

## ENVIRONMENTAL INDUSTRY PLAYS CRITICAL ROLE IN FOSTERING REAL SUSTAINABILITY

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The April 23, 2005, issue of *The Economist* featured a cover entitled "Rescuing Environmentalism (and the planet)." The cover article, referring to the essay by Michael Shellenberger and Ted Nordhaus titled "The Death of Environmentalism: Global Warming Politics in a Post-Environmental World," emphasized the importance of market mechanisms instead of command-and-control mechanisms for achieving the objectives of the environmentalists, or "greens." Fast-forward to 2007: It is clear that market mechanisms are driving today's green movement, but are these mechanisms based on substance, or are they built on a new version of the greed, half-baked ideas, and distorted facts that brought us the dot-com era, the war in Iraq, and the mortgage industry crisis? Are these initiatives championed by individuals of integrity or they are being advanced by the likes of Kenneth Lay of Enron, Bernie Ebbers of Worldcom, and Dennis Kozlowski of Tyco?

In 2007, almost every major business and news magazine ran a cover story that dealt with global warming, sustainability, or some other environmental issue. These articles highlighted the benefits that can accrue to business, communities, and society when organizations adopt a green strategy. The visions of increased profitability, new job creation, and an improved environment are indeed powerful motivators. As a result, companies are seeking green projects, attempting to put a green spin on projects in the pipeline, and scrambling to promote their green efforts. In addition, the marketplace now flourishes with a number of organizations offering products and services to help companies transform "green into gold." Like other booms we have seen in recent years, conditions are ripe for both the expert and the charlatan to excel and profit.

Many would argue that this newfound interest in all things environmental is good for our business, and that even marginal concepts and projects have merit in that they provide a foundation for growth. As potential beneficiaries of this growth, it is in

the long-term interest of our profession—and the resources we seek to protect—to act with diligence to point out flawed programs and help clients and the public fully understand the concepts of environmental market mechanisms and sustainability. By doing so, we will avoid the public embarrassment and consequential business downturn that will come when the public realizes that it has once again been duped and disappointed by those it looked to for expertise and leadership. In short, we will build sustainable businesses that, as we approach what many consider to be the climate change tipping point, have the potential to reverse a trend and produce a favorable outcome.

Consider the University of North Carolina's plan to develop nearly 1,000 acres of forest to yield what will be known as Carolina North. The full plan has yet to be disclosed, but the first phase calls for the development of roughly 250 acres, including the construction of green buildings. "Sustainable," "green," and "environmentally conscious" are terms that are routinely used to describe the project. Yet, although this project reflects the vision of many well-intentioned people, it is sustainable and environmentally conscious over a very narrow range. Stan Rhodes of Scientific Certification Systems (*Engineering News-Record*, "(Mis)Understanding Green Products," Nov. 19, 2007, p. 77) points out that the building envelope accounts for only 15% of the total life-cycle impacts of any building. Without revolutionizing how people work in these new green buildings—or, in this particular case, how they commute to these new green buildings to work—it is clear that Carolina North, while incorporating the latest concepts in green building design, falls short in overall sustainability. And while citizens and environmental groups make the same tired calls to save "Mother Earth," environmental scientists and engineers in the community remain silent and, in so doing, effectively propagate a distorted view of sustainability.

We see the potential for the same types of problems arising in our responses to climate change. On Dec. 19, 2007, President George Bush signed a major energy bill that, among other things, established a new

renewable fuel standard requiring the use of biofuels in the nation's fuel supply. Under this requirement, ethanol use will climb from the current level of roughly 6 billion gallons to 36 billion gallons by 2022. Importantly, corn-based ethanol will rise to 15 billion gallons and the balance of 21 billion gallons, "advanced biofuels," will be derived from other raw materials. Fortuitously, the December 17, 2007 issue of *Chemical and Engineering News* featured a cover story article entitled "The Costs of Biofuels" in which Dr. Bruce Dale of Michigan State University and Dr. David Pimentel of Cornell University squared off to debate the subject. Dr. Dale and Dr. Pimentel presented radically different perspectives on the energy balance, environmental costs, and national security advantages associated with biofuels production. Dr. Dale's argument that not all energy sources are created equal is a compelling argument for biofuels production; however, Dr. Pimentel's discussions of fertilizer use, water use, and the environmental consequences associated with corn farming point to the underlying problems associated with sustainability assessments regarding biofuels. After all, how do we account for the dead zone in the Gulf of Mexico attributed to fertilizer runoff from agricultural operations in the nation's "breadbasket?" What about the potential loss of freshwater biota due to the release of corn pollen and corn products from transgenic corn, as suggested by recent studies by Dr. Todd Royer of Indiana University (*Water & Wastewater News*, Oct. 9, 2007)? And then there is the nagging moral question that continues to surface: How can we use food products for fuel in the face of domestic and global hunger?

The words of Ludwig von Mises, an Austrian economist of the early 20<sup>th</sup> century, although cited by *The Economist* ("Danger Time for America," Jan. 12, 2006) to describe the problems of building current prosperity by borrowing from the future (a problem we still have, but not the focus of this article), certainly seem applicable to the current state of biofuels: "It may sometimes be expedient for a man to heat the stove with his furniture. But he should not delude himself by believing that he has discovered a wonderful new method of heating his premises."

Even if we fail to develop truly sustainable projects and we do so with energy

sources of dubious benefits, can we take comfort in the fact that our efforts have been “carbon neutral?” Maybe. The emergence of the “carbon markets” is instructive. The purchase of carbon offsets falls into two broad categories. The first category primarily includes those purchases by affluent countries to fulfill obligations under the Kyoto Protocol. The second category includes voluntary purchases by individuals and organizations to offset the carbon burden of a particular project, operation, or activity. While the offset accounting provisions of the Kyoto Protocol are rigorous and subject to verification, the vendors that have lined up to serve the growing voluntary market are not subject to the same standards unless they work inside the Kyoto framework or one of the emerging programs intended to bring credibility to the voluntary carbon offsetting business.

As a result, voluntary carbon offset purchases are not always satisfying the objective of the purchaser. The Tufts Climate Initiative at Tufts University, while acknowledging that many programs are run responsibly, reports that other programs are flawed by double-counting and in their treatment of “additionality” ([www.tufts.edu/tuftsclimate/carbonoffsets/index.htm](http://www.tufts.edu/tuftsclimate/carbonoffsets/index.htm)). Double-counting means that the same emission reductions are counted multiple times, resulting in the potential for duplicate offset purchases for the same project. While some make an opposing case, the Tufts report argues that offsets must be linked to a project that is “additional.” If a project is additional, it means that it would not have gone ahead in the absence of carbon funding ([www.climatecare.org](http://www.climatecare.org)). It is clear that we must better understand the workings of the carbon market to ensure that we make the best possible decision and offer the best advice regarding offset purchases. Of course, applying the Kyoto Protocol principle of “supplementarity”—reducing the carbon footprint through project or operational design and implementation before purchasing offsets—should guide our activities and advisory services in this rapidly growing area.

To come back to corporate sustainability programs, *Chemical and Engineering News* reported more than three years ago (“Environmental Progress,” Oct. 25, 2004, p. 45) that companies with environmental management systems (EMS) have compliance records that are nearly the same as companies without such systems.

Furthermore, the article reported that companies with EMSs do not differ significantly from firms without them in terms of toxic releases, major air pollutants, or hazardous waste generation. These findings suggest that, even after making significant investments in the implementation of voluntary EMS, organizations see these systems as cost and compliance management tools instead of operational management tools with the potential to drive sustainability initiatives and add value through energy conservation, improved resource utilization, and reduced waste generation. Similarly, Scott Paton observes (*Quality Digest*, “Quality Afterthoughts: What are you doing to make quality a way of life?,” November 2007, p. 64), “It is frustrating that after going through zero defects, quality circles, total quality management, reengineering, benchmarking, ISO 9001, Six Sigma, lean, and all of their derivations, that quality is still so bad.”

He continues with the observation that the firms that have successfully implemented quality programs as reflected in real product and service quality and increased market share have “made the program their own.” They “don’t ‘do’ ISO 9001 for the sake of meeting customer requirements. They don’t have an employee involvement program because it’s hip; they don’t implement Six Sigma because the CEO’s golfing buddy’s company does.” He could have added that the firms that will enjoy the full benefits of EMSs and sustainability initiatives are the ones that are motivated by core values, not by the opportunity to realize a new revenue stream, sidestep the competition, advance a hot project, or improve the company image. In summary, sustainability and quality initiatives are not bolt-on applications that in and of themselves transform the performance of an organization. Instead, organizational transformation and meaningful results are the products of a value-based, long-term commitment to sustainability and quality programs.

The environmental movement is often traced to the 1950s and the work of Rachel Carson. What started as public concern has grown into a global business contributing billions of dollars to the world economy and yielding real improvements in environmental quality, resource management, and public health. There is much more to do. And the growing recognition that sustainability initiatives can produce substantive financial

returns has the potential to significantly expand the economic and quality-of-life contributions of our profession. In fact, our near-term decisions and actions may very well determine the fate of our planet.

This is an exciting time to be an environmental professional. Let’s make sure that the excitement does not distract from our mission and responsibility as it has so many others in recent years. Self-declared sustainability initiatives, biofuels, and carbon trading are important initial steps. We are positioned to help the public and clients understand that these are the first steps, not the final solutions. By keeping these programs honest, we support those who take the first steps, we maintain credibility, and we drive the sustainability movement in the proper direction.

More and more firms are producing corporate social responsibility reports that detail the range of an organization’s social and environmental contributions. This trend does not seem to have caught on within the environmental service community. Perhaps this is a good thing that will spare us embarrassment in the future. Instead of generating a document that details the reams of recycled paper we used; the tons of paper, aluminum, and plastic we recycled; the renewable energy credits and carbon offsets we purchased; the fair market practices we employed with off-shored data entry and computer-aided drafting work; and the similar benefits we produced for client organization—instead of all this, perhaps we should fulfill our social responsibility obligations by ensuring that the growing interest in environmental issues is indeed sustainable. Instead of reporting our accomplishments, let’s work to ensure that projects touted as sustainable actually are, that efforts intended to reduce a carbon footprint deliver, and that programs designed to improve environmental performance work.

We’re likely to have a wide choice of green projects in the coming months. Let’s use our time in the spotlight to make a difference that is indeed sustainable.

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