GreenTrading™ Markets:
How Environmental Financial Markets Work

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Introduction: What is GreenTrading™?

Green Trading is a term that was coined several years ago to capture the value of the convergence of the capital markets and the environment. It encompasses all forms of environmental financial trading including carbon dioxide and other (greenhouse gas) (GHG) reductions, sulfur dioxide (acid rain) and nitrogen oxide (ozone), renewable energy credits and negawatt (value of energy efficiency). All of these emerging and established environmental financial markets have one thing in common which is making the environment cleaner by either reducing emissions, using clean technology or not using energy through the use of financial markets. Sometimes, you can do both as in reducing emissions and reducing energy usage by moving to cleaner technology. Green Trading is one mechanism to accelerate this environmentally beneficial change.

The financial value of all of these environmental benefits are determined by the trading markets. The quaint notion that we are trading pollution is actually an oversimplication of the need of markets to create financial incentives to reduce pollution and accelerate more efficient and environmentally benign technology transfer. For example, in the well-established US sulfur dioxide (SO2) and nitrogen oxide (NOX) markets, we have seen market-driven changes in the past year. As coal burning increased due to rising electricity demand and decreasing supply of natural gas, the emissions trading markets responded in kind. The price of emissions allowances rose to over $740 per ton for sulfur dioxide and $40,000 for nitrous oxide during the past year in the US. Sulfur dioxide credits in the 11-year-old markets had never before risen above $225 per ton before. This financial penalty for emitting more emissions accelerated the

emergence of new technology into the coal burning power generation space that was previously uneconomic. During the past nine months, at least 20 newly planned coal gasification facilities have either been announced or are on the permitting cycle for siting. A year ago there were none. The benefits of gasification technology are that they not only reduce the previously mentioned SO2 and NOX emissions but also reduce carbon dioxide emissions. They also increase efficiency of coal burning from 30% to over 70% percent. Which means that less coal will need to be burned to produce the same amount of electric power in the future. This additional efficiency benefit is often overlooked by environmentalists, economists and policy makers who tend to view the energy supply picture as static with ever increasing energy demand. Basically, we will be using less energy, and it will be cleaner forms of energy in the future due to market-based incentives coupled with financial penalties for noncompliance. These are not voluntary markets but government mandated markets. They have proven to work and are economically cost effective. They are essentially the template for the Kyoto Protocol.

Another venue for Green Trading has been in the renewal energy area where wind, solar and biomass markets are accelerating commercially due to the monetization of renewable energy credits as they are called in the US. Today, 19 states have or are developing a Renewable Portfolio Standard (RPS) that is jump-starting markets in states such as Texas, California and the Northeastern states to take advantage of “green power” programs that are now popular with consumers. There are over 350 US green power programs where consumers willingly pay more for green power. The renewable energy projects in these states are able to bank-finance their development and create a revenue stream of green credits that reduce the cost of capital in effect creating “Green Finance.”

This report includes the following chapters:

Chapter 1 Global Snapshot of Green Market Development in 2005

Mature Markets: Sulfur Dioxide
Maturing Markets: Nitrous Oxides
Emerging Markets:
- Carbon Dioxide and Greenhouse Gases
- Renewable Energy Credits
- Negawatts
- Mercury

As fossil fuel prices remain higher throughout this decade and as global energy demand continues to increase, clean technology will now becoming a more attractive economic choice for deployment in global markets. Energy and environment issues continue to be more interlinked such that rising demand is accelerating the need to move faster to clean technology solutions. Green Trading is that financial mechanism that allows markets to meet that goal of global deployment of new, cleaner technology to meet rising demand for electricity, transportation, heating and cooling applications. What used to be expensive and uncommercial is now rapidly changing to economic solutions to global environmental problems. Green Trading is the mechanism to create these market-based incentives, and their application is global as not only the US, EU and Japan move forward but also developing economies such as China, India and Russia are moving forward on both emissions trading initiatives and clean technology applications.

In 2005, Green Trading markets are now entering the hockey stick phase of market development. This year promises to bring us the financial market acceleration that has been expected for many years. Despite all the press hubris on the EU Trading Scheme and the implementation of Kyoto, the US is still well positioned to lead on environmental financial market development with its entrepreneurial culture, risk capital and knowledge base in trading. This report explains and analyzes the following markets in easy to understand terms on a very complex issue:

- SO2 (sulfur dioxide)
- NOX (nitrogen oxide)
- CO2 (Carbon Dioxide)
- REC (Renewable Energy Credits)

GreenTrading™ Markets: How Environmental Financial Markets Work is the work of Global Change Associates Inc and Utilipoint International Inc. The price of the report is $2500.

If you want learn the basics of Green Trading financial markets in a comprehensible manner, you should buy this report. It can be ordered from Global Change Associates at our Internet bookstore Energy Media Group (www.energymediagroup.com)

If you have further questions call Peter Fusaro at 212-316-0223, or peterfusaro@global-change.com.