



**NGX Price Index Methodology Guide**  
April 2018 Version

**ICE NGX Canada Inc.**

# ICE NGX PRICE INDEX METHODOLOGY GUIDE

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## 1 Introduction

Natural Gas Exchange Inc. (“ICE NGX”) owns and operates an electronic exchange and clearing operation for natural gas, crude oil and electricity spot and forward Products. ICE NGX provides market participants with a fair, transparent and efficient marketplace for trading and a clearing structure that ensures performance of the resulting Transactions.

As a result, ICE NGX has developed certain market price indices for selected Products and delivery locations that may be utilized by market participants. The purpose of this document is to lay out the methodology under which the generation and publication of the price indices are administered.

## 2 Contracting Party’s Agreement

All of the Transactions that are included in the process to determine the price indices are governed by the rules and regulations laid out in a standard form agreement (the “CPA”) between ICE NGX and all market participants (“Contracting Parties”). The CPA lays out a standard set of rules that dictate the Transaction process with ICE NGX, including how Contracting Parties become eligible to trade on the Exchange, how Transactions take place, and how performance of Transactions will be assured. Capitalized terms, other than those specifically defined herein, are defined in the CPA.

## 3 Definitions

"Alberta Flat" means the periods on each calendar day as follows:

In the case of a Sunday on and from which time is to be one hour in advance of mountain standard time (first Sunday in March), the twenty-three (23) hour period starting at 0000 MPT and ending at 2400 MPT (HE0100 to HE2300 inclusive);

In the case of a Sunday on and from which time is no longer to be one hour in advance of mountain standard time (last Sunday in November), the twenty-five (25) hour period starting at 0000 MPT and ending at 2400 MPT (HE0100 to HE2500 inclusive); and

For all other calendar days, the twenty-four (24) hour period starting at 0000 MPT and ending at 2400 MPT (HE0100 to HE2400 inclusive);

"Alberta Extended Peak" means the sixteen (16) hour periods for each day starting at 0700 MPT and ending at 2300 MPT (HE 0800 to HE 2300 inclusive);

"Alberta Super Peak" means the six (6) hour periods for each day starting at 1700 MPT and ending at 2300 MPT (HE1700 to HE2200 inclusive);

"NERC Holidays" means additional Off-Peak Days (aka “Holidays”) as determined by the North American Electric Reliability Council.”

"Subscriber" means anyone who has access to the Price Indices, including but not limited to Contracting Parties and those who are granted access under a Viewing Services Agreement, a Data Provider Viewing Service Agreement or similar agreement with ICE NGX.

“Third Party Information” means information of third parties that is licensed to ICE NGX for the development of the Price Indices, including but not limited to the WM/Reuters 12Noon EST FX Benchmark.

“WM/Reuters 12Noon EST FX Benchmark” means the FX rate as published by WM/Reuters, by the same name, rounded to four decimal places.

#### **4 Intellectual Property Rights**

ICE NGX owns the right, title and interest in and to the following natural gas indices:

- ICE NGX AB-NIT Same Day Index (formerly NGX AB-NIT Same Day Index )
- ICE NGX AB-NIT Month Ahead Index (formerly NGX AB-NIT Month Ahead Index)
- ICE NGX AB-NIT Bidweek Index (formerly NGX AB-NIT Bidweek Index)
- ICE NGX AB-NIT Yesterday Index (formerly NGX AB-NIT Yesterday Index)
- ICE NGX AB-NIT Day Ahead Index (formerly NGX AB-NIT Day Ahead Index)
- ICE NGX Spectra Station #2 Day Ahead Index (formerly NGX Spectra Station #2 Day Ahead Index)
- ICE NGX GTN Malin Day Ahead Index (formerly NGX GTN Malin Day Ahead Index)
- ICE NGX PG&E Citygate Day Ahead Index (formerly NGX PG&E Citygate Day Ahead Index)
- ICE NGX TCPL-Chippawa Day Ahead Index (formerly NGX TCPL-Chippawa Day Ahead Index)
- ICE NGX Union-Dawn/TCPL-Chippawa Transport Day Ahead Index (formerly NGX Union-Dawn/TCPL-Chippawa Transport Day Ahead Index)
- ICE NGX TCPL-Emerson 1 Day Ahead Index (formerly NGX TCPL-Emerson 1 Day Ahead Index)
- ICE NGX TCPL-Emerson 2 Day Ahead Index (formerly NGX TCPL-Emerson 2 Day Ahead Index)
- ICE NGX TCPL-Empress Day Ahead Index (formerly NGX TCPL-Empress Day Ahead Index)
- ICE NGX AB-NIT/TCPL-Empress Transport Day Ahead Index (formerly NGX AB-NIT/TCPL-Empress Transport Day Ahead Index)
- ICE NGX TCPL-Iroquois Day Ahead Index (formerly NGX TCPL-Iroquois Day Ahead Index)
- ICE NGX Union-Dawn/TCPL-Iroquois Transport Day Ahead Index (formerly NGX Union-Dawn/TCPL-Iroquois Transport Day Ahead Index)
- ICE NGX TCPL-Niagara Day Ahead Index (formerly NGX TCPL-Niagara Day Ahead Index)
- ICE NGX Union-Dawn/TCPL-Niagara Transport Day Ahead Index (formerly NGX Union-Dawn/TCPL-Niagara Transport Day Ahead Index)
- ICE NGX TCPL-St. Clair Day Ahead Index (formerly NGX TCPL-St. Clair Day Ahead Index)
- ICE NGX TCPL-St. Clair/Union-Dawn Transport Day Ahead Index (formerly NGX TCPL-St. Clair/Union-Dawn Transport Day Ahead Index)
- ICE NGX Union Dawn Day Ahead Index (formerly NGX Union Dawn Day Ahead Index)
- ICE NGX Union-Parkway Day Ahead Index (formerly ICE NGX1 Union-Parkway Day Ahead Index)
- ICE NGX Union-Dawn/Parkway Transport Day Ahead Index (formerly NGX Union-Dawn/Parkway Transport Day Ahead Index)

- ICE NGX APC-ATP Day Ahead Index (formerly NGX APC-ATP Day Ahead Index)
- ICE NGX APC-ATP Same Day Index (formerly NGX APC-ATP Same Day Index)
- ICE NGX Alberta Flat Electricity RRO Index (formerly NGX Alberta Flat Electricity RRO Index)
- ICE NGX Alberta Extended Peak Electricity RRO Index (formerly NGX Alberta Extended Peak Electricity RRO Index)
- ICE NGX Alberta Super Peak Electricity RRO Index (formerly NGX Alberta Super Peak Electricity RRO Index)

ICE NGX owns the right, title and interest in and to the following crude oil indices that appear in reports accessible through the ICE NGX Clearing System:

- ICE BLS NED 1a
- ICE BLS PAT 1a
- ICE C5 1a
- ICE C5 1b
- ICE C5 2a
- ICE C5 2b
- ICE CAL 1a
- ICE CAL 1b
- ICE CAL 2a
- ICE CAL 2b
- ICE CLK 1a
- ICE CLK 1b
- ICE CLK 2a
- ICE CLK 2b
- ICE HLT 1a
- ICE HLT 1b
- ICE LSB 1a
- ICE LSB 1b
- ICE LSB 2a
- ICE LSB 2b
- ICE LT SW GRN 1a
- ICE M 1a
- ICE M 1b
- ICE M 2a
- ICE M 2b
- ICE PSO 1a
- ICE PSO 1b
- ICE PSO 2a
- ICE PSO 2b
- ICE SW 1a
- ICE SW 1b
- ICE SW 2a
- ICE SW 2b
- ICE SYN 1a
- ICE SYN 1b
- ICE SYN 2a

- ICE SYN 2b
- ICE UHC 1a
- ICE UHC 1b
- ICE WCS 1a
- ICE WCS 1b
- ICE WCS 2a
- ICE WCS 2b
- ICE WCS CUS 1a
- ICE WCS NED 1a

### **1A (Canadian Locations)**

The crude oil indices that are labeled “1a” and are transacted at a Canadian location are calculated as the volume-weighted average of all transactions in the relevant product from the first trading day of the month prior to delivery until the last day before the first Notice of Shipments (NOS) date for the delivery month, inclusive. The official NOS dates are published by Enbridge Pipeline prior to the start of each calendar year.

### **1A (U.S. Locations)**

The crude oil indices that are labeled “1a” and are transacted at a U.S. location are calculated as the volume-weighted average of all transactions in the relevant product from the 26<sup>th</sup> calendar day of the month two months prior to the contract month until the 25<sup>th</sup> calendar day of the month prior to the contract month, inclusive. If the 26<sup>th</sup> is a weekend or US holiday, trading will begin on the first business day after the 26<sup>th</sup> calendar day. If the 25<sup>th</sup> is a weekend or US holiday, trading will cease on the first business day prior to the 25<sup>th</sup> calendar day. In the event no volume is transacted for the contract month during the index period, the final index price will be determined by the market settlement price on the last trading day of the contract.

### **1B**

The crude oil indices that are labeled “1b” and are transacted at a Canadian location are calculated as the simple average of the volume-weighted averages for each trading day during the same period as the 1a.

### **2A**

The crude oil indices that are labeled “2a” and are transacted at a Canadian location are calculated as the volume-weighted average of all transactions in the relevant product from the Notice of Shipment (NOS) date for the month prior to the delivery month until the last day before the NOS date for the delivery month, inclusive.

### **2B**

The crude oil indices that are labeled “2b” and are transacted at a Canadian location are calculated as the simple average of the volume-weighted averages for each trading day during the same period as the 2a.

The various price indices listed above (referred to individually as a “Price Index” or collectively referred to as the “Price Indices”) are the sole and exclusive property of ICE NGX. The CPA allows the Contracting Parties to use the Price Indices that are made available to such Contracting Party for its business purposes but except to the extent such information was

furnished by or relates solely to the Contracting Party and subject to certain other limited exceptions, the Contracting Party may not publish or otherwise disclose such information publicly. ICE NGX may publish or otherwise disclose or cause to be disclosed such Price Indices.

#### *4.1 Third Party Information*

Third Party Information is provided as part of and in connection with the Price Indices and can be used by a Subscriber solely in relation to the Subscriber's subscription to the Price Indices and for no other independent purpose and, without prejudice to the generality of this statement, the Subscriber is prohibited from redistributing the Third Party Information and any information derived there from independently and separately from the Price Indices.

### **5 Price Index Generation**

#### *5.1 Index Period*

The Index Period is the period of time in which trading data is compiled for use in the generation of a particular Price Index. The Index Period may be a full calendar month, or a particular day or set of days, including Bid Week or the Pre-Nomination Crude Oil Trading Period.

Bid Week is defined as the last five Canadian business days of the calendar month, or a suitable representation as published by ICE NGX to account for certain holidays in Canada and in the United States.

The Pre-Nomination Crude Oil Trading Period is defined as the Canadian business days from the first business day of the calendar month until the day before the initial deadline for Notice of Shipment (the "Initial NOS Deadline") with the relevant pipeline, typically the 20<sup>th</sup> calendar day of the month.

#### *5.2 Index Hours*

All trades consummated during ICE NGX market hours during the Index Period are included in the Indices.

Crude indices also include trades that are consummated on CalRock Brokers, an affiliate of ICE NGX, up until the ICE NGX market has closed.

#### *5.3 Source Data*

To generate the Price Indices, ICE NGX obtains source data files from the ICE Trading System. The source data files are extracted directly from the database that is populated by the ICE Trading System. Depending upon the Price Index that is to be generated, the source data file will be limited to only those Transactions within the relevant Products during the Index Period.

Crude indices also include data that is imported into the ICE NGX Clearing System from CalRock Brokers, an affiliate of ICE NGX.

The source data file contains the following fields:

Product Name - The name of the Product from which the Price Indices will be derived.



Buyer Company/Trader - The name of the Contracting Party and the specific trader that consummated the purchase Transaction that will be included in the generation of the Price Indices.

Seller Company/Trader - The name of the Contracting Party and the specific trader that consummated the sale Transaction that will be included in the generation of the Price Indices.

Date/Time - The date and time of the Transaction that will be included in the generation of the Price Indices.

Price - The price of energy agreed to in the Transaction that will be included in the generation of the Price Indices.

Daily Contract Quantity - The daily delivery quantity of energy agreed to in the Transaction that will be included in the generation of the Price Indices.

The source data file contains one row for each Transaction that occurs on the ICE Trading System and therefore each trade is only counted once in the generation of the Price Indices.

#### 5.4 *Volume Weighted Average*

All Price Indices utilize volume weighted averages either in the calculation of the Index or as a component of the calculation of the Index. Weighted averages are utilized in an effort to minimize any trading anomalies or distress trading activity that might otherwise distort the data sample.

The volume weighted average price is calculated using the following methodology:

- a) Multiply the Transaction price by the Transaction quantity for each trade in the source data file.
- b) Sum the product(s) achieved in step (a).
- c) Sum the Transaction quantity for each trade in the source data file.
- d) Divide the sum from step (b) by the sum from step (c).

$$\text{Volume Weighted Average Price} = \frac{\text{Sum (Price x Quantity)}}{\text{Sum (Quantity)}}$$

The weighted average prices are calculated first by automated electronic routines and subsequently cross-checked against a manual calculation for accuracy. Once verified, the weighted average prices are used in the generation of the Price Indices.

#### 5.5 *Daily Weighted Average*

The Crude Oil Indices that include “1b” in their names are calculated as the simple average of the volume-weighted average price for each trading day during the calculation period.

This “daily weighted” average price is calculated using the following methodology:

- a) Calculate the volume-weighted average prices for each Trading day from the first of the month to the last day before the NOS date, inclusive.
- b) Sum the numbers calculated in volume (a).
- c) Sum the number of days in the period.
- d) Divide (b) by (c).

$$\text{Daily Weighted Average Price} = \frac{\text{Sum (Daily Volume Weighted Average Prices)}}{\text{Sum (Number of days)}}$$

In the event no volume is transacted on a given trading day, ICE NGX will make a determination of the Daily Weighted Average Price.

#### *5.6 Exclusion of Bilateral Transactions in Natural Gas Indices*

Bilateral Transactions are trades entered into directly between two Contracting Parties through the ICE Trading System, pursuant to section 3.1 (g) of the CPA, for the purchase or sale of any Bilateral Product, which trade is cleared and settled in accordance with the terms and conditions of the bilateral agreement between the two Contracting Parties and not cleared and settled through the ICE NGX Clearing System.

Bilateral Transactions that are entered into on the ICE Trading System in accordance with Section 3.1 (f) of the CPA are not included in the calculation of the Price Indices for the underlying Product.

#### *5.7 Inclusion of Bilateral Transaction in Crude Oil Indices*

Bilateral Transactions that are entered into on the Oil Trading Platform in accordance with article 3.1(g) of the CPA will be included in the calculation of the Price Indices for the underlying Product.

Bilateral transactions that are entered into on the trading system of CalRock Brokers, an affiliate of ICE NGX, and reported to ICE NGX on the day of trade in accordance with the ICE NGX-CalRock Brokers procedures and guidelines, are also included in the calculation of the Price Indices for the underlying Product.

#### *5.8 Evaluation and Potential Exclusion of Irregular Market Data*

ICE NGX will have the right to exclude any market data from inclusion in the source data, which appears to be irregular to the then prevailing market prices, during the period of investigation of any such Transactions. All of such market data will be included in the source data on satisfactory resolution of such investigation, provided that ICE NGX resolves such investigation prior to the opening of the ICE Trading System on the next trading day.

#### *5.9 Inclusion of RFQ Transactions in Crude Oil Indices*

ICE NGX will include any Request for Quote (RFQ) transactions negotiated on the ICE Trading System which would qualify to be in a Crude Oil Index had they been transacted as normal transactions.

RFQ transactions which fall outside the bid/offer spread showing on the ICE Trading System at the time of the trade will not be included in the Crude Oil Indices.

### **6 Changes to ICE NGX Price Index Methodology Guide**

ICE NGX will be entitled from time to time to amend this ICE NGX Price Index Methodology Guide in such manner and with such notice to any person, including any Contracting Party, as it may determine in its sole discretion.

## **7 Publication**

ICE NGX Price Indices are published by ICE NGX and by selected third party publishers. All ICE NGX Natural Gas Indices are published on the ICE NGX website at <http://www.NGX.com/>. Select ICE NGX Price Indices are also available through several publications of Canadian Enerdata Ltd. Crude Oil Indices are published on the ICE NGX Clearing System.

### *7.1 Reporting and Analytics*

ICE NGX will publish reports from time-to-time to provide information regarding the ICE NGX Price Indices. Such reports are designed to provide users of the Price Indices with the comfort of knowing that there is widespread participation in computing such Price Indices, while maintaining the anonymity of companies participating in the generation of the Price Indices.

## **8 Price Indices and the CPA**

ICE NGX generates Price Indices derived from Transactions in Products offered via the ICE Trading System and the CalRock Brokers Crude Oil Trading Platform.

### *8.1 Trades In Error and Disputed Trades*

If ICE NGX determines that a Trade in Error has occurred on the ICE Trading System under the definition outlined in the CPA, then ICE NGX will exclude such trades in the calculation of the Price Indices. Article 3.7 of the CPA defines the method by which ICE NGX determines if a Trade in Error has occurred in a Cleared Product and outlines the consequences and notification process for such an event. Article 3.1(g) of the CPA describes the method for excluding bilateral trades in error, which must be agreed to by the parties and communicated to ICE NGX by the earlier of (i) 120 minutes following the entering of the Bilateral Transaction or (ii) 60 minutes following the close of trading on the ICE Trading System on the Trading Day on which the Bilateral Transaction was entered.

Bilateral trades in error which are reported after this time will remain in the index with the indicator that they have been cancelled but remain in the index (“bilateral cancelled – in index”).

All trades which are disputed in the timeframes required by the CPA will be excluded from the crude indices whether or not they are ultimately determined to be in error.

### *8.2 Price Transparency*

Only those Transactions that are visible to market participants through the ICE Trading System are included in the calculation of the Price Indices, except as specifically stated below in the ICE Trading System Availability section of this document.

### *8.3 Linked Deals, Time Trades, and Multiple Month Terms*

Transactions defined as Linked Deals, Time Trades, and/or Transactions with multiple month terms (i.e. strip transactions) are not included in the calculation of the Price Indices.

#### *8.4 ICE Trading System Availability*

##### *Individual Users*

During the operation of the ICE Trading System, a system that connects several hundred remote users, it is possible that certain individual users may experience connectivity problems from time to time. A loss of accessibility to the ICE Trading System, however, will not prevent individuals from consummating trades for inclusion in the Price Indices. In the event that an individual user or an individual group of users cannot access the ICE Trading System to submit orders, ICE NGX is prepared to accept orders via telephone instructions. These orders will be posted by order entry agents internally at ICE NGX based on the instructions provided by the user. Any Transactions that occur which include these orders will also be included in the source data file used to generate the Price Indices as if the users entered the orders in the normal manner.

##### *Aggregate User Base*

The ICE Trading System may experience technological problems that require the temporary halting of trading capability or a temporary shut-down of the ICE Trading System. Both of these situations will make it impossible to continue to build the source data file for the indices in the usual manner as described in this document. While these periods of ICE Trading System downtime have traditionally been infrequent and traditionally quite brief, ICE NGX has developed procedures to ensure that the impact of system outages are not detrimental to the generation of the Price Indices. These procedures will allow ICE NGX to provide order entry, trading and clearing services manually via telephone instructions and confirmations during any system outages. Trades consummated on the ICE Trading System or via telephone orders during these system outages will be included in the resulting source data file used to generate the Price Indices. The Transactions will then be entered into the ICE Trading System once it is again available and all problems have been resolved. Any Transactions that were consummated manually during the outage, and therefore included in the source data file, will be published by ICE NGX to ensure transparency.

#### *8.5 Real-Time Price Indices*

ICE NGX provides running weighted averages of trading activity that will be considered for inclusion in the source data files for the Price Indices. These running weighted averages are provided as a source of information to assist market participants in making timely and informed decisions with respect to their indexed portfolios. The Real-time Price Indices should not be construed as the Price Indices themselves, but rather a representation of the trading activity that will comprise the verified and published Price Indices.

#### *8.6 Not Fair Market Value*

ICE NGX does not make any representation to any person that the Price Indices derived from market activity on the ICE Trading System represents fair market value or is indicative of fair market value.

#### *8.7 Trading Irregularities*

Pursuant to the terms and conditions of the CPA, each Contracting Party has agreed not to engage in any trading irregularities, whether alone or in association with others, that may comprise manipulative activity or activity aimed at manipulation of prices.

## 8.8 *Limitation of Liability*

Neither ICE NGX nor its agents, directors, officers and employees shall be liable to the Contracting Party for any losses, costs or expenses arising from any matter relating to the calculation, methodology of calculation, compilation, or publication of any Price Indices which are calculated by ICE NGX which are used for the settlement of any Transaction. ICE NGX does not make any express or implied warranties in respect of the results which may be achieved through the use of any of such Price Indices or in respect of the value of any of such Price Indices at any given time, nor that any settlement prices established are at a fair, proper or correct amount. Neither ICE NGX nor its agents, directors, officers and employees shall, under any circumstances, be liable for errors or deficiencies in the calculation, methodology of calculation or publication of any of such Price Indices nor shall ICE NGX be obligated to provide notice of, or publish, errors in any of such Price Indices in any manner.

Products, which are settled pursuant to the terms of the CPA on the basis of settlement prices reported by any entity other than ICE NGX, are not issued, endorsed, sold or promoted by such entity, nor has such entity passed on their legality or suitability. Neither ICE NGX, nor its respective agents, officers and employees shall be liable to the Contracting Party for any losses, costs, expenses arising from any matter relating to the source or accuracy of the underlying data, calculation, methodology of calculation, compilation, or publication of any Price Indices which are used for the settlement of any Transaction and which are derived from any publication or any other third party index. ICE NGX does not make any express or implied warranties in respect to the results which may be achieved through the use of any of the Price Indices or in respect of the values of any of the indices at any given time, nor that any settlement prices so established are at a fair, proper or correct amount. Neither ICE NGX, nor its respective agents, directors, officers and employees shall, under any circumstances, be liable for errors or deficiencies in the calculation, methodology of calculation, compilation or publication of any of the indices nor shall the ICE NGX be obligated to provide notice of, or publish, errors in any of the indices in any manner. Neither ICE NGX nor any of its agents, directors, officers and employees shall be liable to the Contracting Party for any losses, damages, costs or expenses arising from any failure of publisher of such Price Indices to establish settlement prices or report settlement prices for their contracts at a fair, proper or correct amount.

## 8.9 *Complaint Procedures*

Any concerns or complaints regarding ICE NGX Indices can be directed to [TO-ICENGX@ICE NGX.com](mailto:TO-ICENGX@ICE NGX.com)

APPENDIX A: PRICE INDEX METHODOLOGY ICE NGX AB-NIT Same Day Indices



Index	Trade Start	Trade End	Delivery Start	Delivery End	Index Price	Duration	Traded Volume	Alternate Volume	Trades in Index	Last Update Time	Component Type	Settle State
NGX AB-NIT Same Day Index (1A)	01-Feb-2016 00:00:00	01-Feb-2016 23:59:59	Mon 01-Feb-16	Mon 01-Feb-16	\$1.9822 CAD / GJ	1	1,404,100 (GJ/Day)		238	02-Feb-2016 02:51:19	Index	Settled
NGX AB-NIT Same Day Index (1A)	02-Feb-2016 00:00:00	02-Feb-2016 23:59:59	Tue 02-Feb-16	Tue 02-Feb-16	\$1.8957 CAD / GJ	1	1,477,300 (GJ/Day)		239	03-Feb-2016 02:53:15	Index	Settled
NGX AB-NIT Same Day Index (1A)	03-Feb-2016 00:00:00	03-Feb-2016 23:59:59	Wed 03-Feb-16	Wed 03-Feb-16	\$1.9045 CAD / GJ	1	1,024,100 (GJ/Day)		176	04-Feb-2016 02:49:37	Index	Settled
NGX AB-NIT Same Day Index (1A)	04-Feb-2016 00:00:00	04-Feb-2016 23:59:59	Thu 04-Feb-16	Thu 04-Feb-16	\$1.7981 CAD / GJ	1	1,280,700 (GJ/Day)		196	05-Feb-2016 02:50:30	Index	Settled
NGX AB-NIT Same Day Index (1A)	05-Feb-2016 00:00:00	05-Feb-2016 23:59:59	Fri 05-Feb-16	Sun 07-Feb-16	\$1.8488 CAD / GJ	1	1,183,700 (GJ/Day)		202	06-Feb-2016 02:53:31	Index	Settled
NGX AB-NIT Same Day Index (1A)	05-Feb-2016 00:00:00	05-Feb-2016 23:59:59	Fri 05-Feb-16	Fri 05-Feb-16	\$1.8567 CAD / GJ	1	267,700 (GJ/Day)		52	06-Feb-2016 02:53:31	Index	Settled
NGX AB-NIT Same Day Index (1A)	06-Feb-2016 00:00:00	06-Feb-2016 23:59:59	Sat 06-Feb-16	Sat 06-Feb-16	\$1.9851 CAD / GJ	1	89,500 (GJ/Day)		26	07-Feb-2016 02:47:53	Index	Settled
NGX AB-NIT Same Day Index (1A)	07-Feb-2016 00:00:00	07-Feb-2016 23:59:59	Sun 07-Feb-16	Sun 07-Feb-16	\$2.0142 CAD / GJ	1	236,600 (GJ/Day)		39	08-Feb-2016 02:46:01	Index	Settled
NGX AB-NIT Same Day Index (1A)	08-Feb-2016 00:00:00	08-Feb-2016 23:59:59	Mon 08-Feb-16	Mon 08-Feb-16	\$1.9908 CAD / GJ	1	856,000 (GJ/Day)		135	09-Feb-2016 02:52:22	Index	Settled
NGX AB-NIT Same Day Index (1A)	09-Feb-2016 00:00:00	09-Feb-2016 23:59:59	Tue 09-Feb-16	Tue 09-Feb-16	\$1.9176 CAD / GJ	1	1,259,900 (GJ/Day)		184	10-Feb-2016 02:49:58	Index	Settled
NGX AB-NIT Same Day Index (1A)	10-Feb-2016 00:00:00	10-Feb-2016 23:59:59	Wed 10-Feb-16	Wed 10-Feb-16	\$1.8562 CAD / GJ	1	1,224,600 (GJ/Day)		205	11-Feb-2016 02:49:20	Index	Settled
NGX AB-NIT Same Day Index (1A)	11-Feb-2016 00:00:00	11-Feb-2016 23:59:59	Thu 11-Feb-16	Thu 11-Feb-16	\$1.8664 CAD / GJ	1	1,077,100 (GJ/Day)		186	12-Feb-2016 02:48:41	Index	Settled
NGX AB-NIT Same Day Index (1A)	12-Feb-2016 00:00:00	12-Feb-2016 23:59:59	Fri 12-Feb-16	Mon 15-Feb-16	\$1.7989 CAD / GJ	1	926,700 (GJ/Day)		163	13-Feb-2016 02:47:57	Index	Settled
NGX AB-NIT Same Day Index (1A)	12-Feb-2016 00:00:00	12-Feb-2016 23:59:59	Fri 12-Feb-16	Fri 12-Feb-16	\$1.8562 CAD / GJ	1	516,600 (GJ/Day)		90	13-Feb-2016 02:47:57	Index	Settled
NGX AB-NIT Same Day Index (1A)	13-Feb-2016 00:00:00	13-Feb-2016 23:59:59	Sat 13-Feb-16	Sat 13-Feb-16	\$1.9929 CAD / GJ	1	443,700 (GJ/Day)		84	14-Feb-2016 02:45:18	Index	Settled
NGX AB-NIT Same Day Index (1A)	14-Feb-2016 00:00:00	14-Feb-2016 23:59:59	Sun 14-Feb-16	Sun 14-Feb-16	\$1.7360 CAD / GJ	1	259,800 (GJ/Day)		49	15-Feb-2016 02:45:10	Index	Settled
NGX AB-NIT Same Day Index (1A)	15-Feb-2016 00:00:00	15-Feb-2016 23:59:59	Mon 15-Feb-16	Mon 15-Feb-16	\$1.7327 CAD / GJ	1	206,900 (GJ/Day)		38	16-Feb-2016 02:45:40	Index	Settled

**Table 1 – ICE NGX AB-NIT Same Day Index Table**

ICE NGX generates various Price Indices from the trading activity in the current intraday (“ICE NGX AB-NIT Same Day Index”) and other short-term physical Products at ICE NGX AB-NIT. Trading information from such Products is used to populate the “ICE NGX AB-NIT Same Day Index Table”, which is published by ICE NGX and in the monthly edition of the Canadian Gas Price Reporter “CGPR”.

### 8.10 Index Diversity

The methodology by which the various Price Indices are established is contained in the summaries in section 1.4 below. The varied array of methodologies used in many of the Price Indices are the result of the varied and diverse set of market participants that utilize them and may also be a result of the gradual changes that the marketplace has made in the way that they enter into Transactions in the spot markets.

### 8.11 Weekend#

The methodologies in section 1.4 below utilize the concept of the “Weekend#”, which refers to a row contained in the “ICE NGX AB-NIT Same Day Index Table”. Weekend# is a value that is derived from trading on the Friday immediately preceding the weekend in the Product (the default Product is a three day instrument) that represents the daily gas delivery for the current Friday to the following Sunday (i.e. A three-day Product that begins on the current Friday).

### 8.12 Month ending on a weekend or Statutory and Other Holidays

Various Products may be substituted as a suitable replacement for the default Product for the Weekend# during certain holidays in Canada and in the United States or because the month

begins or ends on a weekend. Prior to any change that may significantly impact trading in Canada, which would require a change to the default for the Weekend#, ICE NGX will publish a revised methodology regarding how the holiday will be treated with respect to the generation of the Indices.

### 8.13 Methodologies

#### ICE NGX AB-NIT Same Day Index (1)

The *ICE NGX AB-NIT Same Day Index (1)* (“Index 1”) is determined by calculating the volume-weighted average of all the rows contained in the “ICE NGX AB-NIT Same Day Index Table”. This includes all rows representing Same Day Product Transactions and rows representing the Weekend#.

#### ICE NGX AB-NIT Same Day Index (1A)

The *ICE NGX AB-NIT Same Day Index (1A)* (“Index 1A”) is determined by calculating the arithmetic average of the weighted average rows used in Index 1.

#### ICE NGX AB-NIT Same Day Index (2)

The *ICE NGX AB-NIT Same Day Index (2)* (“Index 2”) is determined by calculating the volume-weighted average of the rows representing Same Day Product Transactions contained in the “ICE NGX AB-NIT Same Day Index Table”. This index *excludes* the Weekend# rows.

#### ICE NGX AB-NIT Same Day Index (2A)

The *ICE NGX AB-NIT Same Day Index (2A)* (“Index 2A”) is determined by calculating the arithmetic average of the weighted average rows used in Index 2. In the event that the CGPR does not report the required information to determine the ICE NGX AB-NIT Same Day Index (2A) hereunder, or the ICE NGX AB-NIT Same Day Index (2A) is otherwise not determinable, the price will be the price determined by Exchange based on the arithmetic average of the daily weighted average of all same day Physical Transactions with reference to the most comparable trades executed through the ICE Trading System at ICE NGX AB-NIT.

#### ICE NGX AB-NIT Same Day Index (3)

The *ICE NGX AB-NIT Same Day Index (3)* (“Index 3”) is determined by calculating the volume-weighted average of selected rows contained in the “ICE NGX AB-NIT Same Day Index Table”. The selected rows are those that represent Same Day Product Transactions on business days, and the Weekend# row once for each weekend.

#### ICE NGX AB-NIT Same Day Index (3A)

The *ICE NGX AB-NIT Same Day Index (3A)* (“Index 3A”) is determined by calculating the arithmetic average of the weighted average rows used in Index 3.

#### *ICE NGX AB-NIT Same Day Index (4)*

The *ICE NGX AB-NIT Same Day Index (4)* (“Index 4”) is determined by calculating the volume-weighted average of selected rows contained in the “ICE NGX AB-NIT Same Day Index Table”. The selected rows are those that represent Same Day Product Transactions on business days, and the Weekend# row as a proxy for each day of the weekend. It is important to note that the Weekend# is typically counted twice in this calculation, once for Saturday and again for Sunday.

#### *ICE NGX AB-NIT Same Day Index (4A)*

The *ICE NGX AB-NIT Same Day Index (4A)* (“Index 4A”) is determined by calculating the arithmetic average of the weighted average rows used in Index 4. In the event that CGPR or Exchange does not report the required information to determine the ICE NGX AB-NIT Same Day Index (4A) hereunder, or the ICE NGX AB-NIT Same Day Index (4A) is otherwise not determinable, the price will be the price determined by Exchange based on the arithmetic average of:

- A. for each Gas Day (Monday to Friday, inclusive) the daily weighted average for all same day Physical Transactions executed through the ICE Trading System at ICE NGX AB-NIT; and
- B. the weighted average for Weekend # Physical Transactions executed through the ICE Trading System as a proxy for each Saturday and Sunday at ICE NGX AB-NIT.

#### *ICE NGX AB-NIT Same Day Index (5)*

The *ICE NGX AB-NIT Same Day Index (5)* (“Index 5”) is determined by calculating the volume-weighted average of selected rows contained in the “ICE NGX AB-NIT Same Day Index Table”. The selected rows are those that represent Same Day Product Transactions Monday through Thursday, and the Weekend# row as a proxy for Friday and for each day of the weekend. It is important to note that the Weekend# is typically counted three times in this calculation, once for Friday, once for Saturday and again for Sunday.

#### *ICE NGX AB-NIT Same Day Index (5A)*

The *ICE NGX AB-NIT Same Day Index (5A)* (“Index 5A”) is determined by calculating the arithmetic average of the weighted average rows used in Index 5. In the event that the CGPR or Exchange does not report the required information to determine the ICE NGX AB-NIT Same Day Index (5A) hereunder, or the ICE NGX AB-NIT Same Day Index (5A) is otherwise not determinable, the price will be the price determined by Exchange based on the arithmetic average of:

- A. for each Gas Day (Monday to Thursday, inclusive) the daily weighted average for all same day Physical Transactions executed through the ICE Trading System at ICE NGX AB-NIT; and
- B. the weighted average for all Weekend # Physical Transactions executed through the ICE Trading System as a proxy for Friday, Saturday or



Sunday plus any Canadian statutory holidays that are included in the weekend Physical Transactions at ICE NGX AB-NIT.

#### ICE NGX AB-NIT Same Day Index (5A) US

The ICE NGX AB-NIT Same Day Index (5A) US (“Index 5A US”) is determined by converting the ICE NGX AB-NIT Same Day Index (5A) to US Dollars/MMBtu using the WM/Reuters 12Noon EST FX Benchmark.

### **9 ICE NGX AB-NIT Month Ahead Indices**

ICE NGX generates the ICE NGX AB-NIT Month Ahead Index from the trading activity in the Product that represents daily gas delivery from the first day of the following month to the last day of the following month (i.e. “Near Month”, “Prompt Month”, or “One-Month Spot”) at ICE NGX AB-NIT.

#### *9.1 Index Data Source*

All implied spread Transactions in the underlying Product will be included in the calculation of the ICE NGX AB-NIT Month Ahead Index however all spread legs generated by the ICE Trading System as a result of time spread Transactions in the underlying Product will not be included in the calculation of the ICE NGX AB-NIT Month Ahead Index.

#### *9.2 Methodologies*

##### ICE NGX AB-NIT Month Ahead Index (7A)

The ICE NGX AB-NIT Month Ahead Index (7A) is determined by calculating the volume-weighted average of all the Transactions during a calendar month in the Product that represents gas delivery for the following calendar month. In the event that CGPR or Exchange does not report the required information to determine the ICE NGX AB-NIT Month Ahead Index (7A) hereunder, or the ICE NGX AB-NIT Month Ahead Index (7A) is otherwise not determinable, the price will be the price determined by Exchange with reference to the most comparable reported prices in respect of Intra-Alberta gas bought and sold for the entire delivery Month on the TCPL Alberta System based on agreements made during the Month immediately prior to the delivery Month.

### ICE NGX AB-NIT Month Ahead Index (7A) US

The ICE NGX AB-NIT Month Ahead Index (7A) US is determined by converting the ICE NGX AB-NIT Month Ahead Index (7A) to US Dollars/MMBtu using the WM/Reuters 12Noon EST FX Benchmark as published on the first business day of the calendar month of the ICE NGX AB-NIT Month Ahead Index (7A) US.

### ICE NGX AB-NIT Bidweek Index

The ICE NGX AB-NIT Bidweek Index is determined by calculating the volume-weighted average of all the Transactions during the last five Canadian business days during a calendar month ("Bid Week") in the Product that represents gas delivery for the following calendar month.

### 9.3 *Statutory and Other Holidays*

Prior to any Canadian statutory holiday, or prior to any U.S. holiday that significantly impacts trading in Canada, ICE NGX publishes a methodology regarding how the holiday will be treated with respect to the generation of the Indices.

## **10 ICE NGX Daily Spot Gas Price Indices**

ICE NGX generates daily spot price indices from the on screen daily trading activity, in the next-day Spot Day Product on Monday to Thursday and the on screen daily trading activity, in the Weekend Product (the default product is a three day instrument) traded on Friday. These Products are the index source Products.

### 10.1 *Index Data Source*

For the following Price Indices all of the on screen transactional data that occurs in the index source Products, from market opening until the Product closes for the trading day, will qualify to be used in the calculation of the Index.

- ICE NGX AB-NIT Same Day Index (formerly NGX AB-NIT Same Day Index)
- ICE NGX AB-NIT Month Ahead Index (formerly NGX AB-NIT Month Ahead Index)
- ICE NGX AB-NIT Bidweek Index (formerly NGX AB-NIT Bidweek Index)
- ICE NGX AB-NIT Yesterday Index (formerly NGX AB-NIT Yesterday Index)
- ICE NGX AB-NIT Day Ahead Index (formerly NGX AB-NIT Day Ahead Index)
- ICE NGX Spectra Station #2 Day Ahead Index (formerly NGX Spectra Station #2 Day Ahead Index)
- ICE NGX GTN Malin Day Ahead Index (formerly NGX GTN Malin Day Ahead Index)
- ICE NGX PG&E Citygate Day Ahead Index (formerly NGX PG&E Citygate Day Ahead Index)
- ICE NGX TCPL-Chippawa Day Ahead Index (formerly NGX TCPL-Chippawa Day Ahead Index)
- ICE NGX Union-Dawn/TCPL-Chippawa Transport Day Ahead Index (formerly NGX Union-Dawn/TCPL-Chippawa Transport Day Ahead Index)
- ICE NGX TCPL-Emerson 1 Day Ahead Index (formerly NGX TCPL-Emerson 1 Day Ahead Index)

- ICE NGX TCPL-Emerson 2 Day Ahead Index (formerly NGX TCPL-Emerson 2 Day Ahead Index)
- ICE NGX TCPL-Empress Day Ahead Index (formerly NGX TCPL-Empress Day Ahead Index)
- ICE NGX AB-NIT/TCPL-Empress Transport Day Ahead Index (formerly NGX AB-NIT/TCPL-Empress Transport Day Ahead Index)
- ICE NGX TCPL-Iroquois Day Ahead Index (formerly NGX TCPL-Iroquois Day Ahead Index)
- ICE NGX Union-Dawn/TCPL-Iroquois Transport Day Ahead Index (formerly NGX Union-Dawn/TCPL-Iroquois Transport Day Ahead Index)
- ICE NGX TCPL-Niagara Day Ahead Index (formerly NGX TCPL-Niagara Day Ahead Index)
- ICE NGX Union-Dawn/TCPL-Niagara Transport Day Ahead Index (formerly NGX Union-Dawn/TCPL-Niagara Transport Day Ahead Index)
- ICE NGX TCPL-St. Clair Day Ahead Index (formerly NGX TCPL-St. Clair Day Ahead Index)
- ICE NGX TCPL-St. Clair/Union-Dawn Transport Day Ahead Index (formerly NGX TCPL-St. Clair/Union-Dawn Transport Day Ahead Index)
- ICE NGX Union Dawn Day Ahead Index (formerly NGX Union Dawn Day Ahead Index)
- ICE NGX Union-Parkway Day Ahead Index (formerly ICE NGX1 Union-Parkway Day Ahead Index)
- ICE NGX Union-Dawn/Parkway Transport Day Ahead Index (formerly NGX Union-Dawn/Parkway Transport Day Ahead Index)
- ICE NGX APC-ATP Day Ahead Index (formerly NGX APC-ATP Day Ahead Index)
- ICE NGX APC-ATP Same Day Index (formerly NGX APC-ATP Same Day Index)
- ICE NGX Alberta Flat Electricity RRO Index (formerly NGX Alberta Flat Electricity RRO Index)
- ICE NGX Alberta Extended Peak Electricity RRO Index (formerly NGX Alberta Extended Peak Electricity RRO Index)
- ICE NGX Alberta Super Peak Electricity RRO Index (formerly NGX Alberta Super Peak Electricity RRO Index)

For the **ICE NGX AB-NIT Day Ahead Index** and the **ICE NGX APC-ATP Day Ahead Index** only the on screen transactional data that occurs in the index source Products, from Market opening until 11:30 am Mountain Time, Monday to Friday, will qualify to be used in the calculation of the Index.

ICE NGX AB-NIT Day Ahead Index US and the ICE NGX APC-ATP Day Ahead Index US  
The ICE NGX Day Ahead Index US ("Index Day Ahead US") is determined by converting the Day Ahead index to US Dollars/MMBtu using the WM/Reuters 12Noon EST FX Benchmark on the Physical Gas transaction date.

The **ICE NGX APC-ATP Same Day Index** is determined by the Exchange based on the arithmetic average of the daily weighted average of all same day Physical Transactions executed through the ICE Trading System at ICE NGX APC-ATP. If no same day physical transactions are executed on a gas day, the ICE NGX APC-ATP Same Day Index value from the previous business day will be applied.

Location spread Transaction legs are only included in the calculation of Transport Day Ahead Indices, they are not included in the calculation of non-Transport Day Ahead Indices.

## 10.2 Index Diversity

These Price Indices follow the methodology as outlined below, using the ICE NGX Union Dawn Day Ahead Index Table below as an example.

Index	Trade Start	Trade End	Delivery Start	Delivery End	Index Price	Duration	Traded Volume	Alternate Volume	Trades in Index	Last Update Time	Component Type	Settle State
NGX Union Dawn Day Ahead Index	29-Jan-2016 00:00:00	29-Jan-2016 23:59:59	Mon 01-Feb-16	Mon 01-Feb-16	\$2.3483 USD / MMBtu	1	927,900 (MMBtu/Day)		154	30-Jan-2016 02:15:09	Index	Settled
NGX Union Dawn Day Ahead Index	01-Feb-2016 00:00:00	01-Feb-2016 23:59:59	Tue 02-Feb-16	Tue 02-Feb-16	\$2.2299 USD / MMBtu	1	854,300 (MMBtu/Day)		137	02-Feb-2016 02:15:10	Index	Settled
NGX Union Dawn Day Ahead Index	02-Feb-2016 00:00:00	02-Feb-2016 23:59:59	Wed 03-Feb-16	Wed 03-Feb-16	\$2.0791 USD / MMBtu	1	903,200 (MMBtu/Day)		144	03-Feb-2016 02:15:18	Index	Settled
NGX Union Dawn Day Ahead Index	03-Feb-2016 00:00:00	03-Feb-2016 23:59:59	Thu 04-Feb-16	Thu 04-Feb-16	\$2.0877 USD / MMBtu	1	873,900 (MMBtu/Day)		163	04-Feb-2016 02:15:21	Index	Settled
NGX Union Dawn Day Ahead Index	04-Feb-2016 00:00:00	04-Feb-2016 23:59:59	Fri 05-Feb-16	Fri 05-Feb-16	\$2.0807 USD / MMBtu	1	633,800 (MMBtu/Day)		119	05-Feb-2016 02:15:28	Index	Settled
NGX Union Dawn Day Ahead Index	05-Feb-2016 00:00:00	05-Feb-2016 23:59:59	Sat 06-Feb-16	Mon 08-Feb-16	\$2.1309 USD / MMBtu	1	692,300 (MMBtu/Day)		118	06-Feb-2016 02:15:04	Index	Settled
NGX Union Dawn Day Ahead Index	05-Feb-2016 00:00:00	05-Feb-2016 23:59:59	Sat 06-Feb-16	Mon 08-Feb-16	\$2.1309 USD / MMBtu	1	692,300 (MMBtu/Day)		118	06-Feb-2016 02:15:04	Index	Settled
NGX Union Dawn Day Ahead Index	05-Feb-2016 00:00:00	05-Feb-2016 23:59:59	Sat 06-Feb-16	Mon 08-Feb-16	\$2.1309 USD / MMBtu	1	692,300 (MMBtu/Day)		118	06-Feb-2016 02:15:26	Index	Settled
NGX Union Dawn Day Ahead Index	08-Feb-2016 00:00:00	08-Feb-2016 23:59:59	Tue 09-Feb-16	Tue 09-Feb-16	\$2.2774 USD / MMBtu	1	785,900 (MMBtu/Day)		116	09-Feb-2016 02:15:19	Index	Settled
NGX Union Dawn Day Ahead Index	09-Feb-2016 00:00:00	09-Feb-2016 23:59:59	Wed 10-Feb-16	Wed 10-Feb-16	\$2.2219 USD / MMBtu	1	798,400 (MMBtu/Day)		122	10-Feb-2016 02:15:19	Index	Settled
NGX Union Dawn Day Ahead Index	10-Feb-2016 00:00:00	10-Feb-2016 23:59:59	Thu 11-Feb-16	Thu 11-Feb-16	\$2.1734 USD / MMBtu	1	632,800 (MMBtu/Day)		95	11-Feb-2016 02:15:21	Index	Settled
NGX Union Dawn Day Ahead Index	11-Feb-2016 00:00:00	11-Feb-2016 23:59:59	Fri 12-Feb-16	Fri 12-Feb-16	\$2.1729 USD / MMBtu	1	771,100 (MMBtu/Day)		104	12-Feb-2016 02:15:20	Index	Settled
NGX Union Dawn Day Ahead Index	12-Feb-2016 00:00:00	12-Feb-2016 23:59:59	Sat 13-Feb-16	Tue 16-Feb-16	\$2.0758 USD / MMBtu	1	947,400 (MMBtu/Day)		132	13-Feb-2016 02:15:01	Index	Settled
NGX Union Dawn Day Ahead Index	12-Feb-2016 00:00:00	12-Feb-2016 23:59:59	Sat 13-Feb-16	Tue 16-Feb-16	\$2.0758 USD / MMBtu	1	947,400 (MMBtu/Day)		132	13-Feb-2016 02:15:04	Index	Settled
NGX Union Dawn Day Ahead Index	12-Feb-2016 00:00:00	12-Feb-2016 23:59:59	Sat 13-Feb-16	Tue 16-Feb-16	\$2.0758 USD / MMBtu	1	947,400 (MMBtu/Day)		132	13-Feb-2016 02:15:20	Index	Settled
NGX Union Dawn Day Ahead Index	12-Feb-2016 00:00:00	12-Feb-2016 23:59:59	Sat 13-Feb-16	Tue 16-Feb-16	\$2.0758 USD / MMBtu	1	947,400 (MMBtu/Day)		132	13-Feb-2016 02:15:23	Index	Settled
NGX Union Dawn Day Ahead Index	16-Feb-2016 00:00:00	16-Feb-2016 23:59:59	Wed 17-Feb-16	Wed 17-Feb-16	\$1.9833 USD / MMBtu	1	1,082,400 (MMBtu/Day)		157	17-Feb-2016 02:15:17	Index	Settled

Table 2 – Sample “ICE NGX Union Dawn Day Ahead Index” Table

## 10.3 WKD

The methodology in section 3.4 below utilizes the concept of the “WKD”, which refers to a row contained in the respective “Union Dawn Day Ahead Index Table”.

WKD Total Quantity Traded is a value that is derived from qualifying trading, on the day immediately preceding the weekend, in the index source Product (the default product is a three day instrument) multiplied by the number of days represented. This quantity represents the total qualifying quantity for the weekend (the default would be the qualifying quantity for Saturday, Sunday and Monday).

## 10.4 Methodologies

The daily spot gas price index tables such as the ICE NGX Union Dawn Day Ahead Index table illustrated above provides a summary of the index source Product qualifying Transactions that comprise the Price Index. A volume-weighted average is calculated for each row.

The monthly total for the daily spot gas price indices are determined by calculating the arithmetic average of the daily Product, weighted average rows (typically traded on Monday to Thursday), plus the weighted average of the WKD row typically traded on Friday.

For Clarification, the row-representing weekend trading activity that occurred on Friday is not counted in the calculation. But the WKD row (representing the daily volume traded on Friday times the number of proxy days) is used in the calculation.

### 10.5 Statutory and Other Holidays

Prior to any Canadian statutory holiday, or prior to any U.S. holiday that significantly impacts trading in Canada, ICE NGX publishes a methodology regarding how the holiday will be treated with respect to the generation of the Indices. Typically this will entail a substitution of the index source Product that will represent the WKD in the table. Various Products may be substituted as a suitable replacement for the default Product (three day instrument) for the WKD during certain holidays in Canada and in the United States or because the month begins or ends on a weekend.

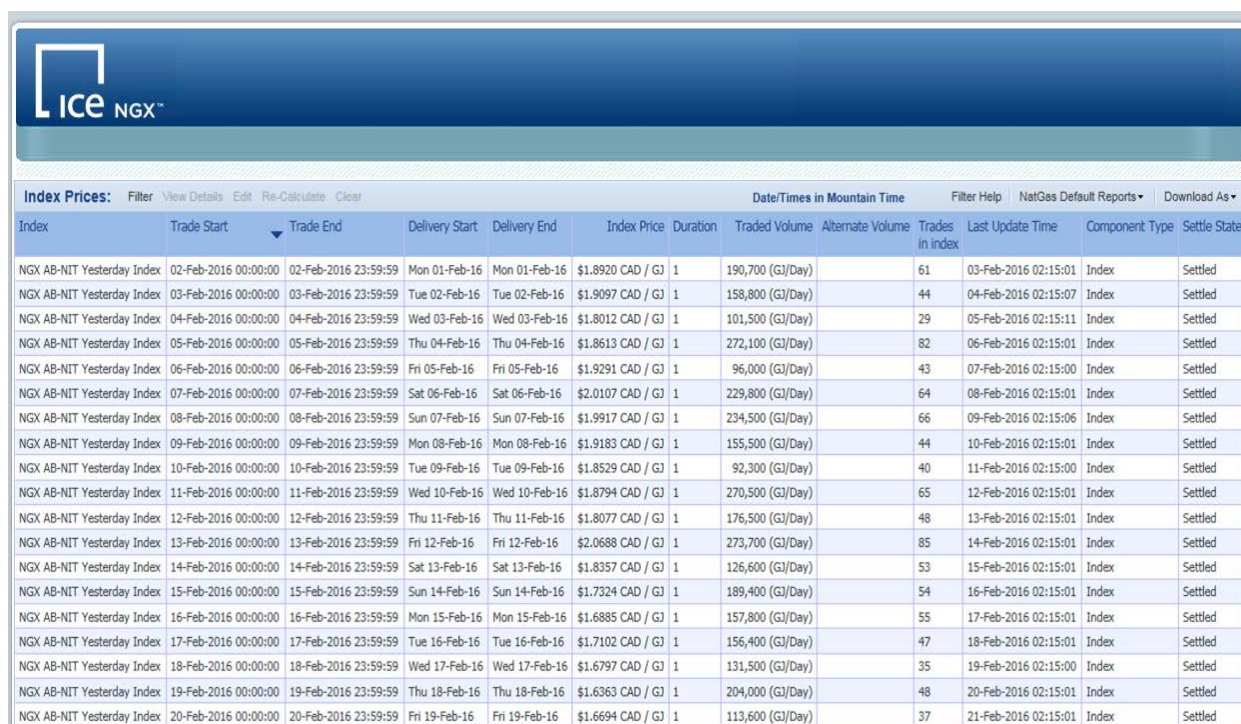
## 11 ICE NGX AB-NIT Same Day Index and ICE NGX AB-NIT Yesterday Index

ICE NGX generates various Price Indices from the trading activity in the current intraday (Same Day) and yesterday's intraday (Yesterday) Products. Trading information from such Products is used to populate the tables using the same methodology for the following Price Indices:

- ICE NGX AB-NIT Same Day Index
- ICE NGX AB-NIT Yesterday Index

### 11.1 Index Diversity

These Price Indices follow the methodology as outlined below, using the ICE NGX AB-NIT Index as an example



Index	Trade Start	Trade End	Delivery Start	Delivery End	Index Price	Duration	Traded Volume	Alternate Volume	Trades in Index	Last Update Time	Component Type	Settle State
NGX AB-NIT Yesterday Index	02-Feb-2016 00:00:00	02-Feb-2016 23:59:59	Mon 01-Feb-16	Mon 01-Feb-16	\$1.8920 CAD / GJ	1	190,700 (GJ/Day)		61	03-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	03-Feb-2016 00:00:00	03-Feb-2016 23:59:59	Tue 02-Feb-16	Tue 02-Feb-16	\$1.9097 CAD / GJ	1	158,800 (GJ/Day)		44	04-Feb-2016 02:15:07	Index	Settled
NGX AB-NIT Yesterday Index	04-Feb-2016 00:00:00	04-Feb-2016 23:59:59	Wed 03-Feb-16	Wed 03-Feb-16	\$1.8012 CAD / GJ	1	101,500 (GJ/Day)		29	05-Feb-2016 02:15:11	Index	Settled
NGX AB-NIT Yesterday Index	05-Feb-2016 00:00:00	05-Feb-2016 23:59:59	Thu 04-Feb-16	Thu 04-Feb-16	\$1.8613 CAD / GJ	1	272,100 (GJ/Day)		82	06-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	06-Feb-2016 00:00:00	06-Feb-2016 23:59:59	Fri 05-Feb-16	Fri 05-Feb-16	\$1.9291 CAD / GJ	1	96,000 (GJ/Day)		43	07-Feb-2016 02:15:00	Index	Settled
NGX AB-NIT Yesterday Index	07-Feb-2016 00:00:00	07-Feb-2016 23:59:59	Sat 06-Feb-16	Sat 06-Feb-16	\$2.0107 CAD / GJ	1	229,800 (GJ/Day)		64	08-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	08-Feb-2016 00:00:00	08-Feb-2016 23:59:59	Sun 07-Feb-16	Sun 07-Feb-16	\$1.9917 CAD / GJ	1	234,500 (GJ/Day)		66	09-Feb-2016 02:15:06	Index	Settled
NGX AB-NIT Yesterday Index	09-Feb-2016 00:00:00	09-Feb-2016 23:59:59	Mon 08-Feb-16	Mon 08-Feb-16	\$1.9183 CAD / GJ	1	155,500 (GJ/Day)		44	10-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	10-Feb-2016 00:00:00	10-Feb-2016 23:59:59	Tue 09-Feb-16	Tue 09-Feb-16	\$1.8529 CAD / GJ	1	92,300 (GJ/Day)		40	11-Feb-2016 02:15:00	Index	Settled
NGX AB-NIT Yesterday Index	11-Feb-2016 00:00:00	11-Feb-2016 23:59:59	Wed 10-Feb-16	Wed 10-Feb-16	\$1.8794 CAD / GJ	1	270,500 (GJ/Day)		65	12-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	12-Feb-2016 00:00:00	12-Feb-2016 23:59:59	Thu 11-Feb-16	Thu 11-Feb-16	\$1.8077 CAD / GJ	1	176,500 (GJ/Day)		48	13-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	13-Feb-2016 00:00:00	13-Feb-2016 23:59:59	Fri 12-Feb-16	Fri 12-Feb-16	\$2.0688 CAD / GJ	1	273,700 (GJ/Day)		85	14-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	14-Feb-2016 00:00:00	14-Feb-2016 23:59:59	Sat 13-Feb-16	Sat 13-Feb-16	\$1.8357 CAD / GJ	1	126,600 (GJ/Day)		53	15-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	15-Feb-2016 00:00:00	15-Feb-2016 23:59:59	Sun 14-Feb-16	Sun 14-Feb-16	\$1.7324 CAD / GJ	1	189,400 (GJ/Day)		54	16-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	16-Feb-2016 00:00:00	16-Feb-2016 23:59:59	Mon 15-Feb-16	Mon 15-Feb-16	\$1.6885 CAD / GJ	1	157,800 (GJ/Day)		55	17-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	17-Feb-2016 00:00:00	17-Feb-2016 23:59:59	Tue 16-Feb-16	Tue 16-Feb-16	\$1.7102 CAD / GJ	1	156,400 (GJ/Day)		47	18-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	18-Feb-2016 00:00:00	18-Feb-2016 23:59:59	Wed 17-Feb-16	Wed 17-Feb-16	\$1.6797 CAD / GJ	1	131,500 (GJ/Day)		35	19-Feb-2016 02:15:00	Index	Settled
NGX AB-NIT Yesterday Index	19-Feb-2016 00:00:00	19-Feb-2016 23:59:59	Thu 18-Feb-16	Thu 18-Feb-16	\$1.6363 CAD / GJ	1	204,000 (GJ/Day)		48	20-Feb-2016 02:15:01	Index	Settled
NGX AB-NIT Yesterday Index	20-Feb-2016 00:00:00	20-Feb-2016 23:59:59	Fri 19-Feb-16	Fri 19-Feb-16	\$1.6694 CAD / GJ	1	113,600 (GJ/Day)		37	21-Feb-2016 02:15:01	Index	Settled

Table 3 – Sample “ICE NGX AB-NIT Yesterday Index” Table

## 11.2 Proxy

There is no proxy used in the calculation of these indices, as ICE Trading System is available for trading 365 days a year.

## 11.3 Methodologies

These Price Indices follow the methodology as outlined below, using the ICE NGX AB-NIT Yesterday Index as an example

The ICE NGX AB-NIT Yesterday Index table illustrated above provides a summary of the Transactions that occurred for yesterday's gas day that comprise the ICE NGX AB-NIT Yesterday Index. The table contains one row representing trades in the yesterday's day Product for each day from Monday to Sunday, a volume-weighted average is calculated for each row. The ICE NGX AB-NIT Yesterday Index is determined by calculating the volume-weighted average of the rows representing Yesterday Product Transactions contained in the "ICE NGX AB-NIT Yesterday Index Table". The *ICE NGX AB-NIT Same Day Index* is determined by calculating the arithmetic average of the weighted average rows.

## 11.4 Statutory and Other Holidays

Prior to any Canadian statutory holiday, or prior to any U.S. holiday that significantly impacts trading in Canada, ICE NGX publishes a methodology regarding how the holiday will be treated with respect to the generation of the Indices.

## 12 Crude Oil Indices

ICE NGX generates Price Indices from the trading activity in certain Crude Oil Product(s) in the month(s) prior to the Delivery Period for those Products. These Indices are calculated as follows:

- A. Monthly Volume Weighted Average Price – Canadian Locations (1a) - The crude oil indices that are labeled "1a" and are transacted at a Canadian location are calculated as the volume-weighted average of all transactions in the relevant product from the first trading day of the month prior to delivery until the last day before the first Notice of Shipments (NOS) date for the delivery month, inclusive. The official NOS dates are published by Enbridge Pipeline prior to the start of each calendar year
- B. Monthly Volume Weighted Average Price – U.S. Locations (1a) - The crude oil indices that are labeled "1a" and are transacted at a US location are calculated as the volume-weighted average of all transactions in the relevant product from the 26th calendar day of the month two months prior to the contract month until the 25th calendar day of the month prior to the contract month, inclusive. If the 26th is a weekend or US holiday, trading will begin on the first business day after the 26th calendar day. If the 25th is a weekend or US holiday, trading will cease on the first business day prior to the 25th calendar day. In the event no volume is transacted for the contract month during the index period, the final index price will be determined by the market settlement price on the last trading day of the contract.

- C. Daily Weighted Average Price (1b) – The crude oil indices that are labeled “1b” and are transacted at a Canadian location are calculated as the simple average of the volume-weighted averages for each trading day during the same period as the 1a.
- D. Monthly Volume Weighted Average Price (2a) - The crude oil indices that are labeled “2a” and are transacted at a Canadian location are calculated as the volume-weighted average of all transactions in the relevant product from the Notice of Shipment (NOS) date for the month prior to the delivery month until the last day before the NOS date for the delivery month, inclusive.
- E. Daily Weighted Average Price (2b) – The crude oil indices that are labeled “2b” and are transacted at a Canadian location are calculated as the simple average of the volume-weighted averages for each trading day during the same period as the 2a.

### Index Data Source

For the following Price Indices all of the on screen ICE NGX transaction data (other than Trades in Error), and all qualifying CalRock trades in the index-generating Products during the relevant Index Period will qualify to be used in the calculation of the relevant Index.

The index-generating Products are the grades referred to in the name of the relevant Index.

- ICE BLS NED 1a
  - Includes differential to WTI on Energy Transfer, Seaway, Enbridge Transfer and Keystone pipelines at Nederland
- ICE BLS PAT 1a
  - Includes differential to WTI on Dakota Access, Enbridge Transfer and Keystone pipelines at Patoka.
- ICE C5 1a, ICE C5 1b, ICE C5 2a, ICE C5 2b
  - Includes differential to WTI on Enbridge (Transfer at Source-ENB and In-Line-EIL), Federated, Fort Sask, Peace, Pembina, Rangeland and Wizard Lake pipelines at Edmonton and Peace pipeline at Namao
- ICE CAL 1a, ICE CAL 1b, ICE CAL 2a, ICE CAL 2b
  - Includes differential to WTI on Central Alberta pipelines at Edmonton
- ICE CLK 1a, ICE CLK 1b, ICE CLK 2a, ICE CLK 2b
  - Includes differential to WTI on Enbridge (Transfer at Source-ENB and In-Line-EIL) and Cold Lake pipelines at Edmonton and on Enbridge (Transfer at Source-ENB and In-Line-EIL), Cold Lake, Gibson and Express pipelines at Hardisty.
- ICE HLT 1a, ICE HLT 1b, ICE HLT 2a, ICE HLT 2b
  - Includes differential to WTI on Gibson pipelines at Hardisty
- ICE LSB 1a, ICE LSB 1b, ICE LSB 2a, ICE LSB 2b
  - Includes differential to WTI on Enbridge (Transfer at Source-ENB and In-Line-EIL) and Tundra pipelines at Cromer
- ICE LT SW GRN 1a
  - Includes differential to WTI on Belle Fourche, Hiland, Butte, Rocky Mountain Pipeline, Enbridge Transfer and Guernsey HUB Pipelines at Guernsey.
- ICE M 1a, ICE M 1b, ICE M 2a, ICE M 2b
  - Includes differential to WTI on Enbridge (Transfer at Source-ENB and In-Line-EIL) and Tundra pipelines at Cromer
- ICE PSO 1a, ICE PSO 1b, ICE PSO 2a, ICE PSO 2b
  - Includes differential to WTI on Peace pipelines at Edmonton

- ICE SW 1a, ICE SW 1b, ICE SW 2a, ICE SW 2b
  - Includes differential to WTI on Enbridge (Transfer at Source-ENB and In-Line-EIL), Bonnie Glen, Federated, Peace, Pembina, Rainbow, and Rangeland pipelines at Edmonton
- ICE SYN 1a, ICE SYN 1b, ICE SYN 2a, ICE SYN 2b
  - Includes differential to WTI on Enbridge (Transfer at Source-ENB and In-Line-EIL), Alberta Oil Sands, and Trans Mountain pipelines at Edmonton
- ICE UHC 1a, ICE UHC 1b
  - Includes differential to WTI on Enbridge (Transfer at Source-ENB, In-Line-EIL and North Dakota-ND) and Minnesota pipelines at Clearbrook
- ICE WCS 1a, ICE WCS 1b, ICE WCS 2a, ICE WCS 2b
  - Includes differential to WTI on Enbridge (Transfer at Source-ENB and In-Line-EIL) and Husky pipelines at Hardisty
- ICE WCS CUS 1a
  - Includes differential to WTI on Enbridge Transfer, Plains Terminal and Keystone pipelines at Cushing
- ICE WCS NED 1a
  - Includes differential to WTI on Enbridge Transfer, Seaway, Keystone, Sunoco Terminal and Market Link Pipelines at Nederland

### **13 ICE NGX Alberta Electricity RRO Indices**

The ICE NGX Alberta Electricity RRO Index generates three near month indices from “On Screen” market activity that occurs during the ICE NGX regular trading day.

- ICE NGX Alberta Flat Electricity RRO Index
- ICE NGX Alberta Extended Peak Electricity RRO Index
- ICE NGX Alberta Super Peak Electricity RRO Index

The ICE NGX Alberta Electricity RRO Index is unique in that it incorporates transactional activity as well as bid/offer spreads to determine the index. It was created to ensure a fair representative index price is available, even on a market day when there are no transactions. All implied spread transactions and implied spread bids or offers in the underlying Product will be included in the calculation of the ICE NGX Alberta Electricity RRO Indices however all spread legs generated by the ICE Trading System as a result of time spread Transactions in the underlying Product will not be included in the calculation of the ICE NGX Alberta Electricity RRO Indices.

#### *13.1 Changes*

As of June 17th 2011, two changes were made to the Baseload and Extended Peak RRO Indices applied to August 2011 index generation and forward. The first change was the removal of the 100 MW limit to the traded volume, all traded volume is now be included in the index. Secondly, all transactions occurring in the EPCOR Power Auctions are included as well.

#### *13.2 Combined Index Generation*

The Daily Combined Index Price is made up of a time weighted average of qualifying spreads and a weighted average of on screen trades, which occur on a specific trading day. Each trading day, a daily post price and daily post volume are calculated to a time weighted average and then combined with the weighted average of ICE NGX Transactions for that day. This result is a weighted average Daily Combined Index Price for that day.



### *13.3 Qualifying Spreads*

Only spreads made up of the best bid and best offer and that meet the predetermined criteria will be included when calculating the daily post price and daily post volume. These qualifying spreads must meet the requirements set out in Table 1.0.

### Qualifying Spread Requirements

Spread Requirement	Baseload (FLAT)	Extended Peak	Super Peak
Minimum bid/offer Volume	5 MWh	5 MWh	5 MWh
Max Spread Post Volume per Day	25 MWh	25 MWh	25 MWh
Max Spread	\$2.00/MWh	\$5.00/MWh	\$10.00/MWh
Min Minutes per Day	60 Minutes	60 Minutes	60 Minutes
Weighted Average Time	Fraction of hours	Fraction of hours	Fraction of hours
Weighted Average Volume	Lesser of bid/offer	Lesser of bid/offer	Lesser of bid/offer
No Qualifying Spreads	Use Volume of 0 for the day	Use Volume of 0 for the day	Use Volume of 0 for the day

To determine the daily post price, only bid/offer spreads with a minimum volume of 5 MWh will be used. The bid/offer spread must be equal to or less than \$2.00/MWh, \$5.00/MWh or \$10.00/MWh in the Baseload, Extended Peak and Super Peak products respectively, for the spread to qualify. Finally, all the qualifying spreads in the day must have a total duration of 60 minutes for the time weighted average post price to be eligible for inclusion into the index; otherwise a volume of 0 will be used. If there are qualifying spreads in the day in excess of 25 MWh, a maximum of 25 MWh will be used when calculating the weighted average index price.

#### 13.4 Qualifying Trades

All on screen trades that occur during a ICE NGX regular trading day are used in the calculation of the Trade Data Weighted average

#### 13.5 Calculating the Daily Post Price Using Spreads:

The daily post price is calculated using a time weighted average as follows:

- Spread duration in Hours =  $\frac{\text{End Time} - \text{Start Time (sec)}}{60 \text{ min/hr} * 60 \text{ sec/min}}$
- Post volume = Spread duration in Hours (see above) \* Min (bid volume, offer volume)
- Post price = Midpoint of the bid/offer spread
- Time weighted average daily index =  $\frac{\text{SUM (Post volume * Post price)}}{\text{SUM (Post Volume)}}$

#### **Examples of Calculating a Spread Daily Post Price (Baseload power market):**

Date	Month	Start Time	End Time	Sprd Dur	Bid Vol	Offer Vol	Best Bid Price	Best Offer Price	Spread	Post Vol	Post Price	Daily Index
Day 1	June 06	8:45:00	10:50:00	2.08 *	25	25	67.50	69.00	1.50	52.08 **	68.25 ***	25 MWh @ \$68.25 ****

Day 2	June 06	10:44:00	11:44:00	1.00	5	10	67.00	68.50	1.50	5.00*	67.75	10.83 MWh @ \$67.08 ***
Day 2	June 06	14:50:00	16:00:00	1.17	5	5	65.50	67.50	2.00	5.83*	66.50	
Day 3	June 06	11:35:30	11:45:45	0.17	5 *	15	66.00	67.00	1.00	0.85	66.50	12.65 MWh @ \$66.50 **
Day 3	June 06	11:45:45	12:56:45	1.18	10 *	15	66.00	67.00	1.00	11.80	66.50	
Day 4	June 06	9:06:30	9:10:30	0.067*	10	15	66.10	66.45	0.35	0.67	66.275	0 Volume used to calculate the daily index
Day 4	June 06	10:15:45	10:37:00	0.35*	15	10	66.25	66.50	0.25	3.54	66.375	
Day 4	June 06	11:02:10	11:21:20	0.32*	15	5	66.35	66.65	0.30	1.60	66.50	
Day 4	June 06	11:34:10	11:56:40	0.38	5	10	65.00	67.15	2.15 **			

Day 1:

\* Spread Duration = 2 hrs and 5 minutes duration = 125 minutes/60 minutes/hour = 2.08333

\*\* Post Volume = Min (bid volume, offer volume) \* Spread Duration = 25 MW \* 2.08333 = 52.08

\*\*\* Post Price = Midpoint (bid price, offer price) = \$68.25

\*\*\*\* The post volume for the day is 52.08, which is greater than the maximum allowed, 25 MWh. Therefore, use the maximum of 25 MWh for post volume.

Day 2:

The Day 2 post price volume is the sum of the volumes of the qualifying spreads as follows:

Spread Duration = 1.00 hr + 1.17 hr = 2.17 hr

\* Post Volume = 5.00 MWh + 5.83 MWh = 10.83 MWh

\*\* Daily Index post price is the weighted average of the Post Volume and Post Price  
= [(5.00 MWh \* \$67.75) + (5.83 MWh \* \$66.50)] / 10.83 MWh = \$67.08

\*\*\* Since the post volume is less than 25 MWh, the index will use the actual value, 10.83 MWh.

Day 3:

\* The spread volume has changed, however the price has not changed. Each volume is counted as a separate spread.

\*\* Daily Index is the weighted average of the Post Volume and Post Price

= [(0.85 MWh \* \$66.50) + (11.80 MWh \* \$66.50)] / (0.85 MWh + 11.80 MWh) = \$66.50

Day 4:

\* Spread Duration = 0.067 hr + 0.35 hr + 0.30 hr = 0.717 hr, which is less than the required 1 hour, so the Daily post volume will be 0.00 MWh.

\*\* This spread is greater than \$2.00 and thus does not qualify. Only spreads less than or equal to \$2.00/MWh for Baseload, less than or equal to \$5.00/MWh for Extended Peak and less than or equal to \$10.00/MWh for Super Peak contracts will be included as a qualifying spread.

*13.6 Calculating the Daily Traded Price Using Trades:*

The daily traded price is a weighted average of trades, calculated as follows:

$$\text{Weighted average} = \frac{\text{SUM (Traded volume * Traded price)}}{\text{SUM (Traded Volume)}}$$

### 13.7 Calculating the Daily Combined Index Price Using Spreads and Trades:

If both trades and qualifying spreads occur on a given day, the daily combined index price becomes a weighted average of the traded price weighted average and the spread time weighted average as follows:

$$\text{Daily Price} = \frac{(\text{Spread Post Price} * \text{Spread Post Volume}) + (\text{Traded Volume} * \text{Traded Price})}{\text{Spread Post Volume} + \text{Trade Volume}}$$

### 13.8 Example of Calculating a Daily Combined Index Price:

Given the following spread and trade data, the daily index is calculated as a weighted average.

Spread Post Price: \$68.25  
Spread Post Volume: 13.83 MWh

Trade Post Price: \$67.75  
Trade Volume: 100 MWh

$$\text{Daily Price: } \frac{(\$68.25 * 13.83 \text{ MWh}) + (\$67.75 * 100 \text{ MWh})}{100 \text{ MWh} + 13.83 \text{ MWh}} = \$67.81$$

$$\text{Daily Volume: } 100 \text{ MWh} + 13.83 \text{ MWh} = 113.83 \text{ MWh}$$

### 13.9 Monthly Index

A weighted average of all Daily Combined Index prices in the interval is then used to calculate the monthly index. Therefore the monthly index can be made up of a combination of qualifying bid/offer spreads and on screen trades.

#### 13.10 Monthly Index Interval

There will be two monthly indices calculated using two different methodologies:

The 45 day monthly index will be established using market activity (trades and spreads) starting on the 45<sup>th</sup> calendar day prior to each month, and ending on the 6<sup>th</sup> trading day prior to each month for which the index is being set.

For example, the Aug 2006 monthly index will be set based on the weighted average of the posted spreads and traded prices starting on June 17<sup>th</sup>, 2006 and ending on July 21<sup>st</sup>, 2006, inclusively.

The 120 day monthly index will be established using market activity (trades and spreads) starting on the 120<sup>th</sup> calendar day prior to each month, and ending on the 6<sup>th</sup> trading day prior to each month for which the index is being set.

For example, the Dec 2013 monthly index will be set based on the weighted average of the posted spreads and traded prices starting on August 3rd, 2013 and ending on Nov 20<sup>th</sup>, 2013, inclusively.

### 13.11 Monthly index calculation

The monthly index is calculated using a weighted average as follows:

$$\text{Weighted average monthly index} = \frac{\text{SUM (Daily Index Volume * Daily Index Price)}}{\text{SUM (Daily Index Volume)}}$$

### 13.12 Monthly Index Generation Days

The monthly index will not be generated on Saturday, Sunday, NERC Holidays or statutory holidays in the Province of Alberta. It will be generated every business day, Monday to Friday unless a NERC Holiday or statutory holiday in the Province of Alberta falls on an index generation day.

## APPENDIX B: PUBLISHED INDICES DEFINITIONS

The following indices ("Published Indices") are not owned or generated by ICE NGX. ICE NGX has the right to use these Published Indices for the purpose of settlement of Products traded on the Exchange.

- a. Available U.S. posting options for individual company 40 degree reference price for WTI crude oil with a differential to \$U.S. per barrel:

"Argus Average" is the arithmetic average of the daily midpoint quote by Argus for the prompt delivery month trading for that specific grade and location

In the event the midpoint of the daily quote is shown as \$U.S.0.005 then the value will be rounded up to the nearest cent.

The abbreviations for the posters as follows:

ConPhil or CP - ConocoPhillips

ARG - Petroleum Argus Americas Crude Report

- b. Available U.S. WTI Index options are:

CMA settlement prices for the applicable delivery months in \$U.S. per barrel, plus/minus a differential in \$U.S. per barrel as specified when entering the Physical Oil Transaction; and

DNS settlement price is the closing daily settlement price for the U.S. Provider as at the date of the Physical Oil Transaction, plus/minus a differential in \$U.S. per barrel as specified when entering the Physical Oil Transaction provided that: (a) when Physical Oil Transactions are for the next most immediate delivery month, the DNS will be the closing daily settlement price for the U.S. Provider prompt contract as at the date of the Physical Oil Transaction; and (b) for Physical Oil Transactions entered into for delivery during any other future month excluding the next most immediate delivery month, the DNS will be the U.S. Provider settlement price for the U.S. Provider contract month that matches the applicable Delivery Period.

Such WTI Index Options are indicated in Table I of the CPA by “CMA” or “DNS” in the “System Price Abbr.” column of such table.

All Physical Oil Transactions entered into on a DNS price basis during a Trading Day when the U.S. provider is closed (for any reason) will be settled using the corresponding U.S. Provider values on the most immediate prior trading day of the U.S. Provider.

- c. Available Canadian WTI Index options refer to CMA settlement prices for the applicable delivery months in \$U.S. per barrel, plus/minus a differential in \$U.S. per barrel. Such WTI Index options are indicated in Table I in the CPA by “WTI” in the “Systems Price Abbr.” column of such table.
- d. For Platts Gas Daily “Index Price” means for any Calculation period:
  - i. the arithmetic average price in US dollars per MMBtu for the applicable flow day(s) as published in Gas Daily in the table "Final Daily Price Survey (\$/MMBtu)" corresponding to the applicable Gas Daily Index.
  - ii. In the event that Gas Daily does not report the required information to determine the Index Price, the price will be the price determined by the Exchange with reference to the most comparable reported price in respect of gas bought and sold at the applicable index location
- e. For Platts Inside Ferc (IFERC) “Index Price” means for any Calculation period:
  - i. the index price in U.S. dollars per MMBtu for the applicable Month as published in "Inside FERC's Gas Market Report" in the table "Prices of Spot Gas Delivered to Pipelines (per MMBtu)" corresponding to the applicable index.
  - ii. in the event that Inside FERC does not report the required information to determine the applicable Spot Month Index Price hereunder, or the applicable Spot Month Index Price is otherwise not determinable, the price will be the price determined by the Exchange with reference to the most comparable reported price in respect of gas bought and sold at the applicable index location
- f. "NGI Bid week Index Price" for any Calculation Period means:
  - i. The index price in U.S. dollars per MMBtu for the applicable Month as published in NGI in the table entitled "(Applicable Month) Bid week" corresponding to the applicable index. The following indices are included;
  - ii. in the event that NGI does not report the required information to determine the applicable Bid week Index Price hereunder, or the applicable Bid week Index Price is otherwise not determinable, the price will be the price determined by the Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the applicable index location

ICE NGX Clearable GDD, IFERC and NGI locations;

<b>HUB</b>	<b>Platts Gas Daily - GDD</b>	<b>IFERC</b>	<b>NGI</b>
ANR-SE-T	Louisiana/Southeast, ANR, La.	Louisiana/Southeast, ANR, La.	
ANR-SW	Midcontinent, ANR, Okla.	Midcontinent, ANR, Okla.	
APC-ACE	Upper Midwest, Chicago city-gates		Midwest, Chicago Citygate
CG-Mainline			
CG-Onshore	Louisiana/Southeast, Columbia Gulf, La.	Louisiana/Southeast, Columbia Gulf, La.	
Cheyenne	Rockies/Northwest, Cheyenne Hub	Rockies/Northwest, CIG, Rockies	
Consumers		Upper Midwest, Consumers city-gate	
Dominion-North	Appalachia, Dominion, North Point	Appalachia, Dominion, Appalachia	
Dominion-South	Appalachia, Dominion, South Point	Appalachia, Dominion, Appalachia	
EGT-Flex	Midcontinent, Enable Gas, East	Midcontinent, Enable Gas, East	
EP-Keystone	Southwest, El Paso, Permian	Southwest, El Paso, Permian Basin	
EP-SJ Blanco Pool	Southwest, El Paso, San Juan	Southwest, El Paso, San Juan	
GTN-Kingsgate	Rockies/Northwest, GTN, Kingsgate		
GTN-Malin	Rockies/Northwest, PG&E, Malin		California, Malin
GTN-Stanfield	Rockies/Northwest, Stanfield, Ore.		
Henry	Louisiana/Southeast, Henry Hub	Louisiana/Southeast, Henry Hub	
HSC-HPL Pool	East Texas, Houston Ship Channel	East Texas, Houston Ship Channel	
Iroquois (into)	Northeast, Iroquois, receipts		
Katy-Enstor Pool	East Texas, Katy		

Katy-Oasis	East Texas, Katy		
		East Texas, Houston Ship Channel	
Katy-Oasis (HSC id)		East Texas, Houston Ship Channel	
		East Texas, Katy	
Katy-Oasis (Katy id)		East Texas, Katy	
KRGT-Del Pool	Southwest, Kern River, delivered		California, Southern Cal. Border Avg.
Michcon	Upper Midwest, Mich Con city-gate	Rockies/Northwest, Northwest, Upper Midwest, Mich Con city-gate	
Millennium East Pool	Appalachia, Millennium, East receipts	Appalachia, Millennium, East receipts	
NBPL-Ventura		Upper Midwest, Northern, Ventura	
NGPL-Midcont Pool	Midcontinent, NGPL, Midcontinent	Midcontinent, NGPL, Midcontinent	
NGPL-Nicor	Upper Midwest, Chicago city-gates		Midwest, Chicago Citygate
NGPL-STX	East Texas, NGPL, STX	East Texas, NGPL, STX	
NGPL-TXOK East	East Texas, NGPL, Texok zone	East Texas, NGPL, Texok zone	
NNG-Demarc	Upper Midwest, Northern, demarc	Upper Midwest, Northern, demarc	
NNG-Ventura	Upper Midwest, Northern, Ventura	Upper Midwest, Northern, Ventura	
Oasis - Waha Pool	Southwest, Waha	Southwest, Waha	
OGT	Midcontinent, Oneok, Okla.	Midcontinent, Oneok, Okla.	
Opal	Rockies/Northwest, Kern River, Opal		
Panhandle	Midcontinent, Panhandle, Tx.-Okla.	Midcontinent, Panhandle, Tx.-Okla.	



PG&E-Citygate	Southwest, PG&E city-gate		California, PG&E Citygate
REX E-ANR	Upper Midwest, REX, Zone 3 delivered	Upper Midwest, REX, Zone 3 delivered	
Socal-Citygate	Southwest, SoCal Gas city-gate		California, SoCal Citygate
Sonat-Z0 South	Louisiana/Southeast, Southern Natural, La.	Louisiana/Southeast, Southern Natural, La.	
Stagecoach			
TCO	Appalachia, Columbia Gas, App.	Appalachia, Columbia Gas, App.	
TCO-A04 Pool	Appalachia, Columbia Gas, App.	Appalachia, Columbia Gas, App.	
TETCO-ELA	Louisiana/Southeast, Texas Eastern, ELA	Louisiana/Southeast, Texas Eastern, ELA	
TETCO-M1 30			
TETCO-M2 (receipt)	Appalachia, Texas Eastern, M-2 receipts	Appalachia, Texas Eastern, M-2 receipts	
TETCO-M3	Northeast, Tx. Eastern, M-3	Northeast, Texas Eastern, M-3	
TETCO-STX	East Texas, Tx. Eastern, STX	East Texas, Texas Eastern, STX	
TETCO-WLA	Louisiana/Southeast, Texas Eastern, WLA	Louisiana/Southeast, Texas Eastern, WLA	
TGP-500L	Louisiana/Southeast, Tennessee, 500 Leg		
TGP-800L	Louisiana/Southeast, Tennessee, 800 Leg		
TGP-Z0 North	East Texas, Tennessee, zone 0	East Texas, Tennessee, zone 0	
TGP-Z0 South	East Texas, Tennessee, zone 0	East Texas, Tennessee, zone 0	
TGT-SL	Louisiana/Southeast, Texas Gas, zone SL	Louisiana/Southeast, Texas Gas, zone SL	
TGT-Mainline	Louisiana/Southeast, Texas Gas, zone 1	Louisiana/Southeast, Texas Gas, zone 1	
TGT-North La	Louisiana/Southeast, Texas Gas, zone 1	Louisiana/Southeast, Texas Gas, zone 1	
Transco-30	East Texas, Transco, zone 1	East Texas, Transco, zone 1	

Transco-65	Louisiana/Southeast, Transco, zone 3	Louisiana/Southeast, Transco, zone 3	
Transco-85	Louisiana/Southeast, Transco, zone 4	Louisiana/Southeast, Transco, zone 4	
Transco-Z5 South	Northeast, Transco, Zone 5 delivered South	Northeast, Transco, Zone 5 delivered South	
Transco-Z6 Sta-210	Northeast, Transco, zone 6 non-N.Y. North	Northeast, Transco, zone 6 non-N.Y. North	
Transco-Z6 (non-NY)	Northeast, Transco, zone 6 non-N.Y.	Northeast, Transco, zone 6 non-N.Y.	
	Northeast, Transco, zone 6 non-N.Y. North	Northeast, Transco, zone 6 non-N.Y. North	
	Northeast, Transco, zone 6 non-N.Y. North	Northeast, Transco, zone 6 non-N.Y. North	
Transco-Z6 (NY)	Northeast, Transco, zone 6 N.Y.	Northeast, Transco, zone 6 N.Y.	
Trunkline-ELA	Louisiana/Southeast, Trunkline, ELA	Louisiana/Southeast, Trunkline, La.	
Trunkline-WLA	Louisiana/Southeast, Trunkline, WLA	Louisiana/Southeast, Trunkline, La.	
Trunkline-Z1A	Louisiana/Southeast, Trunkline, zone 1A	Louisiana/Southeast, Trunkline, zone 1A	
Waha	Southwest, Waha	Southwest, Waha	

g. NORTH HUB INDEX PRODUCTS

The North Hub Index Products are Physically Settled Power Futures Products calculated using the arithmetic average of the 15-minute Real Time Settlement Point Prices for the ERCOT North Hub as published by ERCOT for the specific hours and Operating Days(s) named in the calculation. The North Hub Index Product Purchase Price at the time of settlement is determined using the published Real Time Settlement Point Prices, as considered final by Exchange at 12:00 p.m. on the fifth business day of the month following the time of delivery. For greater clarity, any changes made to the Settlement Point Prices following the 12:00 p.m. deadline on the fifth business day of the month following delivery will NOT be considered in determining the North Hub Index Product Purchase Price.

ERCOT North Peak HE 7-22 Index

The arithmetic average of the hourly Real-time Market Settlement Point Prices (SPP) for ERCOT North Hub as published by ERCOT for specific hours in the determination period for a specific Operating Day(s). In the event the ERCOT Board finds that the REAL-TIME prices are in need of correction, ICE NGX and its customers will accept such REAL-TIME SPP changes provided the resettlement prices are published prior to

the 12:00 p.m. on the fifth business day of the month following delivery. Any price changes made following the deadline will NOT be accepted and the previously published prices are final. Hours: Peak (HE 7-22) – Monday - Friday, excluding NERC Holidays

#### ERCOT Off Peak Index

The arithmetic average of the hourly Real-time Market Settlement Point Prices (SPP) for ERCOT North Hub as published by for specific hours in the determination period for a specific Operating Day(s). In the event the ERCOT Board finds that the REAL-TIME prices are in need of correction, ICE NGX and its customers will accept such REAL-TIME SPP changes provided the resettlement prices are published prior to the 12:00 p.m. on the fifth business day of the month following delivery. Any price changes made following the deadline will NOT be accepted and the previously published prices are final. Hours: Off-Peak (Saturday-Sunday, NERC Holidays: HE 1-24; Monday-Friday: HE 1-6, 23-24)

#### ERCOT North Off Pk Wknd Index

The arithmetic average of the hourly Real-time Market Settlement Point Prices (SPP) for ERCOT North Hub as published by ERCOT for specific hours in the determination period for a specific Operating Day(s). In the event the ERCOT Board finds that the REAL-TIME prices are in need of correction, ICE NGX and its customers will accept such REAL-TIME SPP changes provided the resettlement prices are published prior to the 12:00 p.m. on the fifth business day of the month following delivery. Any price changes made following the deadline will NOT be accepted and the previously published prices are final. Hours: Off-Peak Weekends (Saturday-Sunday and NERC Holidays: HE 7-22)

#### ERCOT North Off Pk, HE 1-6, 23, 24 7x Index

The arithmetic average of the hourly Real-time Market Settlement Point Prices (SPP) for ERCOT North Hub as published by ERCOT for specific hours in the determination period for a specific Operating Day(s). In the event the ERCOT Board finds that the REAL-TIME prices are in need of correction, ICE NGX and its customers will accept such REAL-TIME SPP changes provided the resettlement prices are published prior to the 12:00 p.m. on the fifth business day of the month following delivery. Any price changes made following the deadline will NOT be accepted and the previously published prices are final. Hours: Off-Peak Nights (Monday-Sunday: HE 1-6, 23-24)

#### ERCOT North ATC Index

The arithmetic average of the hourly Real-time Market Settlement Point Prices (SPP) for ERCOT North Hub as published by ERCOT for specific hours in the determination period for a specific Operating Day(s). In the event the ERCOT Board finds that the REAL-TIME prices are in need of correction, ICE NGX and its customers will accept such REAL-TIME SPP changes provided the resettlement prices are published prior to the 12:00 p.m. on the fifth business day of the month following delivery. Any price changes made following the deadline will NOT be accepted and the previously published prices are final. Hours: Around The Clock (HE 1-24)