



# **Coal Trading Association**

## COAL MARKET FREQUENTLY ASKED QUESTIONS

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Over the course of the past decade, numerous issues have arisen in the U.S. coal trading arena. Bankruptcies, standardized trading contracts, and liquidity are a few matters which the CTA has attempted to provide guidance. In a continuing effort to promote efficient and effective coal trading practices and procedures, the CTA has developed this FAQ document that represents the Association's position on various coal trading related matters.

### *What are commodity futures?*

Commodity futures markets allow commercial producers and commercial consumers to offset the risk of adverse future price movements in the commodities they are selling or buying. To facilitate a liquid market so that producers and consumers can freely buy and sell contracts, speculator participation is encouraged. The role of the speculator is to provide liquidity to the market. The speculator does this by both buying and selling in the market. The speculator's objective is to make a profit from taking on the risk of price fluctuation that commercial users do not want.

### *What is a derivative?*

Any financial instrument whose price is dependent upon or derived from one or more underlying assets can be considered a derivative. The derivative itself is merely a contract between two or more parties and its value is determined by fluctuations in the underlying asset.

### *Why did coal trading markets develop?*

Trading developed as a result of buyers and sellers seeking to reduce price exposure. Historically, producers and utilities used traditional strategies like managing spot inventories vs. physical term contracts, participation in various supply basins, and expanding transportation alternatives to limit this exposure. Although reasonably effective in mitigating some risks, the issue of market price fluctuation remained. As a result, a short-list of producers, marketers, and end-users embarked on a strategy to manage price risk through over-the-counter trading.

## *What are the advantages of commodity trading?*

In general, commodity trading allows for:

1. **Leverage:** Commodity futures operate on margin, meaning that to take a position only a fraction of the total value needs to be available in cash in the trading account.
2. **Commission Costs:** It is much cheaper to buy or sell one futures contract than to buy or sell the underlying instrument.
3. **Liquidity:** The involvement of speculators ensures futures contracts are reasonably liquid.
4. **Ability to Go Short:** Futures contracts can be sold as easily as they are bought, enabling a speculator to profit from falling markets as well as rising ones.
5. **Credit Risk:** Futures contracts provide better credit protection as the trades are cleared through NYMEX. This alleviates both counterparty default risk and contract performance risk.

## *What are the specific benefits of Coal Trading?*

Coal Trading allows counterparties to identify and manage price risk. This ultimately assists in the projection of cash flows and the establishment of future cost estimates. Due to standardized trading contracts and very limited force majeure provisions, trading is frequently used to ensure a reliable supply of coal. Standard language in the form of a Master Coal Purchase and Sales Agreement (developed by the CTA) generally shortens the legal review of terms and conditions for a given transaction. Lastly, trading by its very nature, seeks to increase price transparency and coal generally supports reasonable market prices up to 36 months forward. The 36 month term window for transactions appears quite adequate, as the coal market has been moving towards shorter duration fixed price contracts.

## *What are over-the-counter contracts?*

Over-the-counter (OTC) contracts are bilateral contracts where two parties come to terms about how a specific agreement is to be settled in the future. The NYMEX has created a clearing mechanism for a slate of commonly traded OTC energy derivatives (including coal). This allows counterparties of many bilateral OTC transactions to mutually agree to transfer the trade to ClearPort (NYMEX's clearing house), thus eliminating credit and performance risk of the initial OTC transaction counterparties.

## *What are futures contracts?*

A futures contract is a standardized contract to buy or sell a commodity of standardized quality at a certain date in the future and at a market-determined price (the futures price). The contracts traded on a futures exchange. The contracts must have a standard size and grade, expire on a

certain date, and have a preset incremental price movement (tick size). For example, the NYMEX Central Appalachian (CAPP) Coal Futures Contract (Trading Symbol: QL) trades in units of 1,550 tons of coal on a minimum incremental price fluctuation of \$0.01 (1¢) per ton (\$15.50 per contract).

### *What are option contracts and how should they be used in procurement evaluations?*

An option is the right, but not the obligation, to perform on an agreement in the future. The option contract protects the option buyer from the option seller's ability to revoke the offer of the contract. Options are categorized as calls (the right, but not the obligation to buy at given strike price) and puts (the right, but not the obligation to sell at given strike price). Consideration, generally in the form of an option premium, is required to validate this form of contract. There are four major factors affecting the value of an options contract: I. Strike Price, II. Interest rates, III. Volatility, and IV. Time to Maturity (time to expiry of the option).

With respect to evaluating the use of options in coal procurement portfolios, one must evaluate the use of call options not only for short term purchases, but also for longer term purchases as the probability of being in the money over a longer term is greater (hence longer time to maturity and opportunity to experience volatility). Although this will result in higher premium costs, the overall value will be greater.

### *What causes volatility and what has coal volatility looked like over the past decade?*

Volatility is caused by factors that impact supply and demand. Although market participants attempt to predict future market effects, there is no guarantee when dealing with the unknown. Factors such as colder winters, warmer summers, changes in environmental laws, alternative fossil fuel markets (Natural gas/Oil prices), technological innovations, natural disasters, labor issues, and equipment failures all impact pricing volatility.

Coal prices over the last decade tell a significantly different story when compared with the previous 25 years. Since 2001 the market has changed significantly due to a variety of factors such as regulatory restrictions and reserve depletion that have led to significant supply inelasticity and greatly increased price volatility. In fact, coal prices jumped by 200% in 2001 and in 2008 prompt coal prices spiked nearly 300%.

### *What does volatility create?*

Increasing volatility creates fear on the part of natural longs (producers) and natural shorts (utilities) that prices will rapidly fall or rise. In addition, volatility attracts speculators seeking profits from managing the risks associated with high volatility.

In periods of high volatility, it is extremely helpful for “naturals” (producers and end-users) to employ financial hedges along with physical hedges. For example, utilities may use financial markets provide an additional avenue to hedge exposure if producers are unwilling to price at market or if they are unwilling to sell when utilities determine that they need to hedge some of their volume requirements.

### *Can relatively small hedging programs prove beneficial?*

Even limited hedging activities of 10 - 20% of firm purchases assist in creating predictable cash flows and earnings. The use of both physical term contracts and forward financial markets to fix pricing can significantly reduce exposure to price volatility. The decision of whether to purchase prompt month (spot), quarter ahead, or balance of the year are choices available to a counterparty to better manage any remaining un-hedged position. This can be accomplished in the physical OTC market, with futures, with producers, or a mix of these three options.

### *Should I consider hedging tools even though coal is not homogenous?*

The fact that coal is not uniform does not prevent buyers and sellers from using derivatives as a hedge tool because the hedge position can be reversed rather than consumed. There may be a small amount of basis risk compared to actual coal quality purchased for consumption.

### *Does hedging impact transportation contracts?*

No. Transportation contracts should not be affected because a hedge position could be reserved without taking delivery of the contract.

### *Are performance issues more pronounced in the physical or OTC coal market?*

Physical performance issues are generally more prevalent in the physical coal markets. In recent years, the coal market has experienced a high number of producer non-performance and bankruptcies issues. This fact strongly favors using the derivatives market where counterparties have a higher credit rating and the coal transacted is non-source-specific. Generic, non-specific sourcing, eliminates force majeure risks and therefore creates fewer non-performance issues in the OTC. Although some counterparties choose to favor producer direct bilateral transactions over use of the derivatives market, direct transactions have force majeure clauses that

significantly increase the potential of non-performance. The standard derivatives contract does not contain a force majeure clause; therefore, a derivatives contract provides a higher value relative to a traditional bilateral purchase with a supplier.

### *When evaluating the value of coal contracts vs. OTC markets, what elements must be factored into the pricing valuation?*

In evaluating a portfolio of physical bilateral coal contracts against futures or swaps, the analysis often falls short of recognizing a few less apparent factors such as the following:

1. Failure to take into account any value in quality differences
2. The comparison may have a mismatch in timing between market prices and contract prices.
3. Analysis does not attribute a value for difference in counterparty credit/performance risk
4. If the futures or swaps contracts carry a price premium to physical bilateral purchased coal, then the premium would be re-captured when the futures/swap is sold (hedge unwound) and the physical coal is purchased – assuming the premium is held constant.

### *What role do brokers play?*

Brokers are a critical component of an active OTC market. Brokers bring buyers and sellers together for the purpose of transacting business in various markets. There are three (3) active OTC coal brokers that publish daily price reports, in addition to several publications that distribute daily prices. This information helps to provide ample price transparency in the market.

The use of a broker provides anonymity for counterparties until a transaction is consummated. After seeking out the best bid and offer in a particular market, the broker attempts to match approved credit counterparties. Once a transaction is completed with an OTC broker, all OTC transactions are subject to final credit approval of the counterparties. Only after the completion of this process are counterparties contractually bound to do a deal.