CHAPTER 1

The New Millennium in Energy Trading

Peter C. Fusaro
President, Global Change Associates Inc.

The premise of this book is that commodity trading is evolving in many areas of the energy complex and extending into emerging commodity markets, such as emissions, telecommunications broadband, and weather trading. However, the thread that brings all these markets into focus is that all are emerging and converging markets. No book currently published has tackled this subject for commodity trading, and what have been published are sporadic magazine articles. In this book, the best emerging market energy experts have been chosen to disclose the latest developments in the new field of energy convergence and multicommodity trading. This book is also meant as a companion piece to the author's other two books on energy risk management entitled *Energy Risk Management* (McGraw-Hill, 1998), and *Energy Derivatives: Trading Emerging Markets* (Energy Publishing Enterprises, 2000).

This chapter provides the overview of developments of the new emerging markets catalyzed by the Internet electronic trading developments. The chapter also lays out the broad themes of the book and argues why the time is now for the development of these multicommodity markets and why they failed in the past.

Running through the individual chapters, we see that Dr. Antoine Eustache, Global Index Manager at Dow Jones Newswires of Princeton, New Jersey, explains the intricacies of index construction in the age of the Internet. Dr. Eustache has created the first electric power indexes in

the United States and Europe for trading electricity, and the first bandwidth indexes during 2001. He is looking at creating metals and emissions trading indexes for the future. He is the world's expert in creating emerging market indexes for trading and provides insights into future market developments for other commodities.

Chapter 3 examines the weather reinsurance markets and was written by Nick Ward, an experienced broker at Spectron Energy Group in London. The weather trading markets have generated much press over the past five years but actually little liquidity despite all the hype. Nick Ward will show why this is occurring and why this is leading us back to the reinsurance markets and their financial instruments.

The status of the telecommunications bandwidth trading is examined in Chapter 4 by J.P. Crametz of RateXchange Labs, Palo Alto, California. RateXchange is one of the first exchanges trading telecommunications bandwidth. Mr. Crametz is a leading researcher at Stanford University's Business Laboratories. While bandwidth trading will never be as large as the energy market, it is a growing and robust market ripe for commoditization. It is also a converging market with electric power. Mr. Crametz is working on the ground floor of one of the fledgling bandwith trading exchanges.

The importance of pricing energy options is shown by Dr. Robert Brooks in Chapter 5. Dr. Robert Brooks, President, Financial Risk Management LLC and finance professor, University of Alabama, Birmingham, Alabama, is an options expert and modeler. Energy options are unique to themselves and have implied volatility like no other commodity market. Dr. Brooks is a renowned energy options specialist who has worked with the Southern Company in trading strategies. He helps define the necessity of options trading in emerging markets and explains their value to the layperson.

In Chapter 6, Nedia Miller, CTA of New York, New York. Dr. Miller is a leading expert of the new FAS 133 hedge accounting rules for energy. She is an ex-NYMEX floor trader and has given many seminars on FAS 133 to KPMG, Royal Bank of Scotland, and Bank of Montreal. This ruling is changing not only how energy companies hedge, but their trading strategies as evidenced by the Enron debacle.

Dr. Markus Reichel, President of EconTrade in Dresden, Germany, in Chapter 7 explains the antecedents of trading in these emerging mar-

kets. Dr. Reichel focuses primarily on the emerging markets of Poland and Ukraine, which are just beginning to open up for energy trading. Dr. Reichel is a leading expert on Eastern Bloc energy liberalization and trading.

In Chapter 8, Alessandro Mauro, Manager of Risk at Energia SpA in Milan, Italy, focuses on the Italian energy trading markets. He was formerly with PwC and ENI, the Italian oil company. Mr. Mauro will focus on the emerging gas and electric markets in Italy that have evolved from the EU Energy Directives.

In Chapter 9, Kirk Vann, CEO, Freight Advanntage and Advannce Energy in Houston is a very experienced oil trader examining the changes underway in the tanker markets. Mr. Vann has more than 25 years trading oil for Enron and Glencore, and has established a model for the shipping industry on how they should hedge their freight rates, which are very variable and volatile. Tankers provide the lifeblood of global energy trading for oil and gas.

In Chapter 10, William A. Klun, vice president of DZ Bank, AG, in New York investigates market risk for financing merchant power plants. These are plants that have no retail load.

P. Kumar and Shiva Gowrinathan of the New York-based software company Nirvanasoft, Inc., examine and explain the importance of convergent software systems for energy trading, in Chapter 11. They examine the current software architecture and take a look at these new information technology developments for the energy industry.

In Chapter 12, Howard Margulis, partner, Squire, Sanders & Dempsey LLP in New York investigates energy risk management in the merger context looking at the legal and tax issues as well. Mr. Margulis is a leading attorney in the area of energy projects finance and shows how the use of energy derivatives can reduce the cost structure of energy projects. Mr. Margulis was formerly a partner at Baker and McKenzie.

In Chapter 13, Kelly Douvlis examines retail gas and electricity risk for industrial and commercial customers.

In Chapter 14, the author, Peter Fusaro, proposes a radically new concept in emissions trading through the use of structured products. He presents the background for the Kyoto Protocols and the United States experience in emissions trading as the nexus for launching CO_2 emissions

trading. Green finance is using the project finance mechanism to jump-start the CO_2 emissions trading market.

Finally, in Chapter 15, the author investigates the phenomenon of energy convergence for financial, energy, and Internet markets. Besides summarizing the themes of the previous chapters of the book, Fusaro provides a forward spin on how these new financial and commodity markets will converge in the age of market liberalization, consolidation, and globalization.