



What is the SEC Benchmark Price?

Regulation S-X, Section 210.4-10 (a)(22)(v) states:

Existing economic conditions include prices and costs at which economic producibility from a reservoir is determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.

Benchmark Price

The price for oil or gas traded in a particular marketplace, used as a reference price for buyers and sellers of oil or gas with similar quality, in similar marketplaces.

Spot Price

The price for a one-time open market transaction for immediate delivery of a specific quantity of product at a specific location where the commodity is purchased "on the spot" at current market rates.

Posted Price

An annouced price, or an average of a relevant group of announced prices, at which a buyer is willing to purchase or a seller is willing to sell oil or gas for a period of time in a particular marketplace.

Futures Price

The price a buyer is willing to pay to take delivery of oil or gas, from a seller, on a date set at some point in the future.

Realized Price

The price actually received for oil or gas sold from a given lease or field.

M&L Reported Benchmark Prices

2019 Calendar Year

First-Day-of-the-Month (FDOTM) Crude Oil Benchmark Prices											
ndex WTI Front Month (CLo source Thomson Reuters				LA Light Sweet Spot (LLS) Thomson Reuters		Europe Brent Front Month (LCOc1) Thomson Reuters		Europe Brent Spot			
Product	Oil (\$/bbl)		Oil (\$/bbl)		Oil (\$/bbl)		Oil (\$/bbl)		Oil (\$/bbl)		
Jnits											
Vionth	FDOTM	Prior 12-mo	FDOTM	Prior 12-mo	FDOTM	Prior 12-mo	FDOTM	Prior 12-mo	FDOTM	Prior 12-mo	
anuary	45.41	64.31	45.15	64.38	49.95	69.39	52.20	70.98	50.57	70.20	
ebruary	55.26	63.43	55.29	63.50	61.72	68.80	62.75	70.40	61.86	69.64	
Ma rch	55.80	63.00	55.76	63.06	63.51	68.82	65.07	70.50	63.71	69.59	
April	61.59	62.72	61.59	62.79	67.84	68.84	69.01	70.40	69.08	69.60	
Иау	63.60	62.42	63.55	62.48	71.15	68.85	72.18	70.32	63.55	68.66	
lune	53.50	61.39	53.49	61.45	61.24	67.76	64.49	69.29	66.78	68.01	
luly	59.09	60.14	58.91	60.18	63.38	66.59	65.06	68.10	65.10	66.98	
August	53.95	58.99	53.64	58.92	58.04	65.44	60.50	67.11	62.90	66.20	
September	55.10	57.77	55.07	57.69	58.10	63.97	60.43	65.69	61.04	64.87	
October	53.62	55.96	53.60	55.88	57.50	61.81	58.89	63.52	60.06	62.80	
November	56.20	55.34	56.04	55.24	59.49	60.79	61.69	62.58	56.04	61.53	
December	55.17	55.69	58.12	55.85	62.12	61.17	62.43	62.89	64.50	62.10	
Annual Average	55.69		55.85		61.17		62.89		62.10		

2018 Calendar Year

				First-Day-of-the-	Month (FDOTM) C	rude Oil Benchmark	Prices				
Index	WTI Front Month (CLc1) Thomson Reuters Oil (\$/bbl)		WTI Spot (WTC) Thomson Reuters Oil (\$/bbl)		LA Light Sweet Spot (LLS) Thomson Reuters Oil (\$/bbl)		Europe Brent Front Month (LCOc1) Thomson Reuters Oil (\$/bbl)		Europe Brent Spot EIA Oil		
Source											
Product											
Units									(\$/bbl)		
Month	FDOTM	Prior 12-mo	FDOTM	Prior 12-mo	FDOTM	Prior 12-mo	FDOTM	Prior 12-mo	FDOTM	Prior 12-mo	
anuary	60.42	51.90	60.46	51.90	65.51	55.17	66.87	55.77	66.73	55.40	
ebruary	65.80	52.89	65.92	52.90	68.72	56.27	69.65	56.84	68.60	56.47	
Ma rch	60.99	53.49	60.98	53.49	63.28	56.91	63.83	57.46	64.23	57.18	
April	64.94	54.68	64.87	54.69	67.57	58.17	70.27	58.92	69.02	58.58	
Мау	67.25	56.22	67.28	56.23	71.13	59.88	73.13	60.72	74.85	60.62	
lune	65.81	57.67	65.81	57.68	74.31	61.86	76.79	62.90	74.54	62.63	
uly	74.15	60.01	74.13	60.03	77.33	64.30	79.44	65.52	77.44	65.16	
August	67.66	61.55	68.80	61.66	71.87	66.00	72.39	67.24	72.28	66.95	
September	69.80	63.43	69.84	63.54	75.77	68.03	77.42	69.30	76.94	68.93	
October	75.30	65.40	75.37	65.51	83.37	70.27	84.98	71.58	84.94	71.26	
November	63.69	66.18	63.67	66.29	71.80	71.22	72.89	72.62	71.25	72.12	
December	50.93	65.56	50.78	65.66	57.53	70.68	58.71	72.20	57.71	71.54	
Annual Average	65.56		65.66		70.68		72.20		71.54		

M&L Reported Benchmark Prices



This price is the NYMEX front month futures contract for WTI. It is the most commonly reported benchmark price in SEC reports.

WTI Spot (WTC)

This price is a spot price for WTI for delivery at Cushing, OK, as reported by Thomson Reuters and also by EIA (sourced from Thomson Reuters).

LA Light Sweet Spot (LLS)

This price is a spot price for Louisiana Light Sweet crude, as reported by Thomson Reuters.

Europe Brent Front Month (LCOc1)

This price is the ICE front month futures contract for Brent crude. It is the equivalent of the NYMEX WTI Front Month price.

Europe Brent Spot

This price is a spot price for Brent crude, as reported by Thomson Reuters and also by EIA. This is the most commonly reported Brent benchmark price.

Henry Hub

This price is a spot price for Henry Hub for delivery in Erath, Louisiana, as reported by Platts. It is the most commonly reported benchmark price in SEC reports.

Dominion, South Point

This price is a spot price for Dominion, South Point for delivery into two lines which merge just northeast of Pittsburgh, as reported by Platts.

NGPL, Midcontinent

This price is a spot price for NGPL, Midcontinent for delivery into Natural Gas Pipeline Co. of America starting in Wise County, Texas and continuing to Nebraska, as reported by Platts.

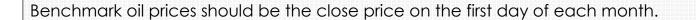
Houston Ship Channel

This price is a spot price for Houston Ship Channel for delivery into pipelines that serve the same region, extending from Galveston to Beaumont, as reported by Platts.

CIG, Rockies

This price is a spot price for CIG, Rockies for deliveries into CIG's mainlines in Wyoming, Colorado and parts of Utah, as reported by Platts.

Selecting the Appropriate Oil Benchmark Prices



If the first day of the month is not a trading day, then the prior trading day's close price should be utilized.

November 1, 2015 was not a trading day. Therefore, the close price on October 30, 2015 should be utilized.

NYMEX.Light Sweet Crude Oil (WTI) Composite Energy Future Continuation 1 | Quote History | Thomson Reuters Elkon

CLc1 NYMEX Light Sweet Crude Oil (WTI) Composite Energy Future Continuation 1
QUOTE HISTORY

Trade Date	Open Price	High Price	Low Price	Close Price	% Net Change (C-C)	Net Change (C-C)	Volume	% Price Change (O-C)	Price Change (O-C)
04-Nov-2015	47.74	48.28	46.17	46.32	-3,299	-1.58	459,307	-2.974	-1.42
03-Nov-2015	46.11	48.36	45.96	47.9	3.814	1.76	434,574	3.882	1.79
02-Nov-2015	46.43	46.73	45.56	46.14	-0.966	-0.45	305,518	-0.625	-0. 29
30-Oct-2015	45.74	47.03	45.48	46.59	1.151	0.53	363,307	1.858	0.85
29-Oct-2015	46.06	46.79	45.16	46.06	0.261	0.12	436,513	0.000	0.00
28-Oct-2015	43. 44	46.22	43.06	45.94	6.343	2.74	521,5 1 8	5.755	2.50

Selecting the Appropriate Gas Benchmark Prices

Benchmark gas prices should always reference the **flow date** as the first-day-of-the-month.

Gas is priced one day in advance of the spot market.

Gas with a **flow date** of May 1, 2018 is sold based on the price determined on the **trade date** of April 30, 2018.

Flow dates are continuous. Therefore, there will always be a first-day-of-themonth price for gas, without need to refer to a prior close date.

S&P Global

Platts

GAS DAILY

Tuesday, May 1, 2018

NEWS HEADLINES

Court won't hear Constitution pipeline case

- Williams to continue seeking relief at FERC
- Environmentalist cheers win for state authority

(continued on page 2)

Maintenance to keep Permian gas prices weaker

- Northbound Permian flows up 550 MMcf/d since April 2017
- Permian production, rig count hover just below record highs

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FINAL DAILY PRICE SURVEY - PLATTS LOCATIONS (\$/MMBtu)

Trade date: 30-Apr Flow date(s): 01-May						
	Midpoint	+/-	Absolute	Common	Vol. D	eals
Northeast						
Algonquin, city-gates	IGBEE21 2.480	-0.150	2.450-2.500	2.470-2.495	75	20
Algonquin, receipts	IGBDK21 2.015	-0.185	2.000-2.050	2.005-2.030	32	8
Dracut, Mass.	IGBDW21					
Iroquois, receipts	IGBCR21 2.540	-0.130	2.480-2.580	2.515-2.565	95	32
Iroquois, zone 2	IGBEJ21 2.550	-0.215	2.500-2.580	2.530-2.570	61	27
Niagara	IGBCS21 2.345	-0.140	2.310-2.380	2.330-2.365	67	16
Tennessee, z6 (300 leg) del.	IGBJC21 —	_				-
Tennessee, zone 6 del.	IGBEI21 2,485	-0.150	2.470-2.550	2.470-2.505	25	8
Tx. Eastern, M-3	IGBEK21 2.265	-0.070	2.130-2.350	2.210-2.320	161	40



Calculating Differentials

Contractural Pricing

When to Use:

For cases where pricing is dependent on contractual arrangements, i.e. sales are made at an agreed upon offset to a benchmark price.

How to Calculate:

- 1. Select an appropriate benchmark price
- 2. Apply the contract differential to the first-day-of-the-month benchmark price.

Consistent Sales

When to Use:

For cases where sales are made on a consistent and continuous basis and realized price data is readily available. The majority of scenarios will fall into this category.

How to Calculate:

- 1. Select an appropriate benchmark price.
- 2. Calculate the 12-month daily average for the benchmark price.
- 3. Calculate the 12-month daily average for the actual realized price.
- 4. Calculate the 12-month daily average differential.
- 5. Apply the 12-month average differential to the first-day-of-the-month benchmark price.

Inconsistent Sales

When to Use:

For cases where sales are made on an inconsistent and discontinous basis only, i.e. periodic offshore shipments, cycling operations, or trucking operations.

How to Calculate:

- 1. Select an appropriate benchmark price.
- 2. Find the benchmark price on each day that a sale was made during the prior 12 months.
- 3. Find the actual realized price on each day that a sale was made during the prior 12 months.
- 4. Calculate the average differential for these days.
- 5. Apply the average differential to the first-day-of-the-month benchmark price.