activity is confidential and will not be disclosed to other Participants or third parties other than as required by law. NGX may publish certain aggregate market statistics on its website or in other formats. NGX advises Participants of any material changes and amendments to the CPA. Participants are granted access to a restricted area of NGX's website containing a variety of information relating to the Marketplace and the Clearing Services, including any such aggregate statistical trading information. Most general information about NGX is publicly available to any visitor to the website.

10. <u>Core Principle K: RECORDKEEPING—The applicant shall maintain records of all activities related to the business of the applicant as a derivatives clearing organization in a form and manner acceptable to the Commission for a period of 5 years.</u>

In addressing Core Principle K, applicants and registered derivatives clearing organizations may describe or otherwise document:

- 1. The different activities related to the entity as a clearing organization for which it must maintain records; and
- 2. How the entity would satisfy the performance standards of Commission regulation 1.31 (17 CFR 1.31), reserved in this part 39 and applicable to derivatives clearing organizations, including:
 - a. What "full" or "complete" would encompass with respect to each type of book or record that would be maintained;
 - b. The form and manner in which books or records would be compiled and maintained with respect to each type of activity for which such books or records would be kept;
 - c. Confirmation that books and records would be open to inspection by any representative of the Commission or of the U.S. Department of Justice;
 - d. How long books and records would be readily available and how they would be made readily available during the first two years; and
 - e. How long books and records would be maintained (and confirmation that, in any event, they would be maintained for at least five years).

NGX will maintain records of all activities related to its business as a DCO in a manner consistent with CFTC Rule 1.31 for a period of five years. NGX maintains an archive of information regarding all trading and clearing activities that is intended to permit reconstruction of each contract entered into and/or cleared through NGX. Specifically, NGX's electronic system maintains a record of end-of-day margin requirements for all Participants for the two most recent years (and paper copies of these records are maintained for seven years). NGX also keeps for seven years paper copies of the daily margin reports provided to management addressing Participants whose margin requirement exceeds certain thresholds of collateral posted. In addition, paper copies of daily reports of collateral held by NGX are retained for seven years.

NGX confirms that records required to be maintained will be open to inspection by a representative of the Commission or the U.S. Department of Justice.

11. <u>Core Principle L: PUBLIC INFORMATION—The applicant shall make information concerning the rules and operating procedures governing the clearing and settlement systems (including default procedures) available to market participants.</u>

In addressing Core Principle L, applicants and registered derivatives clearing organizations may describe or otherwise document:

Disclosure of information regarding rules and operating procedures governing clearing and settlement systems.

- a. Which rules and operating procedures governing clearing and settlement systems should be disclosed to the public, to whom they would be disclosed, and how they would be disclosed;
- b. What other information would be available regarding the operation, purpose and effect of the clearing organization's rules;
- c. How members/participants may become familiar with such procedures before participating in operations; and
- d. How members/participants will be informed of their specific rights and obligations preceding a default and upon a default, and of the specific rights, options and obligations of the clearing organization preceding and upon the member's/participant's default.

As a general matter, the rules and procedures governing clearing and settlement through NGX (including default procedures and rights and remedies upon a default) are set forth in the CPA, which is a standard form document. Each Participant must sign the CPA in order to access the Marketplace and Clearing Services. Although the CPA is not distributed publicly, it is made available to prospective Participants.

NGX may amend the CPA upon notice to the Participants (CPA, Section 1.1). As noted above, all amendments or updates are made available to Participants on NGX's website. If amendments are made, each Participant may, for a period of ten business days following the effective date of the amendment, terminate its participation in NGX. (CPA, Section 9.1(d))

Although NGX does not provide formal training to Participants, NGX staff members are available to provide assistance on accessing and trading on the Marketplace and using the Clearing Services. NGX also provides prospective Participants with information relating to the structure, rules and procedures of the Marketplace and the Clearing Services throughout the application process.

NGX's website also provides Participants with confidential access to certain other information, such as copies of material agreements, information regarding system upgrades, collateral and transaction reports for Participants, invoices with respect to settlements and information concerning new products. NGX currently maintains a help desk that allows Participants to obtain information or contact the appropriate NGX employees.

Financial information in respect of NGX is not given to Participants as a matter of course but is available upon request, subject to confidentiality provisions.

12. <u>Core Principle M: INFORMATION SHARING—The applicant shall (i) enter into and abide by the terms of all appropriate and applicable domestic and international information-sharing agreements; and (ii) use relevant information obtained from the agreements in carrying out the clearing organization's risk management program.</u>

In addressing Core Principle M, applicants and registered derivatives clearing organizations may describe or otherwise document:

- 1. Applicable appropriate domestic and international information-sharing agreements and arrangements including the different types of domestic and international information-sharing arrangements, both formal and informal, which the clearing organization views as appropriate and applicable to its operations.
- 2. How information obtained from information-sharing arrangements would be used to carry out risk management and surveillance programs:
 - a. How information obtained from any information-sharing arrangements would be used to further the objectives of the clearing organization's risk management program and any of its surveillance programs including financial surveillance and continuing eligibility of its members/participants;
 - b. How accurate information is expected to be obtained and the mechanisms or procedures which would make timely use and application of all information; and
 - c. The types of information expected to be shared and how that information would be shared.

NGX is prepared to enter into and comply with the terms of any appropriate and applicable domestic and international information-sharing agreements and to use information obtained from such agreements to further the objectives of NGX's risk management and surveillance programs. NGX recognizes that information-sharing arrangements with other clearing organizations may serve an important function as part of NGX's monitoring and oversight functions to ensure Participants' compliance with the terms of the CPA and applicable law.

NGX does not currently have any such formal information-sharing arrangements with other clearing organizations but will continue to consider the appropriateness of such arrangements, including membership in the Intermarket Surveillance Group. Section 9.5(c) of the CPA permits the disclosure of trading information as required by law. NGX also shares information informally with various regulatory authorities from time to time. NGX will inform the Commission upon entering into any formal information-sharing agreements or arrangements.

13. Core Principle N: ANTITRUST CONSIDERATIONS—Unless appropriate to achieve the purposes of this Act, the derivatives clearing organization shall avoid (i) adopting any rule or taking any action that results in any unreasonable restraint of trade; or (ii) imposing any material anticompetitive burden on trading on the contract market.

Pursuant to section 5b(c)(3) of the Act, a registered derivatives clearing organization or an entity seeking registration as a derivatives clearing organization may request that the Commission issue an order concerning whether a rule or practice of the organization is the least anticompetitive means of achieving the objectives, purposes, and policies of the Act. The Commission intends to apply section 15(b) of the Act to its consideration of issues under this core principle in a manner consistent with that previously applied to contract markets.

In accordance with Sections 5b(c)(2)(N) and 15 of the CEA, NGX will avoid (a) adopting any rule or taking any action that results in any unreasonable restraint of trade in the relevant markets for cleared contracts or (b) imposing any material anticompetitive burden on trading in the relevant markets, unless such action is appropriate to achieve the purposes of the CEA. NGX believes that the Clearing Services as operated by NGX and described in this application have not created and will not create any anticompetitive burden or restraint on trading in the electricity and natural gas markets. Furthermore, NGX believes that by reducing counterparty credit risks in those markets,

its Clearing Services enhance the competitiveness of these markets, consistent with the policies of the CEA.

Conclusion and Request for Registration

Based on this application and the materials attached hereto, NGX believes that it is eligible to register as a DCO under Section 5b(b) of the CEA and that its proposed activities in that capacity satisfy the core principles set forth in Section 5b(c)(2) of the CEA and Part 39 of the Commission's regulations. Accordingly, NGX respectfully requests that the Commission issue an order granting registration of NGX as a DCO under section 5b(b) of the CEA.

* * *

Please do not hesitate to contact the undersigned (tel. 416-947-4359) or Edward J. Rosen (tel. 212-225-2820) of our U.S. counsel, Cleary Gottlieb Steen & Hamilton LLP, for any further information the Commission or its staff may require in connection with this application. NGX hereby undertakes that if at any time prior to its registration as a DCO any material representation made in this application ceases to be true and complete, it will promptly notify the Commission in writing of any material change in the facts and circumstances discussed herein.

Respectfully submitted,

Cheryl Graden Chief Legal Counsel

Enclosures

cc: Peter Krenkel (President, NGX)

Sharon Pel (Senior Vice President, Legal and Business Affairs, TMX Group)

Appendices

- A. Current form of Contracting Party's Agreement, last amended February 8, 2008.
- B. Current Exemptive Orders granted by Canadian regulatory authorities.
- C. Credit Agreement, amended and restated as of November 1, 2007, between Natural Gas Exchange Inc. and The Toronto-Dominion Bank.
- D. Deposit Agreement, amended and restated as of November 1, 2007, between CIBC Mellon Trust Company and Natural Gas Exchange Inc.
- E. List of current NGX management and organization chart.
- F. NGX Margin Calculation Example.
- G. Amended and Restated Bank Collateral Agreement, dated June 22, 2006, between Natural Gas Exchange Inc. and The Toronto-Dominion Bank.
- H. NGX Clearing and Settlement Process Documentation.
- I. New/potential customer introduction to NGX: "Secure Trading and Clearing".
- J. Capital Adequacy Memo.
- K. NGX Insolvency Memo.
- L. NGX Business Continuity Planning Responses Memo.
- M. Additional Information Regarding Credit Facilities
- N. Additional Information Regarding Guarantee Fund
- O. Additional Information Regarding Use of Margin
- P. Additional Information Regarding Settlement Procedures
- Q. Additional Information Regarding Treatment of Funds