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Investing Green in Bad Economic Times

Value of Climate Change Program

by Marc Karell

In early 2008, I wrote in the *Advisor* about the business case for implementing a climate change program at your company and the value it would bring to all elements of your business ("The Business Case for Reducing GHGs," *Advisor* 704, February 4, 2008). The rationale included the following benefits:

- Proven reduction in operational costs through greater energy efficiency.
- Opportunities to generate carbon credits for potential additional revenue.
- Development of new, attractive products and re-package old ones.
- Use as a chip to fast-track important projects.
- Favorably impress customers.
- Satisfy shareholders and improve corporate image.
- Raise employee morale.

Since that time, the domestic and global economy has experienced a series of crippling shocks, reducing available capital for many companies. In the current economic turmoil, many organizations are being forced to re-examine their business strategies and how resources are spent. While all the above reasons for having a climate change program are still valid, the first item—the potential for significant cost reductions achievable in good times or in bad—is more critical than ever. In the past, reducing costs in areas such as energy use, water use, and waste generation and treatment was sometimes considered "not worth the aggravation." Now the potential gains of doing so in a thorough manner are recognized as well worth the effort. In fact, tough times are prompting a leave-no-stone-unturned attitude.

Some business managers continue to believe that pursuing environmental savings and energy efficiency is a trivial pursuit or a hypothetical exercise, but experience is showing just the opposite.

For example, at the Bali global climate change conference in late 2007, a senior DuPont official reported that between 1990 and 2003, DuPont reduced total energy usage by 6 percent while business increased by 40 percent. According to DuPont, this saved the company over \$3 billion in avoided energy costs.

While this surely required a major capital investment and may not be a valid benchmark for every company,

it is an achievement that DuPont directly benefits from in these tough times. An energy assessment and upgrade is virtually guaranteed to have a direct economic savings for companies.

EH&S managers who view their jobs as establishing and maintaining systems to demonstrate continuous compliance with rules may not see the kind of energy savings undertaken by DuPont as their responsibility. This may have been an acceptable position to take in the past, but business trends in United States are changing. More and more companies are reassessing their structure by requesting that groups and departments of the organization demonstrate their business value. We know the value of reducing regulatory and public relations risk by avoiding or minimizing major disruptive incidents, injuries, deaths, and regulatory violations, but risk reduction may be hard to quantify by those assessing value. While sometimes a tough sell, having EH&S manage a program that will lead to direct cost benefits can increase your group's value and visibility within your company.

Essential First Steps

Initial steps in developing a corporate climate change program are conducting a methodical, complete baseline GHG emissions inventory and performing an energy and/or materials assessment that can identify areas of cost savings.

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A climate change group (whether an established department or a more informal group) should be assembled, ideally with input from diverse areas affected by climate change (financial, legal, operations, communications).

The group should introduce long-term goals, a plan to achieve these, and roles and responsibilities of participants to meet these goals. An organized group equipped with baseline GHG emissions data can quickly provide useful information before the efficiency effort is started.

A well-performed energy and/or materials assessment will result in a range of options for you to consider, ranging from low hanging fruit to real home runs—efforts that may require up-front investment, but which can lead to significant future GHG emissions reductions and cost savings.

Such an assessment requires an understanding of which processes use the most energy (manufacturing, worker comfort, transportation), the nature of your equipment and processes, and potential upgrades. This work should involve both plant personnel, who understand your processes and energy systems, and outside specialists experienced in energy systems and efficiency.

While the less-expensive options offer quick gratification with minimal investment, longer-term, large potential gains are worth considering given the unique signature value of some projects. Experience shows that nearly all energy assessments can lead to energy savings.

Cogen and Renewable Energy

Investing in cogeneration (cogen) or renewable energy may be relatively

big ticket items, but there are many long-term advantages related to cost savings and GHG emissions reductions. Also, a large up-front investment may not be required.

Cogen involves building an on-site power plant to supply your facility with electricity and steam.

Cogen is generally more efficient for the user than purchasing electricity and steam from outside as waste heat is utilized to generate more electricity, and transmission losses are reduced.

Your company may own and operate the cogen facility or you may work out an agreement with a third-party firm to control all operations and make the investments and pay a set fee for the output (electricity and steam). This could result in GHG emissions reductions compared to purchases from the electric utility (depending on location and fuel source). Also, there is greater reliability in supplying your own power on-site. While the potential benefits are considerable, a heavy capital investment is required.

Obtaining energy from renewable sources is also an excellent way to reduce GHG emissions (your carbon footprint) as the technologies do not combust fossil fuels. Although sources considered renewable differ among states and organizations, solar, wind, and geothermal clearly qualify.

Currently, 29 states have *renewable portfolio standards* (RPS)—goals to generate specific percentages of electricity through renewable resources. State RPSs differ in percentages and deadlines.

The website www.dsireusa.org contains information on state RPSs. The

U.S. Senate is currently conferring on developing a uniform national RPS as a prelude to the much-discussed carbon cap-and-trade system.

The Staples Example

Utilities that are incentivized to increase the amount of renewable energy they generate are looking for host facilities in which to build. Examples abound of businesses with large areas of roof space operating solar panels (if right for the area). Several Staples stores operate this way. In this case, the solar energy system is owned and maintained by a third party, and stores make no initial investment or contribution to maintenance.

All the generated electricity goes to the grid, but the store is locked in to a discounted rate for its electricity needs. While this is a unique situation for this retailer (a business with a large spacious roof), there may be other site-specific instances where renewable energy could be a good fit because of a company's location.

Other arrangements are possible. For example, your company can obtain permission to use the electricity developed from the system and reduce your carbon footprint.

Also, financial incentives are becoming increasingly available. Utilities, governments, and NGOs have or are developing incentive programs such as tax credits, grants for feasibility studies, and guarantees that any carbon credits successfully developed will be bought at a set price.

With the growing pressure on states and the federal government (through the Stimulus Bill) to increase the percentage of renewable power to improve the nation's infrastructure

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(including green infrastructure), there have never been as many opportunities to share the cost with other interested parties. A government/policy expert can assist in this research.

The critical points are that it is now possible for a company to take

advantage of the developing technology to achieve a major reduction in GHG emissions, reduce long-term energy costs, and have a signature green project to impress customers and shareholders *and potentially not have to invest a whole lot of money up-front.*

➡ Marc Karell, P.E., is a professional, licensed engineer, based in New York, and operates his own consulting firm, Climate Change & Environmental Services, LLC, specializing in the climate change and air quality areas. He may be contacted at 914-584-6720 or at climatechangeenv@gmail.com.

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