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A Profitable Shade of Green

Compounding the Benefits of Carbon
Management & Sustainability Measures

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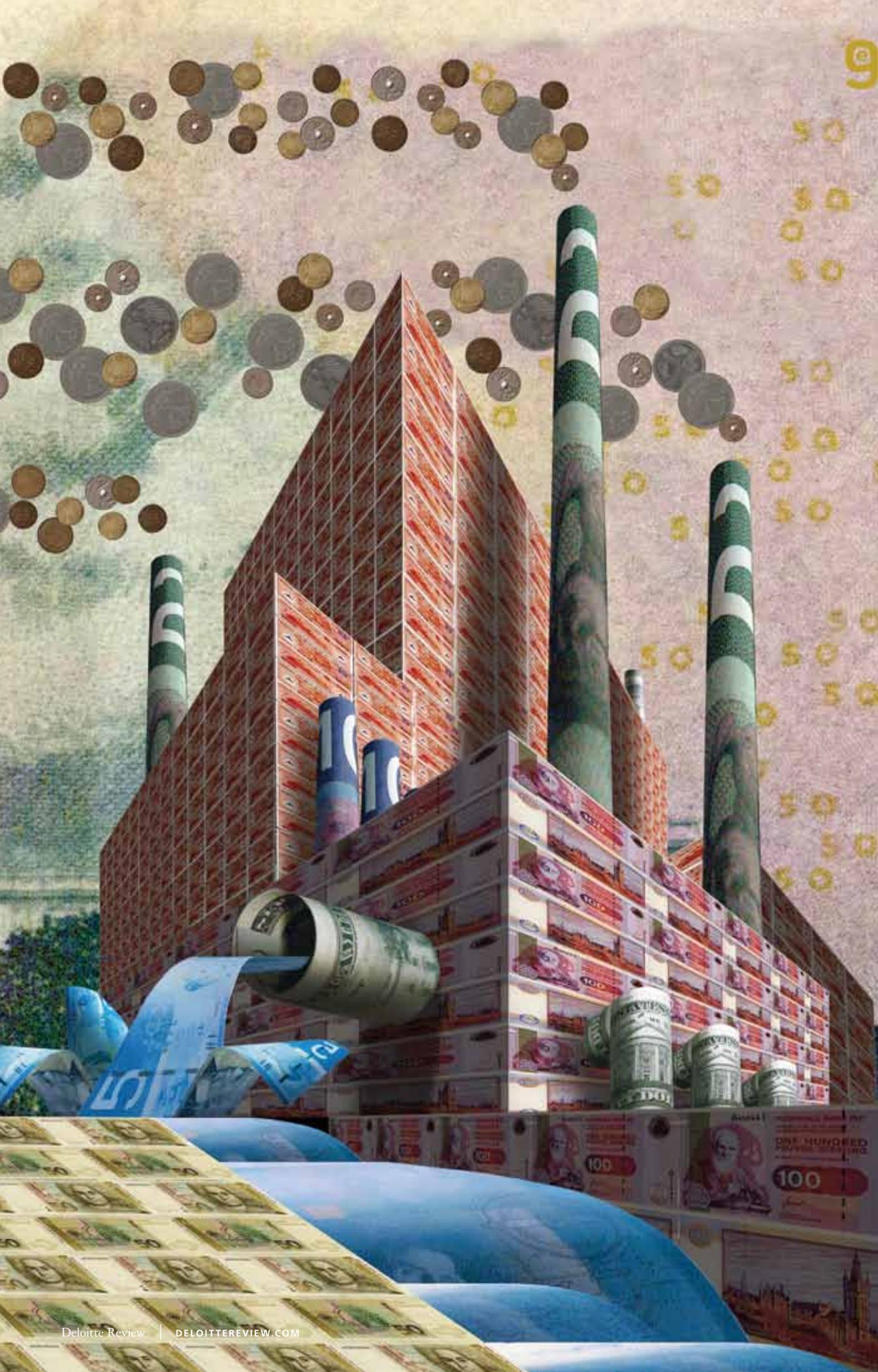
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Compounding the Benefits of Carbon
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What business impact could be so urgent that the SEC, stock indexes around the world and 92 percent of businesses are racing to reevaluate their definition of the corporate bottom line?¹ Contrary to the “six degrees of separation” concept, which tries to quantify today’s global interconnectedness, it is becoming increasingly apparent that linking the interests of businesses, governments and consumers around the world takes only one degree: the challenges of carbon emission management and coping with a resource-constrained, highly competitive future.



Whether you are convinced or skeptical of the merits of sustainability, a paradigm shift addressing the financial impacts of resource scarcity, population growth, carbon intensity, ecosystem services and potential climate change is underway. This momentum has proven neither fragile nor fleeting, with fully 75 percent of large businesses maintaining or increasing their investments in sustainability despite a severe economic downturn and an ever-broader swath of markets regulating greenhouse gas emissions and providing incentives for corporate greening.² Aligning strategies, business practices, systems and public image

has emerged as a business necessity. Proactively embracing sustainability and carbon management is no longer a philosophical or political debate. It is a strategic decision.

Whether motivated by the expanding market for products with social or environmental credentials, rising demands of investors for environmental transparency and accountability, the possibility of significant cost-cutting through efficiency gains, a chance to boost public relations, or outright government regulation, many companies are harvesting new and sometimes unexpected profits from their sustainability programs.

THE CONTEXT FOR ACTION

Businesses and investors have begun to focus on the long-term social, environmental and business implications of their growth strategies. They have begun to make a connection between the resources and communities that enable growth and their responsibility related to their success and longevity.

An accurate assessment of business risks, costs and opportunities is the cornerstone of any successful enterprise, but every now and then conventional wisdom evolves to alter many of our basic assumptions as to what constitutes accurate accounting for such items. Historically, we have accommodated shifts toward incorporating the costs of such balance sheet “fixtures” as legal liability, regulatory risk, public safety, and clean air and water. The latest such shift is evidenced by executives who increasingly speak of a triple bottom line to describe the environmental, social *and* fiscal value they create.³ Or, in the words of energy efficiency pioneer and Rocky Mountain Institute cofounder Amory Lovins, we aren’t harnessing the full power of capitalism unless we start playing with a “full deck of capital” encompassing the material, financial, human and environmental varieties.⁴ Other common terms for these types of capital include social, economic and environmental or natural capital, which are often more commonly referenced by organizations such as the United Nations Global Compact.

Whether motivated by the expanding market for products with social or environmental credentials, rising demands of investors for environmental transparency and accountability, the possibility of significant cost-cutting through efficiency gains, a chance to boost public relations, or outright government regulation, many companies are harvesting new and sometimes unexpected profits from their sustainability programs. For some, the waste products they had dismissed as a cost of business yielded a new product or revenue stream upon closer inspection. For others, public and investor scrutiny created a pressing business case to improve governance, controls and disclosure, reducing long-term risk exposure and potentially preempting regulation. For yet others, a commitment to reduce carbon intensity in-house led to lucrative innovations they could sell up and down their value chain.

There are inherent obstacles to any kind of systemic change as well as challenges in implementing new ideas even after the business case has been made. In addition, trends point to *more* government regulation,⁵ *increasing* stakeholder scrutiny, *greater* competition for resources, and *skyrocketing* global demand for energy⁶ – the issue of how to grow amidst constraints in every direction is not going away. Perhaps even more importantly, with a majority of executives polled by *The Economist* identifying senior management as having a key role in driving their companies' sustainability efforts,⁷ confident and informed C-suite leadership appears essential to meeting these challenges.

TURNING (LOW) CARBON INTO GOLD

While most accepted definitions of sustainability take pains to emphasize *long-term* performance,⁸ prioritizing long-term profitability need not come at the cost of short-term profits. Let's take a look at a broad sampling of companies tackling sustainability for very different reasons but with similarly lucrative results.

Competitive Advantage

Sustainability and revenue growth need not be mutually exclusive. Simply put: if you can't keep the doors open, you are clearly deficient in one or more of the four types of capital.

Some companies have observed that in addition to traditional market factors such as brand image, price, value and production scale, the environmental and social credentials of a given product are featuring more prominently than ever, establishing new market niches and upending traditional competitive logic. Indeed, according to market analyst Information Resources Inc., 20 percent of U.S. consumers are "sustainability-driven" and 50 percent consider at least one sustain-

ability factor in brand and store selection.⁹ This bottom-up, supply and demand-based approach seems to have emerged from a combination of increased consumer awareness, greater public demand to understand the hidden (environmental) costs of some products, and the realization among industry leaders that a product's story can be just as important as its tangible qualities. This comes as no surprise – costs and market demand are two of the basic considerations of business.

Clorox

A challenge for Clorox was how to transform its brand recognition into larger markets for its products. With the straightforward, management-led goal of securing “significant growth potential” through “brands that make consumers’ lives easier, healthier and better”¹⁰ while “decreasing environmental impact,”¹¹ Clorox took several steps that have generated a self-reinforcing cycle of triple bottom line growth.

Clorox’s embrace of a new natural product line, Green Works, spawned a profitable partnership with the Sierra Club (over a two-year period, natural home cleaning products category sales doubled and \$1.1 million was donated to the Sierra Club),¹² while establishing an entire branch of R&D now dedicated to the innovative use of natural ingredients and recycled materials. Led by a newly established Eco Office, the brand originally known for bleach now sports such purportedly earth-friendly product lines as compostable plastic bags and a popular pine cleaner made using the by-products of the paper and pulp industry.

The momentum generated by Clorox’s vigorous sustainable growth strategy has created a culture of “waste not, want not.” Employees now conduct “dumpster dives” to identify cost-saving waste elimination opportunities and reduced waste by 50 percent over one year.¹³ Clorox’s efforts may also be mitigating the business and financial risks of resource instability; sustainability-related cost savings generated \$118 million in 2009, offsetting a \$110 million increase in commodity and energy costs that year.

Actions taken to increase consumer trust, such as becoming the first major household products maker to list detailed descriptions of all of its products’ ingredients on its corporate website, have had other beneficial consequences, such as recognition by the U.S. Environmental Protection Agency as a Safer Detergent Stewardship Partner, and positive exposure as a top 100 green company in *Newsweek*’s rankings of S&P 500 companies.¹⁴ Additionally, risk analysis that stressed potential costs to public health *and* the financial bottom line led to Clorox’s decision in 2009 to cease transporting chlorine gas in the United States, opting for an alternative formula in its industrial strength products that eliminated both

the potential for deadly accidents and exposure to the growing regulatory risk for chlorine shipments.

Accountability to Shareholders

Like consumers demanding eco-friendly products, investors are becoming a key driver of sustainability activities, establishing powerful groups and developing increasingly relevant measurements to persuade companies to disclose their triple bottom line risks and opportunities. Institutional investors like the Investor Network on Climate Risk (managing \$9.8 trillion)¹⁵ and the Carbon Disclosure Project (534 investors managing \$64 trillion)¹⁶ are demanding greater transparency and accounting for sustainability and climate change impacts. Competition is fierce to achieve listing on the Dow Jones Sustainability or FTSE4Good Indexes. Recently, the U.S. Securities and Exchange Commission has taken notice, publishing guidance that climate change related risks could trigger a number of reporting requirements under federal securities law.¹⁷ All this attention is having an effect; in 2009, 82 percent of the FTSE Global 500 companies reported to CDP.¹⁸ And what gets measured gets managed.

While disclosure and reporting can win over some powerful investors, their largest effect may be to initiate a more holistic approach to internal accounting for the four types of capital. Once a company begins tracking environmental and social performance with the same degree of acumen usually reserved for its finances, goals become harder to renege on and progress more closely scrutinized. A failed execution of energy efficiency measures can not only result in higher-than-expected operating costs and a failure to meet emissions reduction targets, but could also lead to a company being dropped from a prestigious sustainability index. Conversely, with strong leadership from the C-suite, a small cost-saving innovation at one location can quickly be deployed to streamline operations at multiple facilities. This cycle of accountability that began with investors makes a strong argument for the market-based rationale of sustainability activities.

Nike

This athletic brand and marketing giant has seen opportunity emerge from significant stakeholder scrutiny. In the words of Nike CFO Don Blair, what began as a largely risk management and compliance-based strategy to respond to environmental and social impacts of the business has evolved into a more clearly defined vision of corporate responsibility that leverages innovation to promote future profitability.¹⁹

The transition from what CEO Mark Parker calls Nike's "teachable moments" to today's comprehensive sustainability strategy offers a look at the increasing

returns of sustainability management, regardless of the initial *modus operandi*. Parker asserts that working diligently with suppliers to improve conditions along its supply chain taught the company the value of transparency and collaboration;²⁰ today, Nike is a co-founder of the BICEP (Business for Innovative Climate & Energy Policy) group *advocating* for climate change policy rather than waiting to respond to it. Subsequently, after successfully challenging its designers to eliminate a harmful greenhouse gas from one of the company's products,²¹ Nike retooled its design and innovation focus to prioritize similar combinations of sustainable technology and performance in the future.

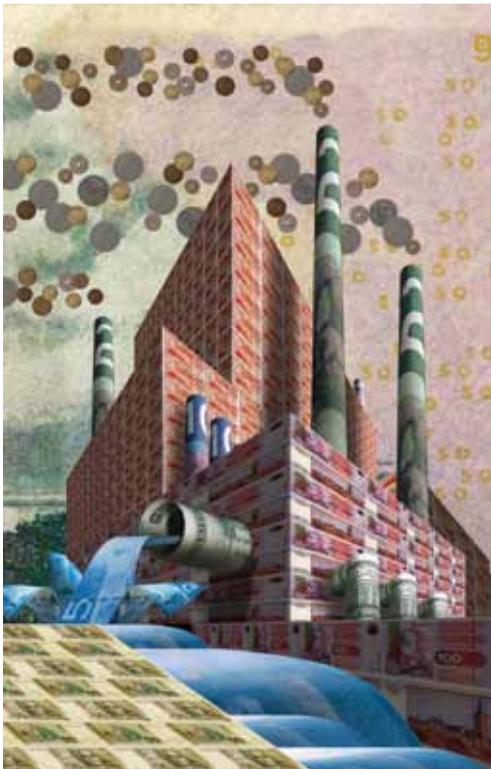
Today, Nike designers work with the company's Considered Index to include all of a product's sustainability impacts and performance needs into the initial product design proposal – a strategic decision to measure, and thereby reduce, toxins and waste. Meanwhile, Nike managed to save \$8.2 million in FY 2009 by optimizing container use to cut emissions and unnecessary shipments. Nike's efforts are an example of how leadership can sow the seeds of triple bottom line thinking at every level of a business.

Cost Savings

Perhaps the most intuitively attractive among the drivers of corporate sustainability efforts, the potential for cost savings and efficiency gains in greening a business is still often viewed as a trade-off in some sectors. For industries

with high carbon intensity due to energy use, however, cutting waste is an economic imperative whose relatively meager costs rest largely in identifying the opportunities. Even better, if you can leverage the cost-saving know-how developed through streamlining your own operations in your product and service offerings, your savings may turn into new revenue streams.

Some sustainability practitioners have described walking into an average U.S. factory and “finding the floor lined with \$10,000 bills.”²² Whoever figures out how to squeeze the most “bang” from their increasingly expensive resource “buck” will



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gain an immediate advantage. Whether you start with energy, water, waste or raw materials, the metrics used to identify and reward savings, along with the systemic knowledge gained from tracking efficiency facility-by-facility, may well illuminate new opportunities for savings. Imagine if every product design had an accounting for not only its upfront value and cost, but also for the potential value and cost of any waste products and the future value of recycling its raw materials. The math might look a little different.

Hewlett-Packard

HP has focused on ways to eliminate waste in both its own operations and throughout the life cycle of its products. Its potential to identify savings for customers is also great – printing services, the energy load of data centers, and safely decommissioning IT equipment can be some of a business’s largest operational costs, especially in today’s knowledge-based economy. In its 2008 Global Citizenship Customer Report, HP acknowledges that a core driver of its strategy is to “help [customers] be more successful,” which, when assessed vis-à-vis the triple bottom line, opens up new sources of revenue going beyond simply selling a product. Illustrating the potential for increasing returns wherever resource and energy conservation are embraced, HP is able to leverage the savings and know-how first learned by building a sustainability ethos under its own roof and then offer added value to its clients.

Amory Lovins describes the convergence of energy and IT as “one of the century’s greatest business opportunities,” both for the efficiency and climate benefits of streamlined IT and for the energy-saving potential of deploying technology to solve complex problems. HP is one example of how this expanded notion of a product’s life cycle can be mutually beneficial for buyer and seller; in one case, HP helped its client save over \$3 million on managed print services over two years through a combination of recycling print cartridges, default duplex settings and energy efficiency.²³ At another client, HP reduced the energy use of the client’s printing fleet 66 percent and helped save 10 million sheets of paper.²⁴ And, a European grocery chain saved an amount equivalent to the cost of a new store by working with HP to cut data center power consumption by 10-15 percent.²⁵ Applying this cost-saving mentality to R&D can yield even more substantial revenue generating opportunities. In HP’s case, management-led design priorities led to innovations such as 80 percent efficient desktop PC power supplies that reduce total system power usage by half and stand to command a greater market share than an energy-gulping alternative.

Cases like HP’s demonstrate the logic of linking all three bottom lines. Whether the in-house reuse and recycling policies that saved the company \$1.75 million

and kept 44,500 units out of landfills during data center consolidation in 2008,²⁶ or the design of a data center in Wynyrd, UK that utilizes the naturally cool winds off the North Sea for cooling and is expected to save \$15 million annually by using 40 percent less power than comparable facilities,²⁷ HP's companywide approach appears to prioritize savings wherever they arise and at any scale.

Digging deep into a company's operations for potential energy savings or carbon reduction possibilities requires not only a coordinated approach and strategic planning on the part of the chief operations officer and his or her team, but also demands a clearly stated commitment from the CEO and CFO, who must measure and reward progress and establish metrics and goals accounting for human and environmental capital. Additionally, executives need to be able to rely on their internal controls system to identify existing sources of waste and potential efficiencies. How can a business be a wise and thrifty consumer of energy without its decision-makers having precise knowledge of what is being consumed, where and by whom?

Corporate Citizenship

In the age of globalization and the Internet, companies face broader risks and greater scrutiny than ever before. The increasing importance attached to corporate citizenship has led many large firms to reexamine their civic image, while NGOs and advocacy groups have spared no sectors in their efforts to shine light on disagreeable practices or associations. Businesses with a heavy reliance on chemical manufacturing or other practices with environmental or public health considerations often face tougher public relations challenges than most, on top of a strict regulatory burden. In these cases, transparency can be an asset. With over 40 percent of executives identifying the improvement of company reputation as a motivation for introducing sustainability policies,²⁸ perceptions of good corporate citizenship appear to be an important consideration for a large number of businesses.

Dow Chemical

In a sector known for both tremendous scientific progress and a considerable environmental footprint, Dow Chemical offers an informative case illustrating the benefits and recognition companies may see when linking the health of their business to the health of the wider communities in which they operate. Presenting itself as a key partner in the world's effort to solve complex problems such as resource scarcity, energy and carbon intensity through innovation and science, Dow has explicitly aimed to hold itself accountable in these areas since 1995.²⁹

At the management level, three goals—customer and stakeholder value, efficient use of resources, and quality of life—are evaluated in aggregate by one met-

ric, Dow’s “Sustainable Chemistry Index” (SCI), measuring the percent of product sales with a sustainability advantage (currently targeted at 10 percent by 2015). As an example, Dow scientists have developed a new chemical process, Hydrogen Peroxide to Propylene Oxide (HPPO), that reduces wastewater 70-80 percent and energy use by approximately 35 percent, compared with existing technology. Plants using the HPPO technology also require up to 25 percent less capital to build. Further, as a part of Dow’s attempt to carve a niche in the growing green building industry, product lines such as Cradle-to-Cradle certified³⁰ building insulation systems and the Powerhouse Solar Shingle³¹ are designed to favorably affect both the 48 percent of U.S. energy consumption attributed to the building sector (76 percent of electricity consumption)³² and Dow’s market share. Finally, perhaps the simplest and most accessible goal across sectors, energy efficiency improvements account for some of Dow’s most immediate and substantial returns on its sustainability investments. With a 10-year investment of \$1 billion,³³ Dow accrued energy savings totaling 170 quadrillion Btus from 1994-2009, equivalent to 1.7 percent of the United States’ annual electricity consumption,³⁴ and \$9 billion of savings in Dow’s pocket.

Dow’s efforts may position the company advantageously if sustainability reporting becomes mandatory, and it has already taken the necessary steps to achieve A+ application level for comprehensive reporting utilizing the Global Reporting Initiative G3 guidelines.³⁵ In this sense, Dow has all hands on deck fighting a battle some competitors have yet to even notice, but a battle that if joined would have the potential to contribute to a business transition from purveying sustainable principles to practicing sustainable profits. Sustainability results appear to hinge on the same drivers of success in any business endeavor – setting serious companywide goals and rewarding innovation whenever and wherever it arises.

Regulatory Compliance

In the hopes of minimizing the potential impact of any new law, agile companies seek to position themselves ahead of the new requirements, collaborating with policymakers to ensure that their early or voluntary actions are recognized. Many companies appear to see a business case in beating the curve. On issues such as climate change and energy policy, companies are proactively embracing and exceeding the regulatory standards set for them, with some even advocating for additional government action.³⁶

Unlike unilateral company-level efforts to more closely intertwine the bottom line with social and environmental accountability, a top-down regulatory approach often elicits a defensive reaction by the subjects of any new rule. But rather than consider shifting operations to another jurisdiction, some companies have found

oversight to be a catalyst for innovation, learning to identify and design as much of the “waste” out of their operations as possible. The goal, then, becomes: How do I make this burden a burden relevant only to my competitors?

Pepco Holdings, Inc.

In recent years, the Delaware-based electricity supplier has seen several of its subsidiaries become subject to myriad new greenhouse gas and climate change regulations at the regional level. Most prominently, the Regional Greenhouse Gas Initiative (RGGI),³⁷ the first market-based emissions trading scheme (“cap and

trade”) in the United States, mandates GHG emissions

reductions and reporting for Pepco operations in

three states. Concurrently, PHI has expanded

its efforts in sustainability reporting to

cover all of its business units and has

embraced environmental initiatives

well beyond the scope of its regula-

tory requirements. PHI’s strategic

outlook on the evolving regula-

tory environment is apparent in its

2009 report to the Carbon Disclo-

sure Project (CDP), a nonprofit or-

ganization with the largest database

of voluntary corporate climate change

information in the world: “Lower carbon

energy and energy efficiency in response to

these risks present an *opportunity* for PHI and

its subsidiaries as well as its customers to minimize

the potential future impact of higher fossil fuel process and

CO₂ allowance costs in the market” (italics added).³⁸ Already regulated by such

national regimes as the Clean Air Act and Acid Rain Program, PHI was no stranger

to scrutiny – but it could be argued that its now proactive focus on sustainability

measures is paying off.

While responses to environmental regulation could be piecemeal—facility-

level actions designed to eliminate the risk of non-compliance—a corporate en-

vironmental management system, such as PHI has,³⁹ is a different proposition.

Pepco has embraced a multi-pronged sustainability portfolio including an expand-

ed market share in renewable energy and Renewable Energy Certificates (RECs),

efficiency improvements in its generating fleet (including dual-fuel and demand-

based generation), community reinvestment through conservation and remedia-

Translating compliance into opportunity requires both vertical and horizontal coordination within an organization. The CEO must set a clear company-wide philosophy that encourages proactive efforts to address the causes and context of the regulation, anticipates future changes, and rewards those who identify ways to turn a regulatory mandate into a competitive advantage.

tion efforts, development of landfill gas (LFG) generating capacity, energy retrofits for PHI facilities, and an internal environmental audit program. Thus far, benefits range from a new LFG station in Baltimore, powering 1,900 homes annually while reducing GHG emissions equivalent to 3,000 less cars on the road,⁴⁰ to energy efficiency upgrades implemented for the Baltimore City Public School System totaling \$46 million in savings for the School System over 15 years.⁴¹

One of the largest potential gains for the company is its preparedness. PHI has received an 87 score from the Carbon Disclosure Project for its efforts to identify carbon and climate-related risks, ranking it in the top three utilities reporting to CDP.⁴² More important than rank is the crucial experience gained by providing such comprehensive reports. When U.S. facilities emitting over 25,000 tons of CO₂ equivalent representing multiple industries submit their first emissions reports to the Environmental Protection Agency in March of 2011,⁴³ PHI will be a step ahead having already established reporting credibility with the CDP and tested its inventory management system through RGGI (locally) and the CDP (at the corporate level).

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A NEW MINDSET

As we have seen, the cross section of companies realizing early and increasing returns from their efforts in sustainability is diverse in industry, motives and execution. Indeed, the examples presented here are representative of the wide variety of business cases that can successfully be made for sustainability. An important similarity, however, is that each of these companies considers its emphasis on building an organizational culture of accountability to be a key ingredient in their success. The strategies pursued in each case did not readily announce themselves but, rather, became apparent as senior management cultivated new mindsets and institutionalized sustainability through metrics tied to clear goals. These first steps of effectively deploying knowledge and tracking progress appear to be the crucial stumbling block for many, with a survey by *MIT Sloan Management Review* identifying three related barriers as the largest impediments to strong corporate action on sustainability: (1) not understanding the implications of sustainability and lacking the necessary information on which to base decisions, (2) not being able to make the business case for sustainability, and (3) not being able to execute effectively.⁴⁴

For any sustainability effort to succeed, these barriers must first be overcome.

For many companies that view sustainability as a secondary imperative compared with short-term financial performance, or for those that don't sense a clear opportunity in their industry, it will take vision, commitment and leadership to motivate organization-wide change and innovation. Holistic, systems-based thinking is beginning to replace the rigid assumptions that (falsely) define sustainability as a trade-off or an add-on. Moving from an approach that treats the sustainability "suite" as a collection of risks to one that regards it as a toolbox of potential rewards takes time, but the most significant risks are those of inaction – a high cost in missed opportunities and stifled innovation.

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