



Coal Trading Handbook 2007 ©

Introduction

By

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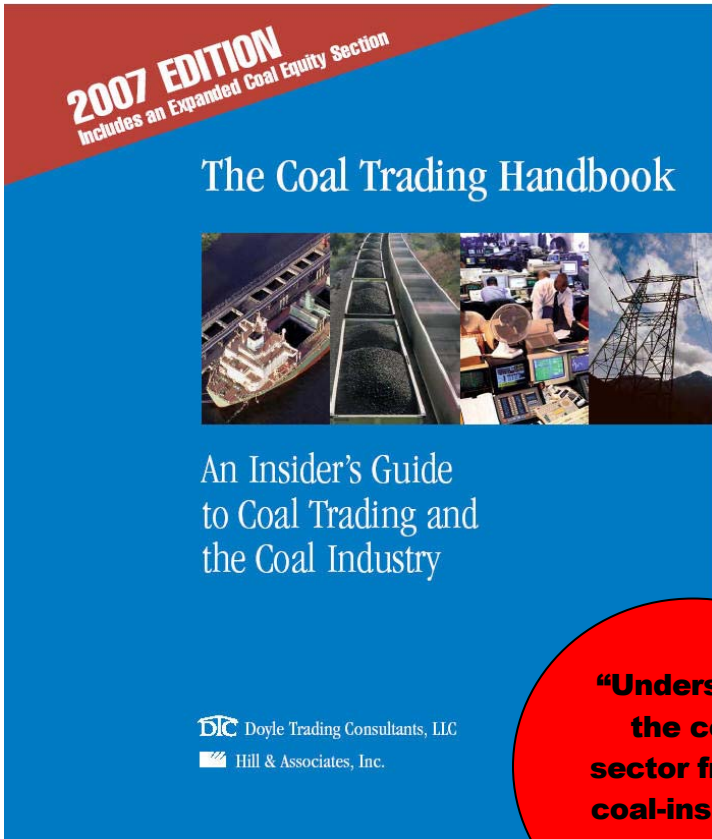
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INTRODUCTION TO THE COAL TRADING HANDBOOK

“Knowledge is power” – Sir Francis Bacon –

“A little knowledge is a dangerous thing” – William Shakespeare –

Welcome to *The Coal Trading Handbook 2007*! Attempting to convey the nuances of the coal industry is analogous to trying to lasso an amoeba. It won't stay still for long and it keeps changing shape. You will find that the 2007 edition of *The Coal Trading Handbook* has morphed along with the industry and contains numerous improvements and additions: an expanded trading glossary, a comprehensive energy correlation matrix and a very detailed section on the publicly traded coal sector.

As in the past, we are determined not to add to the pain and suffering in the world by creating a product that tortures its users with a dry summary of the coal sector. We have made a concerted effort to make using *The Coal Trading Handbook* an enjoyable experience. While the pursuit of financial profit certainly came into play, our main inspiration came from the opportunity to create something that would truly be 'for the good of the game.'

Ask almost anyone who is in the coal business – from the coal digger to the coal marketer to the coal consumer – and he/she will tell you that he/she loves being a part of an enormously important industry. The coal sector is steeped in history and tradition, and imbeds an emotional, deep-rooted pride in those who have made coal an important part of their lives. To an outsider, the coal industry is mostly a mystery: a canary in a coalmine, the Hatfields and McCoys, a coal miner's daughter and Muhlenberg County (♪♪ Mr. Peabody's coal train has hauled it away ...♪♪). For many decades, the coal industry was easily ignored: there were no Exxon Valdez-like disasters, there were no pipeline explosions, there were no threats of embargoes, the regulated utility world muffled the occasional price volatility and there was no daily mayhem on futures exchanges.

That is all changing and we happen to be right in the middle of that process. OTC coal trading is in its eleventh year. After taking a few steps backwards in 2003, trading volume rebounded in 2004/2005 and had a record year in 2006. The coal futures contract found new life on the electronic exchange of the Nymex—not only as a hedging tool, but also as a clearing mechanism for OTC trades. Many brokers, merchant generators, and traders who were involved in OTC's infancy have gone out of business or have withdrawn from market. Several new entrants including many of the top-tiered financial institutions have taken their places.

During the second half of 2003, the global coal market was rocked by changes that an observer might not expect to see over a five-year period: screaming ocean freight rates, record port congestion, unpredictable coal availability from major exporting countries, global shortages of blast furnace coke and metallurgical coal, a surprisingly weak dollar, etc. Coal prices continued to surge in 2004 and 2005 at prices well ahead of historical levels. In 2006, the market started out in a euphoric mood with PRB prices in the high teens, Capp in the upper \$50s, SO₂ allowances in the \$1500s and global coking coal well-above \$100/MT. Then the worst happened: the warmest winter on record, a summer that was below normal, a lagged supply response to the high prices at a time when the coal was not needed, a steel sector that was no longer scrambling for limited coking coal supplies, etc. Fortunately, the global coal participants have a very active swaps market with which to manage the volatile coal prices and ocean freight rates. That market continues to grow and to attract hedgers and financial speculators. The traded market for coal in the U.S. is still dwarfed by the global market but is showing steady growth: coal trading experienced a record-trading year, the swaps market is slowly gaining ground and the entry of some very well-heeled commercial and investment banks has raised many eyebrows.

The Coal Trading Handbook is dedicated to identifying and explaining what drives the market and, more importantly, learning how to use the OTC market and other available tools to protect against price gyrations that negatively affect the bottom line. Who needs to have a solid understanding of coal trading and the coal industry? We engineered our product for virtually every entity that has a horse in the race: coal producers, energy traders, stock analysts, regulated utilities, merchant generators, speculators, railroads, barge lines, risk managers, back-office managers, hedge funds, public utility commissioners, grid operators, exporters/importers, energy consultants, credit rating agencies, mining equipment companies and terminal operators.

Our first premise was that you could not hedge or invest in a sector that you might not fully understand. That resulted in our detailed primer on the coal industry. Conversely, if you do not know how to hedge, an understanding of the coal industry will be of little value in developing strategies to manage the risks posed by the market drivers. That resulted in the primer on trading and hedging. Finally, for the investing community, we included a comprehensive equity section that removes the veils of obfuscation that sometimes accompany the earnings statements, 10 Ks and company presentations. Our goal was to create an essential guide that you can refer to again and again. It is not supposed to serve as a final destination. It is supposed to bring you one step closer to pinpointing your vulnerability to coal prices (or alternatively identify profitable trading opportunities) and designing effective strategies to achieve your hedging and trading objectives.

There is a light at the end of the tunnel and, unfortunately for those who are unprepared, it is an oncoming train that is hauling a full load of price volatility. Coal is responsible for approximately fifty percent of the electricity generated in the US and forty percent worldwide. Do you think increased volatility will have a major impact on coal producers? We do. Coal and transportation constitutes as much as 80% of a generating company's variable cost of producing electricity. Do you think increased volatility will impact spark spreads (profit margins)? We do. The installation of

scrubbers will change the purchasing patterns of major coal consumers. Do you think there will be a significant impact in the major coal-producing regions? We do. Do you think the energy traders and energy brokers have committed time and resources to position themselves to profit from increased volatility in the coal market? We do. After what we witnessed during 2003-2006, do you think the global coal markets will experience continued volatility in coal prices and ocean freight rates? We do.

WHAT'S IN IT FOR ME?

Coal Buyers: Our experience has demonstrated that coal buyers excel at what they do. They have optimized every tool that the traditional market had to offer. However, some energy companies have kept the coal buyers separate from the trading function and many fail to recognize the value that the procurement department can bring to the trading floor. Nevertheless, if you are a buyer, the market will be requiring several things of you: 1) to protect your spark spread and to profit from price volatility as the market provides you those opportunities; 2) to reassess your current business practices and, as appropriate, adopt tools from the OTC/futures markets; 3) to look at the market as a continuous, open auction and at price curves as one of your most important tools; 5) to be prepared to sell as well as buy; and 6) to be able to evaluate risk management products marketed by other energy companies. There is no reason why you cannot continue to be the master of your domain and adopt new practices that will make your company more effective. This handbook is designed to give you a good start along this path.

Coal Producers: This handbook will show you lots of ways to look at trading, to de-mystify it and to use it to your advantage. As you will learn in the section on forward curves, "Do What the Market Tells You to Do!," sometimes it makes sense to sell directly to a generator. Other times it makes sense to take a higher price on the OTC market. Not only that, when the OTC market is way too cheap, buy it! Remember that you are playing in a poker game and, as a producer, you actually know more about the cards in the deck than some of your opponents. A common fallacy among coal mining companies is that trading will result in their having to compete against 'their own coal'. In this handbook, you will learn that unless your diggers dig more coal, your trading actions cannot add more supply to the market.

Coal Traders: If you are your organization's coal trader, chances are your head energy trader, your marketers, your back office manager, and even your colleagues trading power, gas, oil, and emissions are unfamiliar with coal and coal trading. We designed this handbook to be a useful reference for you and for others in your organization. We have found that the more familiar energy traders and marketers become with each other's respective areas of expertise, the more likely your organization will develop profitable cross-commodity trading strategies and innovative risk management products.

Financial Traders: We know you are already active in the global coal markets. Intuitively, you know that coal could be a very big market in the U.S. On the other hand, where do you start? Do you get involved in physical trading or do you wait until the swaps market develops? We cannot answer that question. However, once you have perused the coal primer, the sections on the various market drivers (demand, supply, and

volatility), the overview of the coal trading market, and the data (forward curves, spread history, volatility history, and correlation matrix), we believe you will have sufficient information to make your decisions.

Exporters/Importers: If we have learned one lesson in the past few years, it is that all markets are interdependent. For example, the iron ore and grain markets affect the ocean freight markets, which, in turn, affect the ocean freight differentials between Pacific and Atlantic basins, which, in turn, affect the relative competitiveness of the different coal regions which, in turn, affect FOB vessel prices, import/export patterns, fuel switching decisions, etc. The bottom line: the supply/demand/volatility drivers are increasingly unpredictable and the price swings are much higher. In this environment, only a reckless company would leave its business unhedged.

Equity Traders and Investment Managers: This handbook can assist in the decision process: when to buy, when to sell, when to reallocate capital between companies and which companies are M&A targets. One key to understanding the personalities of the individual coal stocks lies in understanding the often-dysfunctional environment in which they operate. We show which coal companies have the most exposure to which coal curves. Not only have we included an analysis of supply, demand, and market drivers, we have also included a correlation matrix that compares the relationship between coal, crude oil, natural gas, emissions, electricity, and equity prices. We have expanded last year's open-ended discussion on the possibility of using coal trading to hedge equity holdings and/or to develop commodity/equity arbitrage strategies. We have investigated the possibility of using equity, OTC, and futures trading to create a synthetic coal company. We have provided valuable input in making sense out of the various methods of reporting performance and the key questions to pose to company management in order to fill in the blanks.

Debt Holders/Debt Rating Companies: We do not believe it is possible to calculate a coal company's ability to service debt without an underlying understanding of the coal industry. There is so much that balance sheets and pro-forma income statements do not show: hidden exposures, coal curves, emission curves, historical volatility, the true value of the coal reserves and the extent to which coal companies can use the OTC and futures markets to manage risk. This handbook addresses all of these items.

Risk Managers: There are unique risks that come with buying, weighing, testing, storing, transporting, selling, trading, and combusting coal. You need a completely unbiased overview of the industry. It is also important to see how basis spreads, volatility, and forward curves have changed over time. We have included a correlation matrix that demonstrates how the different coal hubs, natural gas, crude oil, various electricity markets (On and Off peak), and emission markets relate to each other.

Back Office Managers: The spotlight might be on the trading floor, but the back office is where the rubber meets the road. Your actions and inactions can contribute significantly to your organization's bottom line. A commodity in the formative stage of trading requires a lot of back office attention. Experience can be a costly teacher. Throughout this handbook, we have highlighted the peculiar characteristics of coal that can lead to costly exposures or profitable opportunities. The coal primer will give the

scheduler an idea of what he/she is scheduling and how to navigate around the dangerous icebergs.

Credit Managers: We know that credit assessment is not necessarily a black/white subject. Basic knowledge of the nuts and bolts of an industry is essential for making decisions about with whom to trade and to what degree. This handbook will provide you with a good overview of the coal industry that can help in making subjective judgments.

PUC Commissioners: We are hoping that the progressive, regulated utilities under your charge are lobbying for permission to use the latest risk management products to provide value to your ratepayers and to their shareholders. We are also hoping that you are ‘coaxing’ your not-so-progressive, regulated utilities to use every tool at their disposal to hedge their exposure to price volatility and/or to monetize the optionality that is imbedded in their generation assets. This handbook should give you a clear idea of what is possible and what is not.

CEO and Board Members: Your business used to be about digging coal and/or generating electrons. It has become riskier and much more complicated. We have attempted to provide an overview for the executive who is at 30,000 feet and is making strategic decisions that will determine the company’s long-term future. Our no-nonsense approach to discussing coal trading and the coal industry highlights the most critical aspects of the coal sector.