



argusmedia.com

ARGUS NORTH AMERICAN NATURAL GAS FORWARD CURVES

Contents:

Introduction	2
Definitions and curve length	2
Corrections to assessments	4
Ethics and compliance	4
Updates to methodology	4

LAST UPDATED: JANUARY 2016

The most up-to-date Argus North American Natural Gas Forward Curves methodology is available on www.argusmedia.com

Introduction

Argus Natural Gas Forward Curves deliver daily assessments of forward natural gas prices at more than 70 locations across North America.

Argus forward curves provide an independent view of forward prices, informed by a variety of data sources for both liquid and illiquid markets. Argus forward curves are not intended to be “predictive” and do not represent a forecast of what natural gas will be worth in future physical prompt markets. Prices are expressed as outright values and as differentials to CME’s Nymex Henry Hub natural gas futures settlement prices.

Definitions and curve length

Argus assesses forward physical markets at some locations and forward financial markets (swaps) at others (see table 2) Forward physical prices reflect the market’s valuation of a standard volume of gas delivered over **24 consecutive hours of each gas day**, and over a named multiday period.

Forward financial prices reflect the market price of a swap between:

- the CME Henry Hub monthly futures contract final settlement price
- the monthly index published in the Inside FERC Gas Market Report for the location under assessment

Argus assesses the following multiday periods:

Period	Duration (inclusive)	Number of periods assessed	Earliest period assessed
Month	All days	84	Month after current month
Gas winter	1 Nov – 31 Mar	6/7	Season after current season
Gas summer	1 Apr – 31 Oct	6/7	Season after current season
Calendar year	All days	6/7	Year after current year
Quarter	All days	4	Quarter after current quarter
Power winter	1 Jan – last day Feb	1	Next season
Power spring	1 Mar – 30 Apr	1	Next season
Power summer	1 Jul – 31 Aug	1	Next season

**longer-term curves are available in [Argus North American Natural Gas Long-Term Forward Curves](#)*

Timing:

Assessments reflect prices at the close of CME’s Henry Hub futures primary trading session, normally 1430 EST.

Source data:

Argus uses transactions, bids and offers, locational spreads and time spreads to derive forward prices. Market information is gathered from numerous sources, including brokers, traders, and mid- and back offices of energy companies. Information that Argus cannot validate may be excluded from the assessment process. Transactions executed, bids placed, and offers made after the Nymex close are not considered for that day’s assessments.

Means of assessment:

Argus assesses each market at the midpoint of an end-of-day bid-offer spreads where possible. If the bid-offer spread is unusually wide by historic standards, Argus may assess the market elsewhere within the bid-offer range. If no bid-offer spread exists, Argus may base its assessment on the latest validated transaction. Argus may ignore transactions if they fall outside the bid-offer range prevailing at the Nymex close, are above a prevailing offer, or are below a prevailing bid.

In the absence of bid, offer, and transactional data, Argus will assess the market on the basis of its relationship to a more liquid market, so long as that relationship shows a historical r2 correlation of over 90pc. Relationships are rechecked for a 90pc r2 correlation at least every two weeks. Argus may assess the illiquid market by:

- Applying the historic spread between the two markets to the its assessment of the liquid market
- Applying the liquid market’s day-on-day change to the price at which it assessed the illiquid market on the previous Nymex business day

Currency and units of assessment:

All assessments are made in US dollars per million British thermal units (btu), unless otherwise specified.

Table 2

Market	Product assessed	Physical delivery point	Market	Product assessed	Physical delivery point
USGC			US northeast		
ANR - SE	Swaps		Algonquin Citygates	Swaps	
Carthage	Swaps		Columbia Gas Appalachia (TCO)	Swaps	
Columbia Gulf (CG) Onshore	Swaps		Dominion	Swaps	
FGT - Z1	Swaps		Dracut	Physical	Dracut, MA
FGT - Z2	Swaps		Iroquois Zone 2	Swaps	
FGT - Z3	Swaps		Leidy Hub	Physical	Leidy storage, Clinton County, PA
Henry Hub	Futures		Leidy Line	Physical	Leidy pipeline, from Clinton County storage to Station 505
Houston Ship Channel (HSC)	Swaps		Millennium	Physical	
Katy	Swaps		Niagara	Physical	Niagara - TCPL
NGPL - South Texas (STX)	Swaps		TCPL - Enbridge CDA	Physical	Enbridge Central Delivery Area
Sonat	Swaps		TETCO - M2	Physical	Texas Eastern Transmission, market zone 2
TETCO - ELA	Swaps		TETCO - M3	Swaps	
TETCO - ETX	Swaps		TGP - Z4 (Marcellus)	Physical	300 line from station 315 to station 321
TETCO - M130	Physical	Kosciusko compressor station, MS	TGP - Z4 (200 line)	Physical	200 line
TETCO - South Texas (STX)	Swaps		TGP - Z4 (300 line)	Physical	300 line
TETCO - WLA	Swaps		TGP - Z6 (200 line)	Physical	200 line
TGP - 500 leg	Swaps		TGP - zone 6 delivered	Swaps	
TGP - 800 leg	Swaps		Transco zone 5 delivered	Physical	Transco zone 5
TGP - Zone 0 (Z0)	Swaps		Transco Zone 6 (non-NY)	Swaps	
TGT - SL	Swaps		Transco Zone 6 (non-NY North)	Physical	
TGT - Zone 1	Swaps		Transco Zone 6 (NY)	Swaps	
Transco Zone 1	Swaps		TCPL - Enbridge CDA	Physical	TCPL at Enbridge
Transco Zone 2	Swaps		Union Parkway	Physical	Union Parkway compressor station
Transco Zone 3	Swaps		Waddington	Physical	TCPL at Iroquois
Transco Zone 4	Swaps		West		
Trunkline-LA	Swaps		AECO	Swaps	
USMC			ANR - REX	Physical	
ANR - SW	Swaps		APC - ATP	Physical	
ANR ML7	Physical	ML7	APC - CREC	Physical	
Centerpoint	Swaps		CIG Rockies	Swaps	
Chicago Citygates (CG)	Swaps		El Paso (EP) Permian	Swaps	
Columbia Gulf (CG) Mainline	Swaps		El Paso (EP) San Juan	Swaps	
Consumers (CG)	Physical	Consumers City Gates	Empress	Physical	TCPL at Empress
Dawn	Swaps		Kern River	Physical	Kern River pipeline within California
Michcon Citygates (CG)	Swaps		Malin	Swaps	
NGPL - Midcontinent	Swaps		NWPL Rockies	Swaps	
NGPL - TxOk	Swaps		Opal	Physical	Kern River pipeline at Opal
NNG Demarc	Swaps		PG&E Citygate (CG)	Swaps	
NNG Ventura	Swaps		Socal border	Swaps	
Oneok	Swaps		Spectra-Station 2	Physical	
PEPL	Swaps		Sumas	Swaps	
Southern Star	Swaps		TCPL - Emerson	Physical	
			Transwestern (TW) Permian	Swaps	
			Waha	Swaps	

Corrections to assessments

Argus will on occasion publish corrections to price assessments after the publication date. We will correct errors that arise from clerical mistakes, calculation errors, or a misapplication of our stated methodology. Argus will not retroactively assess markets based on new information learned after the assessments are published. We make our best effort to assess markets based on the information we gather during the trading day assessed. If transaction information is submitted in error, and the company submitting informs Argus of the error within 24 hours of the original submission, Argus will make best efforts to correct the price data. After 24 hours, Argus will review both the material effect that the correction will have on the price data and the amount of time that has elapsed from the date of the published price data before deciding whether to issue a correction. After 30 days, data submitters are not expected to file corrections to submitted data.

Ethics and compliance

Argus operates according to the best practices in the publishing field, and maintains thorough compliance procedures throughout the firm. We want to be seen as a preferred provider by our subscribers, who are held to equally high standards, while at the same time maintaining our editorial integrity and independence. Argus has a strict ethics policy that applies to all staff. The policy can be found on our website at www.argusmedia.com. Included in this policy are restrictions against staff trading in any energy commodity or energy related stocks, and guidelines for accepting gifts. Argus also has strict policies regarding central archiving of email and instant messenger communication, maintenance and archiving of notes, and archiving of spreadsheets and deal lists used in the price assessment process. Argus publishes prices that report and reflect prevailing levels for open-market arms length transactions (please see the [Argus Global Compliance Policy](#) for a detailed definition of arms length).

Updates to methodology

Argus methodologies are constantly updated and revised. The latest available methodology (which may supersede the one you are reading) is available at www.argusmedia.com.