

**TESTIMONY OF DANIEL G. BRAUN
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**BEFORE THE SELECT COMMITTEE ON ENERGY
INDEPENDENCE AND GLOBAL WARMING
U.S. HOUSE OF REPRESENTATIVES
APRIL 16, 2008**

Mr. Chairman and members of the Committee, my name is Daniel Braun and I am the Director of Global Environmental Finance for Stark Investments, headquartered in Milwaukee, Wisconsin. I appreciate the opportunity to discuss federal policy measures that can enhance investment in clean energy technology.

I also would like to take a moment to acknowledge my hometown Congressman, Ranking Member James Sensenbrenner, and thank him for his leadership on energy security and climate change and other issues of critical importance to the Fifth District of Wisconsin.

About Stark Investments

Stark Investments is an alternative investment firm. We invest on behalf of pension funds, endowments, fund of funds, family offices and high net worth individuals. With over 20 years of investment experience, Stark has grown to become one of the largest alternative investment firms in the industry, with over \$14 billion of assets under management.

As climate change science has matured, and concerns about increasing greenhouse gas emissions have intensified in the United States and around the world, Stark has been involved in the global capital markets for greenhouse gas (GHG) emissions reductions and alternate energy technology.

In my role as Portfolio Manager of Global Environmental Finance, I have a mandate to allocate financial capital in the alternative energy space. The focus of the Portfolio is an exploration of the financial implications of living in a carbon constrained world: A world in which emissions of carbon dioxide and other greenhouse gas emissions carry a price and that price will affect a wide spectrum of financial assets (and liabilities). Over the last several years, the Stark team has allocated capital to alternative energy investments in both public and private markets. In addition, we have been very active in the European carbon markets, the Kyoto compliant markets and the United States early action market traded at the Chicago Climate Exchange.

How Public Policy Decisions Impact Capital Investment

I have been closely following the ongoing public policy debate on global warming here in Washington. I applaud Congress for the recent passage of the Energy and Independence Security Act of 2007 (EISA 07), which includes an aggressive new vehicle fuel economy mandate, renewable fuels mandate, and building efficiency standards. The passage of this legislation is a positive step in decreasing global greenhouse gas emissions. As important, is the need to continue to evaluate the full life cycle of GHG emissions resulting from our policies to ensure that we do not cause unintended negative consequences.

The recently signed energy bill and future legislative efforts to regulate GHG emissions will directly affect capital market allocation. With regard to a potential CO₂ cap and trade program, all eyes are on Washington, and in some respects, the legislative element is now the only thing that matters. The most powerful action this body can make is to set a hard physical limit or cap on CO₂ emissions, then let the private sector invest in the development of the alternative technologies required to continue to meet energy demand while hitting the mandated reduction target.

Furthermore, I believe that a clear, consistent and long-dated tax credit and loan guarantee portfolio defined by this body will augment a cap and trade system and set the stage for the development of the solution set of next-generation alternative energy technologies.

This recommendation is based on the capital market interpretation of and response to legislative action (or inaction), and underlines the need for clarity and long-dated legislation. To this end, and given that these two conditions are met, I believe that the capital markets can engage completely. However, if tax credits are short-dated, subject to legislative uncertainty, or if a cap and trade program is designed and then constantly modified, the capital markets cannot and will not be able to make optimal or well informed decisions. In short, if this is not done correctly, I believe the capital markets will not fully engage, which will reduce the level of private sector investment in the necessary low carbon technologies of the future. As a result, the goal of hitting a greenhouse gas reduction target will be harder to achieve.

The most important aspect of a capital market solution is the idea of an unencumbered price signal. Cap and trade markets with artificial price conditions, safety valves and off ramp conditions will ultimately distort the price signal for GHG's. Using the simple but elegant supply-demand dynamic found in any basic economics text, an artificial price condition will cause sub-optimal resource allocation. In practical terms, if a price is held artificially high, investment decisions will be made that "game" the system and if a price is held artificially low, investment allocations will be unprofitable and, therefore, cannot be funded. Thus, we will either fail in our attempt to achieve an environmental goal, or place an unnecessary cost on our economy in our attempt to achieve those goals.

Parenthetically, a carbon tax behaves like an artificial price condition. I understand that it is the easiest policy from an administrative standpoint but it is functionally the worst in terms of efficacy; not to mention the political challenges associated with imposing new taxes.

I've listened to policy makers and other stakeholders say we need an "Apollo-Project" approach in order to commercialize next generation technology. Given the scale of the challenge before us, I believe that the private sector and capital markets must be fully engaged and that American ingenuity cannot be driven solely by the public sector. With the correct public policy measures, that ingenuity will hit its full stride by funding in the private sector.

Market Manipulation

I have been involved in meetings on the Hill with Members and Staff for a little more than a year. During that time I have encountered both fact and fiction about market based solutions. One common theme is that volatility (which is the degree to which the price of a commodity fluctuates) is a bad thing. In fact, some degree of volatility is a characteristic of a properly functioning market. The magnitude and duration of changing price signals are extremely valuable information about the supply-demand dynamics at any given point in time.

From the standpoint of an investment firm having to deal with financial volatility on a daily basis, price certainty is not a consideration. A transparent and liquid forward price curve is required in our valuation analysis – volatility comes with the territory.

A second common misconception is that price certainty is always a good thing. In fact, price certainty is not a natural feature of any other commodity market, and can be very destructive if it is certain that the price will not support the investment of risk capital in a new market (such as a safety valve price, well below the marginal cost of abatement).

Another misconception is that there is free money to be made by financial players investing in alternative energy under a cap and trade system. Private sector investors will apply risk capital to investments that will yield a return that is a function of the risk. Because the innovative technologies needed to create the low carbon economy of the future are unproven, by definition, the expected return on investment has to relate to that risk. Investors believe the longer we delay creating the policy to unleash the private capital markets towards this investment, the higher the costs will be to our economy because we will have to achieve more in less time.

Much is also made about "lessons learned" from the first phase of the European Union Emissions Trading System (EU-ETS). In simple terms, the over-allocation of credits in the "learn while doing" first phase of the EU-ETS caused financially traded credits to expire with de minimis values. To those that say this proves that cap and trade does not work, I would suggest that this proves to the contrary: The market is a discounting mechanism that considers all fundamental factors to arrive at a market clearing price. In

the case of first phase of the EU-ETS, the over-allocation of credits caused supply to dwarf demand – the terminal value of these credits fully reflected this condition. It is important to note that the second phase of the EU-ETS has seen relatively stable carbon prices because it has been determined to be “short” or intentionally under-allocated.

The most important lesson of the first phase of the EU-ETS is that we cannot over-allocate credits. In fact, a very positive attribute of the 1990 amendments to the Clean Air Act is that we have extremely accurate GHG emission data for generating facilities in the United States. This historical data will help to enable us to set a good baseline from which to establish the declining cap over time.

Earlier in my testimony I mentioned the Chicago Climate Exchange. Dr. Richard Sandor, CEO of the Chicago Climate Exchange, and his team have developed an early action market. This is a new market that allows companies that will be compliant and financial firms that provide liquidity to begin transacting in the US CO₂ emission markets. Early action will smooth the economic transition as we approach the beginning of the compliance period. Companies and financial firms that engage in early action should be credited for CO₂ reductions in excess of “business as usual,” and that credit should be recognized in the compliance program.

Conclusion

A necessary element involved here is the trust that capital markets will work. This is complicated by the current status of the credit crisis. But the commoditization of carbon dioxide emissions is not without precedent. We now have fully functioning markets for sulfur dioxide and nitrous oxide, SO₂ and NO_x, two new commodities borne from the 1990 Amendments to the Clean Air Act. To those that may not agree that there is a connection between SO₂/NO_x and the commoditization of GHG emissions, my point very simply is that a pollutant can be commoditized, capped and traded to achieve emission reduction goals. If done correctly, the private sector will fully engage in creating the solution set. The mandate of the capital market is to assume the risk of developing and commercializing the solution set of alternative energy technologies. In the end, as we move beyond politics and money, we will see this as a partnership between capital markets and Washington that is capable of achieving sustainability, energy security and a low-carbon global economy.

I respectfully submit this testimony into the public record, and look forward to answering questions or providing further comment. Thank you, Mr. Chairman.

