

BOOK REVIEW

ENERGY DERIVATIVES: TRADING EMERGING MARKETS
by Peter C. Fusaro and Jeremy Wilcox (Energy Pub. Enterprises 2000).

Reviewed by
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Energy Derivatives: Trading Emerging Markets is a collection of fourteen informative articles on fuel, power, emissions, weather and bandwidth trading. The articles give the reader information on the fundamentals of the trading of these commodities (some actually are only developing into commodities) and on developing trends in financial instruments and electronic exchanges that support the trading. In addition, the editors of the articles, Peter C. Fusaro and Jeremy Wilcox, included in the book an extremely clear glossary of terms that can help the reader through the confusing world of energy-related financial instruments.

The articles on emissions, weather and bandwidth trading are particularly informative. They set forth the legal and market background that prompted the initiation of trading of these emerging commodities and explain, through examples, how these commodities are traded and how trading of these commodities can reduce an energy company's or consumer's risk. For example, a natural gas distribution company in the Northeast United States whose profit is highly dependent on weather can procure a weather derivative that effectively puts "a limit, or floor on revenue loss [from warmer than normal weather] whilst maintaining the upside potential of a cold winter." In the bandwidth area, a company whose need for data transmission capacity over the Internet peaks during a given period "will be able to secure additional bandwidth to meet short term needs without the magnitude of a capital investment required in the traditional market." How these trading markets work is fairly clearly explained in the fourteen articles and is presented in an interesting style, particularly the explanation of bandwidth trading which includes a description of how the Internet works and what capital investment in telecommunications equipment has been necessary for the development of the Internet.

Beyond an explanation of the fundamentals of the trading of energy-related commodities, these articles explain the increasing "liberalization" (meaning deregulation) of energy markets around the world and why the worldwide movement to energy deregulation has resulted in the development of new commodity trading strategies including financial instruments. As explained, a key result of deregulation is that the final energy providers

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(such as gas distribution companies and electric utilities) no longer own as much of, that is, have as much control over, the sources of the commodity that they sell. Natural gas distribution companies no longer can simply demand gas supplies from major pipeline suppliers and electric utilities do not own as many of the stations that generate the power they sell. Plus, gas and power companies face fierce competition from other energy suppliers. Consequently, the final energy providers generally can no longer purchase or produce commodities on a long-term basis or with large capital investments. Instead, they are under extreme pressure to purchase only the commodities needed for resale at the moment and to purchase the commodities from the cheapest sources. In addition, energy consumers have choices and they, too, want to purchase only the precise amount of commodity needed and then from only the cheapest sources. These factors drive the energy markets toward short-term pricing. A main thesis of the articles is that the liberalization of energy markets worldwide has forced more emphasis on short-term energy prices and thus created tremendous volatility in energy prices.

Energy price volatility puts a premium on energy risk management strategies. These strategies involve both physical and financial hedges in an attempt to eliminate some of the volatility. As can be seen, volatility then creates complexity and puts a premium on timely decision-making. This leads to the articles' final theme involving electronic energy trading.

The articles attempt to explain why electronic, Internet-based trading of energy and energy-related commodities is required and will develop in a few years to a point where most all energy worldwide will be traded or supported in one way or another in the daisy chain of transactions effected through electronic exchanges of commodities and financial instruments. Only through electronic trading can the selling side of the market keep up with the needs of the buying side. For example, "The Internet is the key to both enabling electricity to be treated like the commodity it has become through liberalization and to increasing price transparency in the energy market overall." One article flatly predicts that the future will include "Intelligent air-conditioning systems, for example, [that] will not only regulate room temperature in time with the weather but also in time with electricity pricing [being linked] directly to automatic price feeds that will switch off or switch supplier when the market price gets too high." Only through the trading of commodity and purchasing of energy-related financial instruments through electronic exchanges can the energy markets keep up with consumer needs. The articles contend that, indeed, "traditional floor exchanges are fighting for survival in the wake of technological change and global financial integration" made possible by Over-the-Counter transactions.

In addition, as the articles demonstrate, there is an increasing inter-relationship among the short-term prices of traditional energy commodities such as oil, natural gas and even coal and the prices of electricity, such as "the economies of converting gas to electricity through spark spread." The articles contend that this convergence of commodities also includes

emissions, weather and bandwidth. For example, cheaper coal prices usually come from coal sources that result in higher sulphur emissions, extreme weather usually drives up energy prices, and electricity and bandwidth usage usually peak at the same time. The trading of commodities on electronic exchanges will ultimately provide the sellers and buyers choices in all of these commodities at the same place and same time. The future is predicted to include "end-to-end" systems where sellers and buyers will have all their needs met through a single electronic system even though with multiple counter-parties.

In my view, the "end-to-end" system will become a reality through the Internet. However, only when "consultancy" services are also simultaneously available will the energy markets act truly competitively. The issues and opportunities will be so complex that only with assistance from the expert in particular areas can a party wade through the choices and come to a satisfactory decision. Availability of a voice of an expert on the other end of the telephone line will lead to ultimate optimization of the opportunities in the electronically-driven energy markets.

Many of the articles in the book do suffer from a "mad printer's proofreader" (the same defect said of Winston Churchill's first book) with many grammatical and typographical errors. The articles also pre-date the fall of Enron and its sophisticated trading operation. However, the editing defects are only mildly annoying and thus easily overlooked. The pre-Enron debacle status is not the fault of the editors and does not detract from the information presented. This book is an extremely useful introduction into the modern "liberalized" and electronic world of energy commodities trading.
