



**Principles for Financial Market Infrastructures
(PFMIs) Quantitative Disclosure
As of September 30, 2018**

This disclosure can also be found at www.ngx.com. For further information, please contact Operations-ICENGX-Clearing@TheIce.com or (403) 974-1700

TABLE OF CONTENTS

Principle 4: Credit Risk 4

Principle 5: Collateral 7

Principle 6: Margin 7

Principle 7: Liquidity Risk 14

Principle 12: Exchange-of-Value Settlement Systems 16

Principle 13: Participant-Default Rules and Procedures 16

Principle 14: Segregation and Portability 17

Principle 15: General Business Risk 17

Principle 16: Custody and Investment Risks 18

Principle 17: Operational Risk 19

Principle 18: Access and Participation Requirements 21

Principle 19: Tiered Participation Arrangements 22

Principle 20: FMI Links 22

Principle 23: Disclosure of Rules, Key Procedures, and Market Data 22

Observance of CPSS-IOSCO PFMI



All values stated within these disclosures are Canadian currency and converted to such using the Bank of Canada noon day rate as at the end of the quarter, unless otherwise stated. The CDN/USD rate was 1.2909 as at September 30, 2018.

Principle 4: Credit Risk	
<p>Principle 4.1 – Total value of default resources (excluding initial and retained variation margin), split by clearing service if default funds are segregated by clearing service, split by:</p> <ul style="list-style-type: none"> (a) pre-funded <ul style="list-style-type: none"> i) own capital that forms part of the default waterfall (further split by whether used before, alongside, or after, member contributions) ii) aggregate participant contributions (both amount required and post-haircut amount posted, where different) iii) other (b) committed <ul style="list-style-type: none"> i) own/parent funds that are committed to address a participant default (or round of participant defaults) ii) aggregate participant commitments to address an initial participant default (or initial round of participant defaults) iii) aggregate participant commitments to replenish the default fund to deal with a subsequent participant default (or round of participant defaults) after the initial participant default (or round of participant defaults) has been addressed iv) other 	
<p>Total Value of ICE NGX’s default resources as at September 30, 2018: CAD \$2,667.2MM</p> <ul style="list-style-type: none"> a) Pre-funded <ul style="list-style-type: none"> • ICE NGX Capital: CAD \$44.4MM (used after defaulting Contracting Party collateral) • Contracting Party Collateral: CAD \$2,515.9MM b) Committed <ul style="list-style-type: none"> • Export Development Canada Default Insurance: CAD \$106.9MM (maximum liability USD \$100.0MM, first loss deductible USD \$15.0MM, value adjusted for deductible and potential liquidity risk) 	
<p>Principle 4.2 – Kccp.</p> <p>ICE NGX is a CCP with a self-funded default fund and does not require default fund contributions from its members; both the default fund contribution by clearing members and the associated capital costs of such contribution is currently zero. Basel III rules do not require QCCPs to be mutualized nor do they require QCCPs to have mutualized default funds. Given the certainty of the outcome of the capital cost calculation and the permissibility of ICE NGX’s non-mutualized structure under the Basel III rules, ICE NGX has determined it satisfies the QCCP criteria without the Kccp value.</p>	
<p>Principle 4.3 – Value of pre-funded default resources (excluding initial and retained variation margin) held for each clearing service, in total and split by:</p> <ul style="list-style-type: none"> • Cash deposited at a central bank of issue of the currency concerned • Cash deposited at other central banks • Secured cash deposited at commercial banks (including reverse repo) 	

- Unsecured cash deposited at commercial banks
- Non-cash
 - o sovereign government bonds
 - domestic
 - other
 - o agency bonds
 - o state/municipal bonds
 - o corporate bonds
 - o equities
 - o commodities
 - gold
 - other (please describe)
 - o mutual funds / UCITs
 - o other

Amounts should be reported both pre-haircut (i.e., at market value) and at post-haircut value.

The value of ICE NGX’s pre-funded default funds as at September 30, 2018 was CAD \$2,553.4MM consisting of the items shown in Principle 4.1(a) above.

- Secured cash deposited at commercial banks:
 - o CAD \$49.7MM (ICE NGX Cash)
 - o CAD \$61.3MM (Contracting Party Collateral)
 - o USD \$251.9MM (Contracting Party Collateral)
- Non-cash – Letters of Credit:
 - o CAD \$567.3MM (Contracting Party Collateral)
 - o USD \$1,200.6MM (Contracting Party Collateral)

Principle 4.4 – State whether the CCP is subject to a minimum Cover 1 or Cover 2 requirement in relation to total pre-funded default resources.

For each clearing service, state the number of business days within which the CCP assumes it will close out the default when calculating credit exposures that would potentially need to be covered by the default fund.

For each clearing service, the estimated largest aggregate stress loss (in excess of initial margin) that may be caused by the default of any single participant and its affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions.

Report the number of business days, if any, on which the estimated largest aggregate loss, exceeded pre-funded default resources (in excess of initial margin) and by how much.

For each clearing service, the actual largest aggregate credit exposure (in excess of initial margin) to any single participant and its affiliates (including transactions cleared for indirect participants).

For each clearing service, the estimated largest aggregate stress loss (in excess of initial margin) that may be caused by the default of any two participants and their affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions.

Report the number of business days, if any, on which the above amount exceeded actual pre-funded default resources (in excess of initial margin) and by how much.

For each clearing service, the actual largest aggregate credit exposure (in excess of initial margin) to any two participants and their affiliates (including transactions cleared for indirect participants).

Note under ICE NGX's margin model, credit exposure is measured as the value by which a Contracting Party's total margin requirement exceeded current collateral posted with ICE NGX, for further information please see Principle 6, Key Consideration 1 section of ICE NGX's [Principles for Financial Market Infrastructures Qualitative Disclosure](#).

As at Q3 2018, ICE NGX is subject to Cover 1 requirements.

ICE NGX's margin model assumes a two day liquidation and close out period. Close out procedures are outlined in Section 5.6 and 8.3 of the Contracting Party Agreement ("CPA") and ICE NGX would follow those procedures. ICE NGX's direct cleared, non-mutualized structure means that non-defaulting Contracting Parties are not exposed to losses by the defaulting Contracting Party, nor does ICE NGX have the ability to directly transfer (port) positions to non-defaulting Contracting Parties without prior consent. Accordingly, ICE NGX tests procedures by conducting regular liquidation simulation events without participation by Contracting Parties.

Cover 1 Estimated Largest Aggregate Stress Loss during Q3 2018:

- Peak Value: CAD \$115,868,674 (July 16, 2018)
- Rolling 12 month Mean Average: CAD \$30,326,332

During Q3 2018, the estimated largest aggregate loss did not exceed the value of pre-funded default resources.

Cover 1 Actual Largest Aggregate Credit Exposure during Q3 2018:

- Peak Value: CAD \$31,060,667 (July 17, 2018)
- Rolling 12 month Mean Average: CAD \$176,886

Cover 2 Estimated Largest Aggregate Credit Exposure during Q3 2018:

- Peak Value: CAD \$162,619,842 (July 16, 2018)
- Rolling 12 month Mean Average: CAD \$53,557,804

<p>During Q3 2018, the two estimated largest aggregate losses did not exceed the value of pre-funded default resources.</p> <p>Cover 2 Actual Largest Aggregate Credit Exposure for Q3 2018:</p> <ul style="list-style-type: none"> • Peak Value: CAD \$36,345,674 (January 5, 2018+ July 17, 2018) • Rolling 12 month Mean Average: CAD \$178,647
--

Principle 5: Collateral	
Principle 5.1 – Assets eligible as initial margin and the respective haircuts applied.	
	ICE NGX only accepts USD and CAD cash or Letters of Credit denominated in US or Canadian dollars, in ICE NGX’s standard Letter of Credit format issued by an Approved Financial Institution as defined in the CPA. ICE NGX does not apply haircuts towards these assets. For further details, please refer to ICE NGX’s Principles for Financial Market Infrastructures Qualitative Disclosure .
Principle 5.2 – Assets eligible for pre-funded participant contributions to the default resources and the respective haircuts applied.	
	Pre-funded participant contributions to default resources are limited to the collateral posted by each Contracting Party for their own margin requirements the forms of which are disclosed above in Principle 5.1. Mutualized default contributions are not required under ICE NGX’s non-mutualized, direct clearing model.
Principle 5.3 – Results of testing of haircuts, including the:	
	<ul style="list-style-type: none"> • confidence interval targeted through the calculation of haircuts, • assumed holding/liquidation period for the assets accepted, • look-back period used for testing the haircuts, • number of days during the look-back period on which the fall in value during the assumed holding/liquidation period exceeded the haircut on an asset.
	Not applicable, ICE NGX does not apply haircuts to Contracting Party collateral.

Principle 6: Margin	
<i>For further information regarding ICE NGX’s margin requirements, please reference Principle 6 of ICE NGX’s Principles for Financial Market Infrastructures Qualitative Disclosure.</i>	
Principle 6.1	
For each clearing service, total initial margin required, split by house and client.	

For each clearing service, state whether the initial margin for the positions of indirect participants must be provided for each indirect participants own position or for the net position of a group of indirect participants.

All current ICE NGX Contracting Parties are direct participants and as such all margin requirements are held entirely for house positions.

As at September 30, 2018:

- Total net initial margin required: CAD \$570,938,004
- Total variation margin required: CAD \$398,843,282
- Total accounts receivable margin required: CAD \$381,800,385

Principle 6.2 – For each clearing service, total initial margin held, split by house and client.

For each overall house and client totals of initial margin (or for just the overall total posted, if house and client are not segregated), the amounts of:

- Cash deposited at a central bank of issue of the currency concerned
- Cash deposited at other central banks
- Secured cash deposited at commercial banks (including reverse repo)
- Unsecured cash deposited at commercial banks
- Non-cash
 - o sovereign government bonds
 - domestic
 - other
 - o agency bonds
 - o state/municipal bonds
 - o corporate bonds
 - o equities
 - o commodities
 - gold
 - other (please describe)
 - o mutual funds / UCITs
 - o other

Amounts should be reported both pre-haircut and at post-haircut value.

All current ICE NGX Contracting Parties are direct participants and as such all margin requirements are held entirely for house positions.

As at September 30, 2018:

- Total net initial margin held: CAD \$570,938,004
- Total variation margin held: CAD \$398,843,282
- Total accounts receivable margin held: CAD \$381,800,385
- Total cushion and surplus collateral held: CAD \$1,164,307,489

<ul style="list-style-type: none"> Total collateral held: CAD \$2,515,889,160 <p>Total collateral amounts held as September 30, 2018:</p> <ul style="list-style-type: none"> Secured cash deposited at commercial banks: CAD \$388,606,556 Letters of Credit issued by Approved Financial Institution: CAD \$2,127,282,604
<p>Principle 6.3 – Initial margin rates on individual contracts, where CCP sets such rates.</p>
<p>ICE NGX initial margin rates can be found at www.ngx.com under the ‘Downloads & Documents’ section.</p>
<p>Principle 6.4 – Type of initial margin model used and key model design parameters for each initial margin model applied to that clearing service – key parameters including, but not limited to:</p> <ul style="list-style-type: none"> (i) single-tailed confidence level targeted; (ii) sample/data look-back period for calibrating the model; (iii) adjustments or scalars or weighting, if any, applied to historical data; (iv) close-out/holding periods by product (or, if varying, contract type); (v) for risk aggregation models, the margin rate per contract and details of the offsets between different contracts; (vi) the frequency of parameter reviews.
<p>The initial margin model and related parameters are outlined in Principle 6, Key Considerations 2 and 3 of ICE NGX’s Principles for Financial Market Infrastructures Qualitative Disclosure. In addition, a copy of ICE NGX’s Margin Methodology Guide is publicly available under the “Downloads & Documents” section of the website.</p>
<p>Principle 6.5 – Results of back testing of initial margin. At a minimum, this should include, for each clearing services and each initial margin model applied to that clearing service:</p> <ul style="list-style-type: none"> a) Number of times over the past twelve months that margin coverage held against any account fell below the actual marked to market exposure of that member account based on daily back-testing results (specifying if measured intraday/continuously or only once a day. If once a day, specify at what time of day) b) Number of observations c) Achieved coverage level
<p>Where breaches of initial margin coverage have occurred, report on the size of the uncovered exposure.</p>
<p>The Q3 2018 back testing results reported below are within the acceptable performance range for initial margin.</p> <ul style="list-style-type: none"> Number of times margin coverage fell below mark to market exposure (12 month period): 318, measured once a day following closure of the market (exceptions detailed in table below) Number of observations: 42,309 Achieved coverage level: 99.25%

Q4 2017 Initial Margin Breaches							
10/3/2017	-\$ 1,416,108.84	10/18/2017	-\$ 613,879.09	11/3/2017	-\$ 301.96	12/18/2017	-\$ 17,811.88
10/4/2017	-\$ 58,300.63	10/19/2017	-\$ 25,704.07	11/3/2017	-\$ 37,051.44	12/20/2017	-\$ 111,285.82
10/4/2017	-\$ 162,158.51	10/19/2017	-\$ 315,653.64	11/3/2017	-\$ 29,685.29	12/20/2017	-\$ 29,002.20
10/4/2017	-\$ 182,903.38	10/19/2017	-\$ 236,694.48	11/6/2017	-\$ 78,894.02	12/25/2017	-\$ 336,034.91
10/4/2017	-\$ 29,780.54	10/24/2017	-\$ 273,085.39	11/6/2017	-\$ 2,453.39	12/26/2017	-\$ 818,172.73
10/4/2017	-\$ 103,556.95	10/24/2017	-\$ 26,670.26	11/9/2017	-\$ 350.06	12/27/2017	-\$ 52,956.54
10/4/2017	-\$ 66,553.43	10/24/2017	-\$ 152,020.46	11/10/2017	-\$ 2,320,728.57	12/27/2017	-\$ 146,812.43
10/4/2017	-\$ 194,821.67	10/24/2017	-\$ 180,437.50	11/10/2017	-\$ 64,279.33	12/27/2017	-\$ 74,502.70
10/4/2017	-\$ 118,290.21	10/25/2017	-\$ 94,590.76	11/10/2017	-\$ 35,980.21	12/27/2017	-\$ 18,948.31
10/4/2017	-\$ 24,114.83	10/25/2017	-\$ 88,012.53	11/13/2017	-\$ 2,269,570.08	12/28/2017	-\$ 315,071
10/6/2017	-\$ 71,848.71	10/25/2017	-\$ 582,413.03	11/13/2017	-\$ 456,120.29	12/28/2017	-\$ 1,291,586
10/6/2017	-\$ 1,215,535.38	10/31/2017	-\$ 85,333.88	11/30/2017	-\$ 20,565.96	12/28/2017	-\$ 637,835
10/6/2017	-\$ 160,282.95	10/31/2017	-\$ 18,658.04	11/30/2017	-\$ 852,104.85	12/28/2017	-\$ 1,100,990
10/11/2017	-\$ 1,656.03	10/31/2017	-\$ 6,389.81	11/30/2017	-\$ 164,272.55	12/28/2017	-\$ 111,728
10/12/2017	-\$ 188,449.23	10/31/2017	-\$ 132,097.54	11/30/2017	-\$ 15,294.23	12/28/2017	-\$ 72,582
10/12/2017	-\$ 1,658,563.88	11/1/2017	-\$ 28,861.10	12/1/2017	-\$ 178,129.80	12/28/2017	-\$ 906,123
10/12/2017	-\$ 36,762.93	11/1/2017	-\$ 57,657.96	12/1/2017	-\$ 1,686,451.88	12/28/2017	-\$ 1,271
10/12/2017	-\$ 39,413.15	11/1/2017	-\$ 55,724.49	12/4/2017	-\$ 98,840.01	12/29/2017	-\$ 595,026
10/13/2017	-\$ 222,367.72	11/1/2017	-\$ 107,877.54	12/4/2017	-\$ 587,548.99	12/29/2017	-\$ 1,965
10/13/2017	-\$ 244,615.82	11/2/2017	-\$ 38,594.23	12/12/2017	-\$ 113,104.55	12/29/2017	-\$ 38,503
10/18/2017	-\$ 534,493.28	11/3/2017	-\$ 44,839.43	12/12/2017	-\$ 41,401.97	12/29/2017	-\$ 142,272

Q1 2018 Initial Margin Breaches							
4/10/2017	\$ 4,905.87	9/25/2017	\$ 126,894.41	12/1/2017	\$ 178,129.80	1/2/2018	\$ 12,104,080.22
4/11/2017	\$ 329.26	9/25/2017	\$ 103,881.33	12/1/2017	\$ 1,686,451.88	1/2/2018	\$ 37,126.47
5/1/2017	\$ 40.98	9/25/2017	\$ 162,404.98	12/4/2017	\$ 98,840.01	1/2/2018	\$ 37,988.17
5/29/2017	\$ 36,267.88	9/25/2017	\$ 37,295.83	12/4/2017	\$ 587,548.99	1/2/2018	\$ 665,263.06
5/29/2017	\$ 844.34	9/25/2017	\$ 119,978.78	12/12/2017	\$ 113,104.55	1/2/2018	\$ 236,635.78
7/7/2017	\$ 2,024.97	9/28/2017	\$ 71,410.06	12/12/2017	\$ 41,401.97	1/2/2018	\$ 13,651.38
7/17/2017	\$ 412.62	9/28/2017	\$ 33,555.37	12/18/2017	\$ 17,811.88	1/2/2018	\$ 5,955.47
7/20/2017	\$ 186,210.78	9/28/2017	\$ 52,955.99	12/20/2017	\$ 111,285.82	1/3/2018	\$ 46,804.07
7/20/2017	\$ 128,702.12	9/28/2017	\$ 7,742.47	12/20/2017	\$ 29,002.20	1/3/2018	\$ 63,594.72
7/20/2017	\$ 222,753.92	9/28/2017	\$ 1,957.09	12/25/2017	\$ 336,034.91	1/3/2018	\$ 253,528.57
7/20/2017	\$ 16,769.28	10/3/2017	\$ 1,416,108.84	12/26/2017	\$ 818,172.73	1/3/2018	\$ 425,829.10
7/20/2017	\$ 105,671.06	10/4/2017	\$ 58,300.63	12/27/2017	\$ 52,956.54	1/3/2018	\$ 45,808.24
7/20/2017	\$ 463,658.00	10/4/2017	\$ 162,158.51	12/27/2017	\$ 146,812.43	1/3/2018	\$ 10,643.52
7/20/2017	\$ 410,300.34	10/4/2017	\$ 182,903.38	12/27/2017	\$ 74,502.70	1/3/2018	\$ 2,693,834.29
7/20/2017	\$ 229,274.15	10/4/2017	\$ 29,780.54	12/27/2017	\$ 18,948.31	1/4/2018	\$ 2,876,815.60
7/20/2017	\$ 39,367.30	10/4/2017	\$ 103,556.95	12/28/2017	\$ 315,071.49	1/4/2018	\$ 110,607.23
7/20/2017	\$ 21,943.52	10/4/2017	\$ 66,553.43	12/28/2017	\$ 1,291,585.91	1/4/2018	\$ 474,804.56
7/21/2017	\$ 49,017.57	10/4/2017	\$ 194,821.67	12/28/2017	\$ 637,835.06	1/4/2018	\$ 344,066.51
7/21/2017	\$ 773,107.73	10/4/2017	\$ 118,290.21	12/28/2017	\$ 1,100,989.63	1/4/2018	\$ 71,413.85
7/21/2017	\$ 256,910.98	10/4/2017	\$ 24,114.83	12/28/2017	\$ 111,727.91	1/4/2018	\$ 125,247.64
7/21/2017	\$ 213,426.85	10/6/2017	\$ 71,848.71	12/28/2017	\$ 72,581.60	1/4/2018	\$ 664,801.51
7/21/2017	\$ 461,862.04	10/6/2017	\$ 1,215,535.38	12/28/2017	\$ 906,122.83	1/4/2018	\$ 1,794,926.34
7/21/2017	\$ 88,339.08	10/6/2017	\$ 160,282.95	12/28/2017	\$ 1,270.96	1/4/2018	\$ 7,778,609.63
7/21/2017	\$ 254,921.78	10/11/2017	\$ 1,656.03	12/29/2017	\$ 595,026.25	1/4/2018	\$ 807,476.01
7/21/2017	\$ 773,107.62	10/12/2017	\$ 188,449.23	12/29/2017	\$ 1,965.45	1/4/2018	\$ 2,329,891.47
7/21/2017	\$ 67,012.13	10/12/2017	\$ 1,658,563.88	12/29/2017	\$ 38,503.47	1/4/2018	\$ 4,292.92
7/21/2017	\$ 8,224.84	10/12/2017	\$ 36,762.93	12/29/2017	\$ 142,272.29	1/4/2018	\$ 42,330.74
7/21/2017	\$ 36,840.84	10/12/2017	\$ 39,413.15	1/1/2018	\$ 202,474.90	1/4/2018	\$ 60,581.03
7/21/2017	\$ 240,667.63	10/13/2017	\$ 222,367.72	1/1/2018	\$ 5,849,691.28	1/4/2018	\$ 20,853.01
7/21/2017	\$ 697,414.82	10/13/2017	\$ 244,615.82	1/1/2018	\$ 293,648.86	1/4/2018	\$ 157,186.70
7/21/2017	\$ 387,397.59	10/18/2017	\$ 534,493.28	1/1/2018	\$ 21,712.63	1/5/2018	\$ 55,993.66
7/21/2017	\$ 129,207.29	10/18/2017	\$ 613,879.09	1/1/2018	\$ 2,756,885.98	1/5/2018	\$ 2,400.00
7/27/2017	\$ 10,327.69	10/19/2017	\$ 25,704.07	1/1/2018	\$ 2,355,770.36	1/5/2018	\$ 18,040.38
7/27/2017	\$ 14,429.23	10/19/2017	\$ 315,653.64	1/1/2018	\$ 1,747,892.58	1/5/2018	\$ 154,700.49
7/27/2017	\$ 1,783.17	10/19/2017	\$ 236,694.48	1/1/2018	\$ 248,880.29	1/5/2018	\$ 16,666.34
7/28/2017	\$ 732.55	10/24/2017	\$ 273,085.39	1/1/2018	\$ 614,481.42	1/17/2018	\$ 13,255.20
7/28/2017	\$ 785.12	10/24/2017	\$ 26,670.26	1/1/2018	\$ 99,093.45	1/24/2018	\$ 1,157.69
8/4/2017	\$ 579.25	10/24/2017	\$ 152,020.46	1/1/2018	\$ 54,455.91	1/30/2018	\$ 384,736.76
8/15/2017	\$ 122,177.73	10/24/2017	\$ 180,437.50	1/1/2018	\$ 992,666.40	1/31/2018	\$ 21,675.81
8/15/2017	\$ 134,623.17	10/25/2017	\$ 94,590.76	1/1/2018	\$ 4,225,356.92	1/31/2018	\$ 377,631.95
8/16/2017	\$ 55,102.22	10/25/2017	\$ 88,012.53	1/1/2018	\$ 292,458.09	1/31/2018	\$ 753,091.33
8/17/2017	\$ 2,403.42	10/25/2017	\$ 582,413.03	1/1/2018	\$ 112,873.64	1/31/2018	\$ 555,484.83
8/17/2017	\$ 128,652.16	10/31/2017	\$ 85,333.88	1/1/2018	\$ 2,668,179.49	2/1/2018	\$ 330,275.41
8/17/2017	\$ 293,651.62	10/31/2017	\$ 18,658.04	1/1/2018	\$ 6,943,445.87	2/1/2018	\$ 62,080.86
8/17/2017	\$ 14,802.64	10/31/2017	\$ 6,389.81	1/1/2018	\$ 70,362.62	2/13/2018	\$ 5,807.74
8/29/2017	\$ 9,328.56	10/31/2017	\$ 132,097.54	1/1/2018	\$ 36,882.27	2/14/2018	\$ 84,857.06
8/30/2017	\$ 6,368.28	1/1/2018	\$ 28,861.10	1/1/2018	\$ 3,320,850.42	2/15/2018	\$ 275,702.16
9/1/2017	\$ 2,886.43	1/1/2018	\$ 57,657.96	1/1/2018	\$ 853,049.52	2/16/2018	\$ 110,300.34
9/1/2017	\$ 10,023.49	1/1/2018	\$ 55,724.49	1/1/2018	\$ 8,090.56	2/21/2018	\$ 13,385.14
9/1/2017	\$ 46,843.66	1/1/2018	\$ 107,877.54	1/1/2018	\$ 10,622.94	2/22/2018	\$ 94,016.60
9/12/2017	\$ 83,215.93	1/1/2018	\$ 38,594.23	1/1/2018	\$ 538,497.23	2/22/2018	\$ 173,403.20
9/12/2017	\$ 2,960.61	1/1/2018	\$ 44,839.43	1/1/2018	\$ 211,609.45	2/22/2018	\$ 721,972.12
9/12/2017	\$ 3,014.77	1/1/2018	\$ 301.96	1/1/2018	\$ 297,307.79	2/22/2018	\$ 6,917,060.10
9/12/2017	\$ 16,107.77	1/1/2018	\$ 37,051.44	1/2/2018	\$ 682,324.02	2/22/2018	\$ 234,522.14
9/18/2017	\$ 17,841.77	1/1/2018	\$ 29,685.29	1/2/2018	\$ 60,873.58	2/22/2018	\$ 2,725,657.46
9/19/2017	\$ 42,088.80	1/1/2018	\$ 78,894.02	1/2/2018	\$ 2,558.92	2/22/2018	\$ 318,581.58
9/19/2017	\$ 23,522.69	1/1/2018	\$ 2,453.39	1/2/2018	\$ 7,155,334.04	2/23/2018	\$ 271,401.54
9/19/2017	\$ 19,878.45	1/1/2018	\$ 350.06	1/2/2018	\$ 359,828.33	2/23/2018	\$ 63,025.87
9/19/2017	\$ 4,783.66	1/1/2018	\$ 2,320,728.57	1/2/2018	\$ 52,823.18	2/23/2018	\$ 24,166.66
9/19/2017	\$ 47,361.90	1/1/2018	\$ 64,279.33	1/2/2018	\$ 851,053.66	2/23/2018	\$ 9,182.09
9/22/2017	\$ 8,497.80	1/1/2018	\$ 35,980.21	1/2/2018	\$ 4,025,126.07	2/23/2018	\$ 702,562.94
9/25/2017	\$ 25,181.47	1/1/2018	\$ 2,269,570.08	1/2/2018	\$ 1,378,317.44	2/23/2018	\$ 7,620,160.23
9/25/2017	\$ 119,985.26	1/1/2018	\$ 456,120.29	1/2/2018	\$ 3,063,000.15	2/26/2018	\$ 3,488,442.34
9/25/2017	\$ 42,383.26	1/1/2018	\$ 20,565.96	1/2/2018	\$ 1,403,586.85	2/26/2018	\$ 217,770.87
9/25/2017	\$ 162,857.96	1/1/2018	\$ 852,104.85	1/2/2018	\$ 8,202,145.79	2/26/2018	\$ 16,377.62
9/25/2017	\$ 235,238.40	1/1/2018	\$ 164,272.55	1/2/2018	\$ 307,946.22	2/27/2018	\$ 476.71
9/25/2017	\$ 50,165.71	1/1/2018	\$ 15,294.23	1/2/2018	\$ 2,937,385.68	2/27/2018	\$ 1,846,915.97
						2/27/2018	\$ 13,886,876.94
						2/27/2018	\$ 411,779.26

Q2 2018 Initial Margin Breaches									
7/7/2017	2,024.97	9/28/2017	71,410.06	12/12/2017	41,401.97	1/2/2018	13,651.38	4/3/2018	2,000,393.35
7/17/2017	412.62	9/28/2017	33,555.37	12/18/2017	17,811.88	1/2/2018	5,955.47	4/3/2018	67,919.98
7/20/2017	163,658.00	9/28/2017	52,955.99	12/20/2017	111,285.82	1/3/2018	46,804.07	4/6/2018	10,099.59
7/20/2017	128,702.12	9/28/2017	7,742.47	12/20/2017	29,002.20	1/3/2018	63,594.72	4/9/2018	1,315,890.17
7/20/2017	16,769.28	9/28/2017	1,957.09	12/25/2017	336,034.91	1/3/2018	253,528.57	4/9/2018	13,380.66
7/20/2017	229,274.15	10/3/2017	1,416,108.84	12/26/2017	818,172.73	1/3/2018	425,829.10	4/18/2018	993,945.12
7/20/2017	39,367.30	10/4/2017	58,300.63	12/27/2017	52,956.54	1/3/2018	45,808.24	4/19/2018	28,483.19
7/20/2017	410,300.34	10/4/2017	162,158.51	12/27/2017	146,812.43	1/3/2018	10,643.52	4/19/2018	429,338.52
7/20/2017	105,671.06	10/4/2017	182,903.38	12/27/2017	74,502.70	1/3/2018	2,693,834.29	4/19/2018	44,900.85
7/20/2017	21,943.52	10/4/2017	29,780.54	12/27/2017	18,948.31	1/4/2018	2,876,815.60	4/20/2018	14,101.60
7/20/2017	222,753.92	10/4/2017	103,556.95	12/28/2017	315,014.9	1/4/2018	110,607.23	4/24/2018	747.24
7/20/2017	186,210.78	10/4/2017	66,553.43	12/28/2017	1,291,585.91	1/4/2018	474,804.56	4/30/2018	10,025.08
7/20/2017	240,667.63	10/4/2017	194,821.67	12/28/2017	637,835.06	1/4/2018	344,066.51	4/30/2018	1,173.07
7/20/2017	550,014.62	10/4/2017	118,290.21	12/28/2017	1,100,989.63	1/4/2018	71,413.85	4/30/2018	2,308.56
7/20/2017	256,910.98	10/4/2017	24,114.83	12/28/2017	111,727.91	1/4/2018	125,247.64	5/8/2018	1,083,308.65
7/20/2017	89,339.08	10/6/2017	71,848.71	12/28/2017	72,581.60	1/4/2018	664,801.51	5/8/2018	525,403.14
7/20/2017	387,397.59	10/6/2017	1,215,535.38	12/28/2017	906,122.83	1/4/2018	1,794,926.34	5/9/2018	1,161,287.32
7/20/2017	213,426.85	10/6/2017	160,282.95	12/28/2017	1,270.96	1/4/2018	7,778,609.63	5/14/2018	3,998,706.72
7/20/2017	67,012.13	10/11/2017	1,656.03	12/29/2017	595,026.25	1/4/2018	807,476.01	5/14/2018	1,584,204.52
7/20/2017	697,414.82	10/12/2017	188,449.23	12/29/2017	1,965.45	1/4/2018	2,329,891.47	5/14/2018	1,012,031.80
7/20/2017	36,840.84	10/12/2017	1,658,563.88	12/29/2017	38,503.47	1/4/2018	4,292.92	5/15/2018	16,761.90
7/20/2017	129,207.29	10/12/2017	36,762.93	12/29/2017	142,272.29	1/4/2018	42,330.74	5/15/2018	11,191.84
7/20/2017	254,921.78	10/12/2017	39,413.15	1/1/2018	202,474.90	1/4/2018	60,581.03	5/15/2018	75,579.87
7/20/2017	49,017.57	10/13/2017	222,367.72	1/1/2018	5,849,691.28	1/4/2018	20,853.01	5/15/2018	6,941.65
7/20/2017	8,224.84	10/13/2017	244,615.82	1/1/2018	299,648.86	1/4/2018	157,186.70	5/15/2018	29,792.07
7/20/2017	461,862.04	10/18/2017	534,493.28	1/1/2018	21,712.63	1/5/2018	55,993.66	5/15/2018	476,369.08
7/20/2017	773,107.73	10/18/2017	613,879.09	1/1/2018	2,756,895.98	1/5/2018	2,400.00	5/15/2018	75,668.19
7/27/2017	14,429.23	10/19/2017	25,704.07	1/1/2018	2,355,770.36	1/5/2018	18,000.38	5/15/2018	263,555.40
7/27/2017	10,327.69	10/19/2017	315,653.64	1/1/2018	1,747,892.58	1/5/2018	154,700.49	5/15/2018	5,294.91
7/27/2017	1,783.17	10/19/2017	236,694.48	1/1/2018	248,890.29	1/5/2018	16,666.34	5/15/2018	1,575,404.39
7/28/2017	732.55	10/24/2017	273,085.39	1/1/2018	614,481.42	1/17/2018	13,255.20	5/15/2018	18,935.38
7/28/2017	785.12	10/24/2017	26,670.26	1/1/2018	99,093.15	1/24/2018	1,157.69	5/15/2018	52,766.75
8/4/2017	579.25	10/24/2017	152,020.46	1/1/2018	54,455.91	1/30/2018	384,736.76	5/15/2018	487,206.03
8/15/2017	122,177.73	10/24/2017	180,437.50	1/1/2018	992,666.40	1/31/2018	21,675.81	5/15/2018	665,195.01
8/15/2017	134,623.17	10/25/2017	94,590.76	1/1/2018	4,225,356.92	1/31/2018	377,631.95	5/15/2018	33,294.00
8/16/2017	55,102.22	10/25/2017	88,012.53	1/1/2018	292,458.09	1/31/2018	753,091.33	5/15/2018	144,404.08
8/17/2017	2,403.42	10/25/2017	582,413.03	1/1/2018	112,873.64	1/31/2018	555,484.83	5/15/2018	7,329.97
8/17/2017	128,652.16	10/31/2017	85,333.88	1/1/2018	2,668,179.49	2/1/2018	330,275.41	5/16/2018	199,743.84
8/17/2017	293,651.62	10/31/2017	16,658.04	1/1/2018	6,943,445.87	2/1/2018	62,080.86	5/21/2018	123,734.53
8/17/2017	14,802.64	10/31/2017	6,389.81	1/1/2018	70,362.62	2/13/2018	5,807.74	5/22/2018	127,527.00
8/29/2017	9,328.56	10/31/2017	132,097.54	1/1/2018	36,892.27	2/14/2018	84,857.06	5/22/2018	260,828.25
8/30/2017	6,368.28	1/1/2018	28,861.10	1/1/2018	3,320,850.42	2/15/2018	275,702.16	5/22/2018	239,127.09
9/1/2017	2,886.43	1/1/2018	57,657.96	1/1/2018	853,049.52	2/16/2018	110,300.34	5/22/2018	415,482.04
9/1/2017	10,023.49	1/1/2018	55,724.49	1/1/2018	8,090.56	2/21/2018	13,385.14	5/22/2018	1,204,372.48
9/1/2017	46,843.66	1/1/2018	107,877.54	1/1/2018	10,622.94	2/22/2018	94,016.60	5/22/2018	18,858.56
9/12/2017	83,215.93	1/2/2018	38,594.23	1/1/2018	538,497.23	2/22/2018	173,403.20	5/22/2018	703,389.49
9/12/2017	2,960.61	1/3/2018	44,839.43	1/1/2018	211,609.45	2/22/2018	721,972.12	5/22/2018	26,588.23
9/12/2017	3,014.77	1/3/2018	301.96	1/1/2018	297,307.79	2/22/2018	6,917,060.10	5/22/2018	237,247.62
9/12/2017	16,107.77	1/3/2018	37,051.44	1/2/2018	682,324.02	2/22/2018	234,522.14	5/22/2018	371,771.11
9/18/2017	17,841.77	1/3/2018	29,685.29	1/2/2018	60,873.58	2/22/2018	2,725,657.46	5/22/2018	299,430.53
9/19/2017	42,088.80	1/6/2018	78,894.02	1/2/2018	2,558.92	2/22/2018	318,581.58	5/23/2018	243,997.08
9/19/2017	23,522.69	1/6/2018	2,453.39	1/2/2018	7,155,334.04	2/23/2018	271,401.54	5/23/2018	9,355.56
9/19/2017	19,878.45	1/9/2018	350.06	1/2/2018	359,828.33	2/23/2018	63,025.87	5/23/2018	44,511.47
9/19/2017	4,783.66	1/10/2018	2,320,728.57	1/2/2018	52,823.18	2/23/2018	24,166.66	5/23/2018	52,547.15
9/19/2017	47,361.90	1/10/2018	64,279.33	1/2/2018	851,053.66	2/23/2018	9,182.09	5/29/2018	172,875.95
9/22/2017	8,497.80	1/10/2018	35,980.21	1/2/2018	4,025,126.07	2/23/2018	702,562.94	5/31/2018	101,954.44
9/25/2017	25,181.47	1/13/2018	2,269,570.08	1/2/2018	1,378,317.44	2/23/2018	7,620,160.23	6/5/2018	2,946,654.49
9/25/2017	119,985.26	1/13/2018	456,120.29	1/2/2018	3,063,000.15	2/26/2018	3,488,442.34	6/5/2018	299,372.67
9/25/2017	42,383.26	1/13/2018	20,565.96	1/2/2018	1,403,586.85	2/26/2018	217,770.87	6/5/2018	3,266,521.26
9/25/2017	162,857.96	1/30/2018	852,104.85	1/2/2018	8,202,145.79	2/26/2018	16,377.62	6/5/2018	22,750,497.80
9/25/2017	235,238.40	1/30/2018	164,272.55	1/2/2018	307,946.22	2/27/2018	476.71	6/6/2018	2,405,464.30
9/25/2017	50,165.71	1/30/2018	15,294.23	1/2/2018	2,937,385.68	2/27/2018	1,846,915.97	6/6/2018	386,912.26
9/25/2017	126,894.41	12/1/2018	178,129.80	1/2/2018	12,104,080.22	2/27/2018	13,886,876.94	6/6/2018	2,818,194.80
9/25/2017	103,881.33	12/1/2018	1,686,451.88	1/2/2018	37,126.47	2/27/2018	411,779.26	6/6/2018	17,994,704.39
9/25/2017	162,404.98	12/4/2018	98,840.01	1/2/2018	37,988.17	4/2/2018	13,963.73	6/13/2018	3,035,559.15
9/25/2017	37,295.83	12/4/2018	587,548.99	1/2/2018	665,263.06	4/2/2018	2,205,164.42	6/13/2018	101,877.15
9/25/2017	119,978.78	12/12/2018	113,104.55	1/2/2018	236,635.78	4/2/2018	560,601.44	6/13/2018	100,632.97
								6/14/2018	2,708,287.23
								6/14/2018	189,457.21
								6/14/2018	1,288,400.67

Q3 2018 Initial Margin Breaches									
10/3/2017	1,416,108.84	12/27/2017	52,956.54	1/3/2018	10,643.52	4/19/2018	44,900.85	7/2/2018	40,116.05
10/4/2017	58,300.63	12/27/2017	146,812.43	1/3/2018	2,693,834.29	4/20/2018	14,101.60	7/3/2018	980,568.23
10/4/2017	162,158.51	12/27/2017	74,502.70	1/4/2018	2,876,816.60	4/24/2018	747.24	7/6/2018	559.81
10/4/2017	182,903.38	12/27/2017	18,948.31	1/4/2018	110,607.23	4/30/2018	10,025.08	7/9/2018	2,105,632.91
10/4/2017	29,780.54	12/28/2017	315,071.49	1/4/2018	474,804.56	4/30/2018	1,173.07	7/9/2018	286,912.27
10/4/2017	103,556.95	12/28/2017	1,291,585.91	1/4/2018	344,066.51	4/30/2018	2,308.56	7/9/2018	103,782.27
10/4/2017	66,553.43	12/28/2017	637,835.06	1/4/2018	71,413.85	5/8/2018	1,083,308.65	7/10/2018	75,313.60
10/4/2017	194,821.67	12/28/2017	1,100,989.63	1/4/2018	125,247.64	5/8/2018	525,403.14	7/13/2018	267,147.21
10/4/2017	118,290.21	12/28/2017	111,727.91	1/4/2018	664,801.51	5/9/2018	1,161,287.32	7/13/2018	2,772,806.44
10/4/2017	24,114.83	12/28/2017	72,581.60	1/4/2018	1,794,926.34	5/14/2018	3,998,706.72	7/13/2018	31,047,211.00
10/6/2017	71,848.71	12/28/2017	906,122.83	1/4/2018	7,778,609.63	5/14/2018	1,584,204.52	7/13/2018	47,651,176.00
10/6/2017	1,215,535.38	12/28/2017	1,270.96	1/4/2018	807,476.01	5/14/2018	1,012,031.80	7/13/2018	3,030,266.22
10/6/2017	160,282.95	12/29/2017	595,026.25	1/4/2018	2,329,891.47	5/15/2018	16,761.90	7/13/2018	31,254,523.49
10/11/2017	1,656.03	12/29/2017	1,965.45	1/4/2018	4,292.92	5/15/2018	11,191.84	7/13/2018	267,147.21
10/12/2017	188,443.23	12/29/2017	38,503.47	1/4/2018	42,330.74	5/15/2018	75,579.87	7/13/2018	31,812,375.20
10/12/2017	1,658,563.88	12/29/2017	142,272.29	1/4/2018	60,581.03	5/15/2018	6,941.65	7/13/2018	1,122,766.69
10/12/2017	36,762.93	1/1/2018	202,474.90	1/4/2018	20,853.01	5/15/2018	29,792.07	7/13/2018	169,911.51
10/12/2017	39,413.15	1/1/2018	5,849,691.28	1/4/2018	157,186.70	5/15/2018	476,369.08	7/16/2018	174,822.06
10/13/2017	222,367.72	1/1/2018	299,648.86	1/5/2018	55,993.66	5/15/2018	75,668.19	7/16/2018	426,514.91
10/13/2017	244,615.82	1/1/2018	21,712.63	1/5/2018	2,400.00	5/15/2018	263,555.40	7/16/2018	1,283,952.39
10/18/2017	534,493.28	1/1/2018	2,756,885.98	1/5/2018	18,040.38	5/15/2018	5,294.91	7/16/2018	15,369,062.01
10/18/2017	613,879.03	1/1/2018	2,355,770.36	1/5/2018	154,700.49	5/15/2018	1,575,404.39	7/16/2018	17,108,876.59
10/19/2017	25,704.07	1/1/2018	1,747,892.58	1/5/2018	16,666.34	5/15/2018	18,935.38	7/16/2018	17,585,247.75
10/19/2017	315,653.64	1/1/2018	248,880.29	1/17/2018	13,255.20	5/15/2018	52,766.75	7/16/2018	15,447,568.83
10/19/2017	236,694.48	1/1/2018	614,481.42	1/24/2018	1,157.69	5/15/2018	487,206.03	7/17/2018	7,602,763.51
10/24/2017	273,085.39	1/1/2018	99,093.45	1/30/2018	384,736.76	5/15/2018	685,195.01	7/17/2018	3,749,408.51
10/24/2017	26,670.26	1/1/2018	54,455.91	1/31/2018	216,75.81	5/15/2018	33,294.00	7/17/2018	8,466,341.90
10/24/2017	152,020.46	1/1/2018	992,666.40	1/31/2018	377,631.95	5/15/2018	144,404.08	7/18/2018	206,461.38
10/24/2017	180,437.50	1/1/2018	4,225,356.92	1/31/2018	753,091.33	5/15/2018	7,329.97	7/18/2018	251,731.78
10/25/2017	94,590.76	1/1/2018	292,458.09	1/31/2018	555,484.83	5/16/2018	199,743.84	7/18/2018	4,261,806.97
10/25/2017	88,012.53	1/1/2018	112,873.64	2/1/2018	330,275.41	5/21/2018	123,734.53	7/20/2018	80,985.14
10/25/2017	582,413.03	1/1/2018	2,668,179.49	2/1/2018	62,080.86	5/22/2018	127,527.00	7/21/2018	33,666.44
10/31/2017	85,333.88	1/1/2018	6,943,445.87	2/13/2018	5,807.74	5/22/2018	260,828.25	7/24/2018	72,799.63
10/31/2017	18,858.04	1/1/2018	70,362.62	2/14/2018	84,857.06	5/22/2018	239,127.09	7/26/2018	10,992.22
10/31/2017	6,389.81	1/1/2018	36,882.27	2/15/2018	275,702.16	5/22/2018	415,482.04	7/27/2018	207,253.40
10/31/2017	132,097.54	1/1/2018	3,320,850.42	2/16/2018	110,300.34	5/22/2018	1,204,372.48	7/27/2018	65,323.81
1/1/2017	28,861.10	1/1/2018	853,049.52	2/21/2018	13,385.14	5/22/2018	18,858.56	7/30/2018	109,944.34
1/1/2017	57,657.96	1/1/2018	8,090.56	2/22/2018	94,016.60	5/22/2018	703,389.49	7/31/2018	2,117,029.63
1/1/2017	55,724.49	1/1/2018	10,622.94	2/22/2018	173,403.20	5/22/2018	26,588.23	8/1/2018	3,752,267.87
1/1/2017	107,877.54	1/1/2018	538,497.23	2/22/2018	721,972.12	5/22/2018	237,247.62	8/6/2018	2,764,299.49
1/2/2017	38,594.23	1/1/2018	211,609.45	2/22/2018	6,917,060.10	5/22/2018	371,771.11	8/6/2018	1,267,985.93
1/3/2017	44,839.43	1/1/2018	297,307.79	2/22/2018	234,522.14	5/22/2018	299,430.53	8/6/2018	3,397,619.98
1/3/2017	301.96	1/2/2018	682,324.02	2/22/2018	2,725,657.46	5/23/2018	243,997.08	9/5/2018	58,710.52
1/3/2017	37,051.44	1/2/2018	60,873.58	2/22/2018	318,581.58	5/23/2018	9,355.56	9/6/2018	48,888.88
1/3/2017	29,685.29	1/2/2018	2,558.92	2/23/2018	271,401.54	5/23/2018	44,511.47	9/26/2018	12,085.75
1/6/2017	78,894.02	1/2/2018	7,155,334.04	2/23/2018	63,025.87	5/23/2018	52,547.15	9/28/2018	96,772.24
1/6/2017	2,453.39	1/2/2018	359,828.33	2/23/2018	24,166.66	5/29/2018	172,875.95		
1/9/2017	350.06	1/2/2018	52,823.18	2/23/2018	9,182.09	5/31/2018	101,954.44		
1/10/2017	2,320,728.57	1/2/2018	851,053.66	2/23/2018	702,562.94	6/5/2018	2,946,654.49		
1/10/2017	64,279.33	1/2/2018	4,025,126.07	2/23/2018	7,620,160.23	6/5/2018	299,372.67		
1/10/2017	35,980.21	1/2/2018	1,378,317.44	2/26/2018	3,488,442.34	6/5/2018	3,266,521.26		
1/13/2017	2,269,570.08	1/2/2018	3,063,000.15	2/26/2018	217,770.87	6/5/2018	22,750,497.80		
1/13/2017	456,120.29	1/2/2018	1,403,586.85	2/26/2018	16,377.62	6/6/2018	2,405,464.30		
1/30/2017	20,565.96	1/2/2018	8,202,145.79	2/27/2018	476.71	6/6/2018	386,912.26		
1/30/2017	852,104.85	1/2/2018	307,946.22	2/27/2018	1,846,915.97	6/6/2018	2,818,194.80		
1/30/2017	164,272.55	1/2/2018	2,937,385.68	2/27/2018	13,886,876.94	6/6/2018	17,994,704.39		
1/30/2017	15,294.23	1/2/2018	12,104,080.22	2/27/2018	411,779.26	6/13/2018	3,035,559.15		
12/1/2017	178,129.80	1/2/2018	37,126.47	4/2/2018	13,963.73	6/13/2018	101,877.15		
12/1/2017	1,686,451.88	1/2/2018	37,988.17	4/2/2018	2,205,164.42	6/13/2018	100,632.97		
12/4/2017	98,840.01	1/2/2018	665,263.06	4/2/2018	560,601.44	6/14/2018	2,708,287.23		
12/4/2017	587,548.99	1/2/2018	236,635.78	4/3/2018	2,000,393.35	6/14/2018	189,457.21		
12/12/2017	113,104.55	1/2/2018	13,651.38	4/3/2018	67,919.98	6/14/2018	1,288,400.67		
12/12/2017	41,401.97	1/2/2018	5,955.47	4/6/2018	10,099.59	7/2/2018	86,937.05		
12/18/2017	17,811.88	1/3/2018	46,804.07	4/9/2018	1,315,890.17	7/2/2018	270,821.34		
12/20/2017	111,285.82	1/3/2018	63,594.72	4/9/2018	13,380.66	7/2/2018	71,439.49		
12/20/2017	29,002.20	1/3/2018	253,528.57	4/18/2018	993,945.12	7/2/2018	41,260.74		
12/25/2017	336,034.91	1/3/2018	425,829.10	4/19/2018	28,483.19	7/2/2018	915,709.33		
12/26/2017	818,172.73	1/3/2018	45,808.24	4/19/2018	429,338.52	7/2/2018	214,589.28		

<p>Principle 6.6 – Average total variation margin paid to the CCP by the participants each business day over the period.</p>	
	<p>Average Daily Settlement Invoice during Q3 2018: CAD \$243,533.04</p> <p>Note this value reflects the average value of ICE NGX’s daily settled Canadian Financial Electricity Futures Contracts which are settled on a t+2 daily basis. For all other products, variation margin is accrued in monthly settlement values. Further information related to ICE NGX monthly settlements are found in ICE NGX’s Principles for Financial Market Infrastructures Qualitative Disclosure.</p>
<p>Principle 6.7 – Maximum total variation paid to the CCP by the participants each business day over the period.</p>	
	<p>Maximum Daily Settlement Invoice during Q3 2018: CAD \$6,442,340.80 (August 29, 2018)</p>
<p>Principle 6.8 – Maximum aggregate initial margin call on any given business day over the period.</p>	
	<p>Maximum aggregate margin call during Q3 2018: USD\$55MM (July 17, 2018)</p> <p>Margin call value is comprised of \$30.7MM for initial margin, \$131.2MM for variation margin and \$26.2MM for AP/AR receipts.</p>

<p>Principle 7: Liquidity Risk</p>	
<p>Principle 7.1 – State whether the clearing service maintains sufficient liquid resources to 'Cover 1' or 'Cover 2'.</p> <p>Size and composition of qualifying liquid resources for each clearing service – for each relevant currency – split by:</p> <ul style="list-style-type: none"> a) Cash deposited at a central bank of issue of the currency concerned; b) Cash deposited at other central banks; c) Secured cash deposited at commercial banks (including reverse repo); d) Unsecured cash deposited at commercial banks; e) Secured committed lines of credit including committed foreign exchange swaps and committed repos; f) unsecured committed lines of credit; g) highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements even in extreme but plausible market conditions; h) other. 	

<p>State whether the CCP has routine access to central bank liquidity or facilities.</p> <p>If, in using qualifying liquid resources, the CCP is required or allowed to give priority to meeting certain payment obligations, please provide or reference:</p> <ul style="list-style-type: none"> the schedule of payments or priority for allocating payments, if such exists; any applicable rule, policy, procedure, and governance arrangement around such decision making. 	
<p>As at the end of Q3 2018, ICE NGX maintained sufficient liquid resources to meet the requirements for Cover 1.</p> <p>Size and composition of qualifying liquid resources as at September 30, 2018:</p> <ul style="list-style-type: none"> Unsecured cash deposited at commercial banks: CAD \$49.7MM <p>ICE NGX does not use central bank liquidity or facilities at this time. While ICE NGX is not required to give priority to payment obligations, it retains the right to give priority to meeting the most immediate settlement obligations.</p>	
<p>Principle 7.2 – Size and composition of qualifying liquid resources for each clearing service above those qualifying liquid resources above.</p>	
<p>ICE NGX has one clearing service, as per IOSCO definition of a clearing service. All qualifying liquid resources outlined in Principle 7.1 above are for ICE NGX CCP operations.</p>	
<p>Principle 7.3 – The estimated largest same-day and, where relevant, intraday and multiday payment obligation in total that would be caused by the default of any single participant and its affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions.</p> <p>The number of business days, if any, on which the above amount exceeded its qualifying liquid resources (identified as in 7.1, and available at the point the breach occurred), and by how much.</p> <p>The actual largest intraday and multiday payment obligation of a single participant and its affiliates (including transactions cleared for indirect participants) over the past twelve months.</p> <p>The estimated largest same-day and, where relevant, intraday and multiday payment obligation in each relevant currency that would be caused by the default of any single participant and its affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions.</p> <p>The number of business days, if any, on which the above amounts exceeded its qualifying liquid resources in each relevant currency (as identified in 7.1 and available at the point the breach occurred), and by how much.</p>	
<p>The value reported reflects ICE NGX’s stress testing results of its daily settled Canadian Financial Electricity Futures Contracts in extreme, but plausible conditions. For further information, please</p>	

<p>reference Principle 7, Key Consideration 4 section of ICE NGX’s Principles for Financial Market Infrastructures Qualitative Disclosure</p> <p>Largest estimated payment obligation during Q3 2018: CAD \$34.74MM (July 3, 2018)</p> <p>Number of Business Days on which the above amount exceeded qualifying liquid resources: 0, the estimated largest payment obligation did not exceed ICE NGX’s qualifying liquid resources.</p> <p>Largest actual daily settlement payment obligation (rolling 12 month period): CAD \$16,117,591 (December 8, 2017)</p> <p>ICE NGX conducts stress testing on all of its daily settlement obligations which are settled exclusively in Canadian dollars.</p> <p>No single daily settlement obligation for any participant of affiliates has exceeded ICE NGX’s qualifying liquid resources.</p>
--

Principle 12: Exchange-of-Value Settlement Systems	
Principle 12.1 and Principle 12.2	
	Not applicable. ICE NGX does not use a DvP, DvD or PvP settlement system nor does ICE NGX have linked obligations for settlement.

Principle 13: Participant-Default Rules and Procedures	
Principle 13.1 – CCPs are encouraged, subject to legal constraints on timing and content, to disclose as soon as practicable quantitative information related to defaults, such as:	
<ul style="list-style-type: none"> • Amount of loss versus amount of initial margin • Amount of other financial resources used to cover losses • Proportion of client positions closed-out/porting 	
Appropriate references to other published material related to the defaults may also be helpful.	
	ICE NGX has not sustained any Contracting Party default resulting in any loss or necessitating the use of ICE NGX’s financial resources since inception. <ul style="list-style-type: none"> • Amount of loss versus amount of Initial Margin: \$0 • Amount of other financial resources used to cover losses: \$0 • Proportion of client positions closed out/porting: 0%

Principle 14: Segregation and Portability	
<p>Principle 14.1 – Split, by clearing service, of total client positions held in:</p> <ul style="list-style-type: none"> a) individually segregated accounts; b) omnibus client-only accounts, other than LSOC accounts (see below); c) legally segregated but operationally comingled (LSOC) accounts; d) comingled house and client accounts; <p>as a share of notional values cleared or of the settlement value of securities transactions.</p>	
<p>All collateral positions held with ICE NGX are in individually segregated accounts as follows:</p> <ul style="list-style-type: none"> • USD Cash Collateral Accounts: 90 • CAD Cash Collateral Accounts: 37 • USD Letters of Credit: 82 • CAD Letters of Credit: 89 	

Principle 15: General Business Risk	
<p>Principle 15.1 – (a) Value of liquid net assets funded by equity; and (b) Six months of current operating expenses</p>	
<p>As at September 30, 2018:</p> <ul style="list-style-type: none"> a) Value of liquid net assets funded by equity: CAD \$49.7MM b) Six months of current operating expenses: CAD \$8.3MM 	
<p>Principle 15.2 – Annual financial disclosures: including, but not limited to,</p> <ul style="list-style-type: none"> • total revenue, • total expenditure, • profits, • total assets, • total liabilities. <p>Explain if collateral posted by clearing participants is held on or off the CCP’s balance sheet.</p>	
<p>ICE NGX consolidated financial statements as at December 31, 2017:</p> <ul style="list-style-type: none"> • Total Revenue: CAD \$48.8MM • Total Expenditure: CAD \$32.0MM • Profits: CAD \$13.6MM • Total Assets: CAD \$989.5MM • Total Liabilities: CAD \$948.4MM • Total Equity: CAD \$41.1MM <p>Collateral held by ICE NGX is disclosed in the notes to the financial statements and not captured on the balance sheet.</p>	

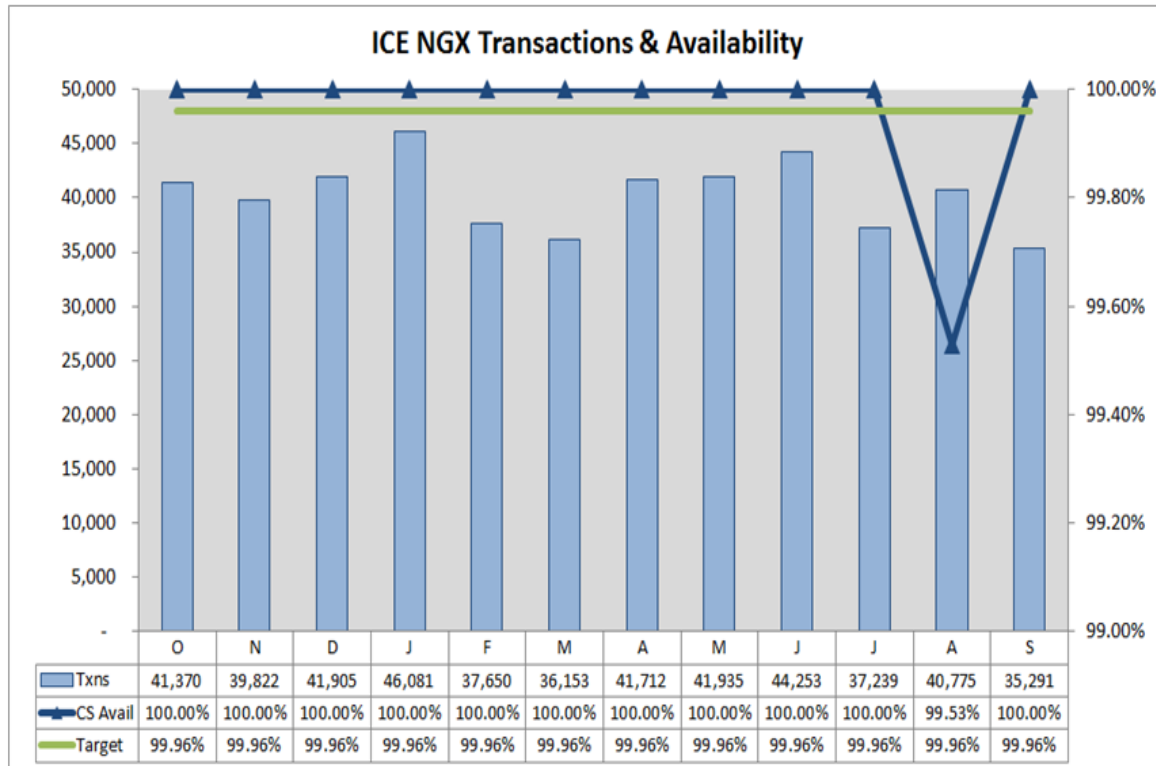
	<p>Principle 15.3 – Income Breakdowns:</p> <ul style="list-style-type: none"> • percentage of total income that comes from fees related to provision of clearing services; • percentage of total income that comes from the reinvestment (or rehypothecation) of assets provided by clearing participants.
	<p>As at September 30, 2018:</p> <ul style="list-style-type: none"> • Percentage of total income derived from fees related to provision of clearing services: 79% • Percentage of total income that comes from reinvestment of assets provided by clearing participants: 1%, derived from ICE NGX’s portion of interest earned on cash collateral deposits only

Principle 16: Custody and Investment Risks	
	<p>Principle 16.1 – Total cash (but not securities) received from participants, regardless of the form in which it is held, deposited or invested, split by whether it was received as initial margin or default fund contribution.</p>
	<p>As of end of Q3 2018, ICE NGX held CAD \$388.6MM equivalent in cash collateral from Contracting Parties for total margin requirements including initial margin, accounts receivable, and variation margin. Contracting Parties do not contribute to ICE NGX’s self-funded default fund.</p>
	<p>Principle 16.2 – How the total cash received from participants (ie the combined total of initial margin and default fund contributions in 16.1) is held/deposited/invested, including:</p> <ul style="list-style-type: none"> • percentage of this total participant cash held as cash deposits (including through reverse repo); further split into: <ul style="list-style-type: none"> ○ percentage held: <ul style="list-style-type: none"> ▪ as cash deposits at central banks of issue of the currency deposited; ▪ as cash deposits at other central banks; ▪ as cash deposits at commercial banks; of which: <ul style="list-style-type: none"> • percentage secured (including through reverse repo); • percentage unsecured; ▪ in money market funds; ▪ in other forms (please specify). ○ percentage split by currency of these cash deposits (including reverse repo) and money market funds - local currency, USD, EUR, other. <p>Also:</p> <ul style="list-style-type: none"> ○ weighted average maturity of these cash deposits (including reverse repo) and money market funds • percentage of this total participant cash invested in securities; further split into: <ul style="list-style-type: none"> ○ percentage invested in: <ul style="list-style-type: none"> ▪ sovereign government bonds; of which:

	<ul style="list-style-type: none"> • domestic; • other; ▪ agency bonds; ▪ state/municipal bonds; ▪ other instruments (please describe). ○ percentage split by currency of these securities - local currency, USD, EUR, other. <p>Also:</p> <ul style="list-style-type: none"> ○ weighted average maturity of these securities <p>Provide an estimate of the risk on the investment portfolio (excluding central bank and commercial bank deposits) (99% one-day VaR, or equivalent).</p> <p>State if the CCP investment policy sets a limit on the proportion of the investment portfolio that may be allocated to a single counterparty, and the size of that limit.</p> <p>State the number of times over the previous quarter in which this limit has been exceeded.</p>
	<p>All Contracting Party cash collateral disclosed in Principle 16.1 above is held in secured cash deposits held at a Canadian Schedule 1 commercial bank. Cash collateral is held in the same denomination it is received.</p> <p>As at September 30, 2018 the percentage of cash collateral split by currency was 84.1% USD and 15.9% CAD.</p> <p>ICE NGX does not re-invest Contracting Party collateral.</p>
	<p>Principle 16.3 – Rehypothecation of participant assets (i.e., non-cash) by the CCP where allowed, split by initial margin and default fund:</p> <ul style="list-style-type: none"> • total value of participant non-cash rehypothecated; • maturities (overnight/one day; over one day and up to one week; over one week and up to one month; over one month and up to one year; over one year and up to two years; over two years).
	<p>Not applicable. ICE NGX does not re-invest Contracting Party collateral.</p>

Principle 17: Operational Risk	
	<p>Principle 17.1 – Operational availability target for the core system(s) involved in clearing (whether or not outsourced) over specified period for the system.</p>
	<p>ICE NGX has an operational system uptime objective of 99.96% on an annual basis. For further details please refer to Principle 17, Key Considerations 3 of ICE NGX’s Principles for Financial Market Infrastructures Qualitative Disclosure.</p>
	<p>Principle 17.2 – Actual availability of the core system(s) over the previous twelve month period.</p>

Actual availability of the core system as of September 30, 2018 (rolling 12 month period): 99.84% (monthly availability illustrated below)



Principle 17.3 – Total number and duration of failures affecting the core systems involved in clearing over the previous twelve month period.

ICE NGX experienced one outage totaling 146 minutes over the previous 12 months as of September 30, 2018.

Principle 17.4 – Recovery Time Objectives

ICE NGX’s Recovery Time Objective is within 2 hours.

Principle 18: Access and Participation Requirements	
<p>Principle 18.1 – Number of clearing members, by clearing service, split by:</p> <ul style="list-style-type: none"> • category of membership; • type of participant; and • domestic or foreign participants. 	
<p>As at September 30, 2018, ICE NGX had 274 Contracting Parties as defined under the CPA, all of which were direct participants.</p> <ul style="list-style-type: none"> • Category of membership: <ul style="list-style-type: none"> ○ Direct Participant: 278 ○ Special Participant: 0 • Type of Participant: <ul style="list-style-type: none"> ○ Financial Institution: 28 ○ Other: 250 • Domestic or Foreign participation: <ul style="list-style-type: none"> ○ Domestic Participants: 127 ○ Foreign Participants: 151 	
<p>Principle 18.2 – For each clearing service with 25 or more members, the percentage of open positions held by the largest five and ten clearing members, including both house and client, in aggregate.</p>	
<p>All ICE NGX Contracting Parties are direct participants therefore, all accounts are house accounts. During Q2 2018:</p> <ul style="list-style-type: none"> • Average Top 5 Contracting Parties: 35.3% • Average Top 10 Contracting Parties: 55.5% • Peak Top 5 Contracting Parties: 36.9% • Peak Top 10 Contracting Parties: 57.3% 	
<p>Principle 18.3 – For each clearing service with 25 or more members percentage of initial margin held by the largest five and ten clearing members, including both house and client, in aggregate.</p>	
<p>All ICE NGX Contracting Parties are direct participants therefore, all accounts are house accounts. During Q2 2018:</p> <ul style="list-style-type: none"> • Average Top 5 Contracting Parties: 30.2% • Average Top 10 Contracting Parties: 44.4% • Peak Top 5 Contracting Parties: 32.2% • Peak Top 10 Contracting Parties: 46.8% 	
<p>Principle 18.4 – For each segregated default fund with 25 or more members percentage of participant contributions to the default fund contributed by the largest five and ten members in aggregate.</p>	
<p>ICE NGX is a CCP with a self-funded default fund and does not require default fund contributions from its members.</p> <ul style="list-style-type: none"> • Top 5 Contracting Parties: 0 • Top 10 Contracting Parties: 0 	

--	--

Principle 19: Tiered Participation Arrangements	
<p>Principle 19.1: Measures of concentration of clearing clients:</p> <ul style="list-style-type: none"> • Number of clients • Number of direct members that clear for clients • Per cent of client transactions by clearing service (by total gross notional for derivatives or total cleared value of securities transactions or similar) attributable to the top five clearing members and top ten clearing members. 	
	<p>Not applicable. All ICE NGX Contracting Parties are direct participants, and as such ICE NGX has not identified any measures of concentration with clearing clients.</p>

Principle 20: FMI Links	
<p>Principle 20.1 through Principle 20.7</p>	
	<p>Not applicable. ICE NGX does not have links to another FMI.</p>

Principle 23: Disclosure of Rules, Key Procedures, and Market Data						
<p>Principle 23.1 – Average daily volumes and notional value of new trades cleared, by instrument/ asset class, by currency and split by OTC or exchange traded.</p>						
As at September 30, 2018		CAD Gas	US Gas	CAD Power	US Power	Crude
Exchange Traded	Average Daily Volume (TJ)	23,766	4,662	74	50	0
	Average Daily Notional Value (CAD \$MM)	\$31	\$5.8	\$0.1	\$0.05	\$0.0
OTC	Average Daily Volume (TJ)	7,153	847	96	552	0
	Average Daily Notional Value (CAD \$MM)	\$9.3	\$1.0	\$0.1	\$0.7	\$0.0

<p>Principle 23.2 – Gross notional outstanding/total settlement value of novated but not-yet settled securities transactions per instrument/asset class and currency and split by OTC or exchange-traded.</p>											
<p>Not applicable. ICE NGX products are limited to physically and financially settled energy commodities transactions.</p>											
<p>Principle 23.3 – Average daily volumes and notional contract values submitted by each execution facility or matching/confirmation venue.</p>											
<table border="1"> <thead> <tr> <th>As at September 30, 2018</th> <th>ICE</th> <th>ICE NGX</th> </tr> </thead> <tbody> <tr> <td>Average Daily Volume (TJ)</td> <td>20,069</td> <td>7,205</td> </tr> <tr> <td>Average Daily Notional Value (CAD \$MM)</td> <td>\$28.7</td> <td>\$10.3</td> </tr> </tbody> </table>			As at September 30, 2018	ICE	ICE NGX	Average Daily Volume (TJ)	20,069	7,205	Average Daily Notional Value (CAD \$MM)	\$28.7	\$10.3
As at September 30, 2018	ICE	ICE NGX									
Average Daily Volume (TJ)	20,069	7,205									
Average Daily Notional Value (CAD \$MM)	\$28.7	\$10.3									