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by Gary M. Rahl

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As businesses improve their environmental performance, government should be a powerful partner.

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by Gary M. Rahl

Reports from corporations on their sustainability — self-portraits of their efforts to safeguard the environment while delivering acceptable returns to shareholders — are taking an increasingly common form. They start with sincere letters from the leadership, articulating lofty aspirations; they include examples of how technology and ingenuity have allowed new business models to take hold; and they substantiate genuine progress with fainter carbon footprints, increased community engagement, and improved financial health. Read a few of them, and you may get the impression that all the world's ills are in retreat, and that the sort of full-scale environmental disaster depicted in Al Gore's documentary *An Inconvenient Truth* has been largely forestalled.

Unfortunately, other reports — indicators of the actual state of the global environment — paint a much bleaker picture. The United Nations Intergovernmental Panel on Climate Change (IPCC), which shared the 2007 Nobel Prize with Gore, recently concluded that human activities have taken the planet to the edge of a massive wave of species extinctions and that continued global warming is "inevitable." Other reports warn of the draining of water resources, decimation of fishing stocks, and destruction of natural habitats from coral reefs to forests. The net effect is a kind of cognitive dissonance. On the one hand, there's the buoyancy of the private sector; on the other, the grim prognosis of the scientific establishment.

Neither view, however, represents reality. For one thing, the private sector has moved beyond stonewalling and "greenwashing" to seriously embrace sustainability.

Illustration by Paul Wearing

Gary M. Rahl
(rahl_gary@bah.com) is a vice president with Booz Allen Hamilton based in McLean, Va. He leads sustainability initiatives in the public and private sectors.

Also contributing to this article were Booz Allen Hamilton Senior Associate Scott Thigpen and Consulting Editor Paula Margulies.

And yet the results are not nearly deep or broad enough to offset the ominous trends. The reason for this is simple, but is not generally acknowledged in business circles: The private sector, for all its energetic optimism and capability, is innately limited in what it can achieve on its own. The climate change problem will require a widespread change in thinking, both for business leaders and for consumers. Wholesale, dramatic changes in thinking are difficult to achieve, of course, and sometimes success comes only with the rise of a new generation. But the luxury of waiting that long doesn't exist. The only way out is to foster, and accept, a kind of innovation that tends to be overlooked, or unfairly viewed as impossible: new thinking and practice in the public sector.

Government — at the national, state, and local levels — has a unique role to play in fostering sustainable practice, because of the role it already plays in the economic, legal, political, and cultural systems that make up human activity. (For example, government rules shape the market system in which companies operate and consumers make choices.) But the mechanisms through which policymakers and regulators have sought to achieve environmental protection over the past 30 years have proven inadequate. They have centered on governing corporate behavior through investments, legislative mandates, regulation, and taxation. Relatively little thought has gone into finding ways for government to be an innovative partner in solving complex environmental problems.

Three high-leverage strategies for this kind of partnership are visible today, at least in their early or prototypical forms: the resolution and creative alignment of incentives, the effective use of information, and the implementation of a comprehensive engagement model for collaborative, cross-sector decision making.

Incentives for Improvement

The need for energy efficiency has never before been so great. In the U.S., according to the National Association of Home Builders, the average size of a new house grew by nearly 20 percent between 1990 and 2005. Those homes must be heated and cooled, and most of them are filled with energy-intensive computers and electronics. In metropolitan regions around the world, demand for electricity is growing at a much faster rate than the ability to deliver that electricity to end-users. The environmental effects of this are significant — buildings alone are responsible for a plurality of greenhouse gas emissions in most cities. (See "Building the Sustainable City," by Nick Beglinger and Tariq Hussain, *s+b*, Summer 2008.) Environmental concerns are converging with near-term practical ones: Greater Washington, D.C., for example, may face rolling blackouts within three years. Simply increasing transmission capacity can be challenging; transmission lines are difficult and expensive to build and can be controversial because of their effect on open space in populated areas.

But although numerous studies have reinforced the value of energy efficiency investments — they are cash-flow-positive at competitive rates of return — these investments lag in the marketplace. As a result, the energy efficiency of a region's building stock typically improves very slowly, as old buildings are demolished and new ones are constructed. One reason for this is the high transaction costs for energy efficiency improvements. The projects themselves may not be expensive, but they require complex engineering skills to imple-

ment. Also, because of the historical variability in building practices, the returns from efficiency improvements in specific buildings are difficult to predict; larger financial institutions are therefore reluctant to support the necessary capital investments. Finally, although the companies that occupy buildings often benefit from efficiency upgrades, they understandably prefer to allocate capital and management time to their core business, not to the buildings they inhabit.

The result is a market failure: The incentives for building owners, operators, and managers to implement the kinds of improvements needed are insufficient to overcome the hurdles they face, even when the outcomes would be better for everyone.

To be sure, efforts have been made to align and strengthen incentives, but they have not been sufficiently successful. Tax credits, for example, provide building owners with motivation to undertake efficiency improvements, but they do little or nothing to connect owners with the capital or expertise needed to identify and execute improvements. Publicly funded efficiency programs provide a capital infusion that helps in meeting rate-of-return hurdles, but support is typically provided for particular technologies, not for the net gain in overall savings per building. A building owner might install better windows or insulation, but never realize the efficiency gains possible from rethinking the entire energy system. Energy service companies (ESCOs) have been created that offer comprehensive energy efficiency improvements and operate by collecting most or all of their payment from the stream of savings. But ESCOs typically finance quick-return projects on a building-by-building basis, and their efficiency "investments" are illiquid and not transferable to other locations.

But what if more governments at all levels sought creative ways to align incentives that would unlock greater improvements in energy efficiency? They would find many opportunities. For example, they might establish finance agencies to serve as a secondary market catalyst for energy savings, akin to the role the bond market plays in the home mortgage industry. A finance agency could define technical criteria that ESCOs (or other service providers) would have to meet if they wanted to qualify for inexpensive financing. It could also help ensure low-cost financing by serving as a secondary market for the rights to savings generated by energy efficiency improvements, thereby reducing payment risk. This arrangement could be further enhanced by tradable carbon credits, which would be awarded to owners of buildings with verifiable reductions in energy use. Building owners and operators could then finance improvements with either their future savings or their revenues from selling carbon credits.

Finally, if more energy regulators agreed to decouple utility revenue from earnings — allowing power companies to earn money more easily on their efficiency-related investments — it would remove a major disincentive for promoting conservation and the development of distributed generation of electric power. In the U.S., six states have attempted decoupling, with mixed results; the design of particular programs matters a great deal. The key with incentives in general is to structure all innovations so that they reinforce, rather than undermine, one another. If regulators put such a structure in place, it would, for the first time, powerfully align utilities, building owners, energy service providers, and financial institutions in support of broader and deeper energy efficiency improvements.

Innovations in Information

The power of environmental information became evident in 1986, when the U.S. Emergency Planning and Community Right-to-Know Act (EPCRA) was passed into law. (EPCRA was itself a response to two accidents in Union Carbide chemical plants: the 1984 Bhopal, India, explosion that released enough methyl isocyanate to kill 6,000 people and injure hundreds of thousands more, and a West Virginia leak less than a year later, which injured 150 people and caused damage in three neighboring communities.) To provide the public with data about potential chemical hazards in their communities, and to help community leaders create contingency plans in case of releases of hazardous substances, EPCRA mandated that businesses and industrial facilities disclose the types, locations, and quantities of dangerous chemicals they stored on-site. EPCRA also established the Toxics Release Inventory (TRI) program, a publicly available database of harmful chemicals that could potentially be released from industrial facilities. TRI's original goals were to empower the public to hold companies accountable, and to foster informed local government decisions about the management of environmental toxins in any particular locale. But the law's most significant result was an unexpected side effect: Having this information at hand has motivated companies to voluntarily improve their chemical management standards and to reduce or eliminate the use of the most dangerous chemicals.

The role of government in gathering and standardizing information could be even more valuable today, especially with the growing number of online information outlets and the increased comfort that consumers feel in using the Internet as a guide for making purchases of all sorts. One area where public-sector involvement is sorely needed is the field of eco-labeling — an emerging process aimed at identifying the environmental impact of goods and services. Growing consumer interest in eco-friendly products and services has led to a proliferation of labels attesting to energy efficiency, recycled material content, and more — in fact, a Web site called www.ecolabelling.org has identified more than 300 distinct eco-labels currently in use worldwide. Although their intentions are positive, those generating the labels are operating in a "Wild West" of sorts, where standards for clarity and substantiation are spotty, vague, or even nonexistent. The underlying challenge revolves around the fact that labelers must take what can be an overwhelming amount of information on a product's manufacture, consumption, toxicity, carbon footprint, and disposal and codify it in a clear, consistent, and organized manner — informing, but not overwhelming, the public.

In general, there are three main categories in which improved labeling would clarify matters for consumers and ultimately make a difference in environmental sustainability: a product's production and supply chain, the product's use, and the product's disposal. Many eco-labels provide information about one area or another, but there is simply no comprehensive, all-encompassing label of the sort that exists for nutritional information. For example, the U.S. government's most successful eco-label is Energy Star, which was created in 1992 as a voluntary labeling program to identify energy-efficient products. It covers appliances, home electronics, heating products, and lighting — nearly 45,000 products in all — and has since been expanded to use in evaluation of homes, buildings, and manufacturing plants. But

Consumers may eventually scan eco-labels the same way they interpret nutrition labels today.

Energy Star's rating system for products refers only to the energy they use during their operating lifetime. Emissions from the manufacture and distribution of the product, which may be radically different, are not factored into the rating.

Despite some early public-sector successes with eco-labeling, only 15 percent of the labels identified by ecolabelling.org were developed by governments, and most of those are outside the United States. To be sure, not every effective eco-label needs the imprimatur of the public sector. Many labels are produced by standards organizations, or by not-for-profit organizations that have shown great ingenuity and entrepreneurship in this field. But consumers rely on the government more than any other entity for information regarding food's nutritional value or pharmaceuticals' safety, so it makes sense to tap that authority for environmental labeling. The public sector could create order, streamline the development process, and provide consumers with more comprehensive information about the environmental aspects of products and services.

If that happened, one might envision a time when eco-labels exist for a wide range of economic activity, showing not just how much energy a product (for example) consumes in use, but how much energy was consumed to create and transport it and how much would be required in its disposal or recycling. Consumers would eventually learn to scan and interpret those labels in the same way that they now read nutrition labels to check a food's saturated fat content. Once again, product developers and manufacturers would probably voluntarily exceed expectations for energy efficiency, much as they did in phasing out dangerous chemicals once TRI was put in place.

Convening Public Engagement

Portland, Ore., enjoys a reputation as America's greenest city, and it is distinguished by its collaborative, regional approach to governance. An agency known as Metro — the only directly elected metropolitan planning organization in the country — oversees the area around and including Portland. Metro conducts land-use planning, manages parks, plans the region's transportation systems, and maintains the Portland-area urban growth boundary, which separates urban from rural land and reduces urban sprawl. The agency works closely with the region's 25 cities and three counties to ensure that a 20-year supply of developable land exists.

To forecast transportation and land-use needs, Metro developed a regional data center. Each local jurisdiction uses and contributes to the center, which eliminates duplication and streamlines data — allowing the region's jurisdictions to spend more time focusing on policy and less time arguing over technicalities. Additionally, Metro is supported by a series of advisory committees that offer opportunities for citizens to have a meaningful involvement in Metro's policy decision making. Those policy decisions tend to be geared toward sustainability; the city makes green space and public parks a priority.

Far from paying a price for its collaborative emphasis on sustainability, Portland has enjoyed a significant "green dividend," as described in a recent study by the not-for-profit organization CEOs for Cities. This study shows that Portlanders enjoy shorter commutes, drive their vehicles less, and own fewer vehicles (but more hybrids) than other Americans. As a result, they save nearly US$2.5 billion per year — $1 billion in direct savings (in part through owning fewer cars) and $1.5

Portland's regional planning megacommunity has surpassed weaker forms of cross-sector partnership because it has budgetary and decision-making authority.

billion in time saved in shorter commutes. Moreover, these savings in time and money often are plowed back into the local economy.

Metropolitan regional planning in Portland is also an excellent example of the third high-leverage strategy: engagement. Portland's approach created and empowered a megacommunity in which leaders and citizens of all stripes — heads of political jurisdictions, civic activists, business owners, transit riders, and others — could envision and move toward a future that reflected their shared aspirations. In doing so, they surpassed weaker forms of cross-sector partnership (such as some government-sponsored councils) that create venues for information sharing and communication but do not have budgetary or decision-making authority, and therefore do not change the underlying dynamic among various political jurisdictions and between these jurisdictions and the public.

The grave environmental challenges now looming are archetypal megacommunity challenges. They span political boundaries and demographic groups. And although technically viable solutions exist, the challenges cannot be addressed by business, government, or interested citizens acting independently, because the causes of the challenge are fundamentally embedded in the way we live.

Consider land use and regional planning. Although the "new urbanism" movement and the popularity of upscale center city districts are visible in many places, the popularity of suburbs continues to grow overall. As neighborhoods extend farther away from places of employment, social gathering spots, and commerce, driving increases. For instance, a resident of the suburbs of Washington, D.C., will drive 27 miles a day on average, whereas the average driving distance of city residents is 17 miles. Unfortunately, the population of Washington suburbs is projected to grow twice as fast as the District of Columbia's urban population between now and 2030, with the most distant exurbs growing seven times as fast. A recent study in the *Journal of the American Planning Association* showed, unsurprisingly, that residents of suburbs and exurbs create more auto-generated air pollution. They also pay a toll with their own bodies; a related study found that people who live in the suburbs, because they drive more and walk less, tend to weigh more than their urban counterparts. And larger exurban homes, as already noted, require significantly more energy to heat and cool than urban dwellings. Eventually, technological improvements may neutralize the differences in environmental impacts from urban, suburban, and exurban residents, but that's not the case today.

Addressing these trends demands megacommunity engagement on a regional scale. In any region, some counties and cities are more affluent and developed than others. Moral suasion alone will not convince jurisdictions that have been bypassed in earlier waves of development (but whose open land has become a rarer commodity) from swearing off future development. Without a megacommunity approach, regional optimization will give way to local self-interest.

The public sector is well positioned to initiate and maintain megacommunity-style solutions. It is easy to envision a regional chamber of commerce, board of trade, or nongovernmental organization sponsoring a conference or a study addressing one or more aspects of a region's future. Far more difficult to see is an organization other than government putting in place a

sustaining engagement model in which businesses, government, and civil society come together regularly to work on both the strategy and tactics central to a region's future. Government alone has the broadest reach across society, and only government can provide both the information necessary and the ability to align incentives that will make the ensuing dialogue meaningful and actionable.

The Future of Creative Government

The three strategies for public-sector innovation — incentives, information, and engagement — have potential applicability well beyond the approaches described here. For example, a desperate need exists for resolving the effects of traffic congestion on the environment and quality of life in major metropolitan areas. With government incentives and support, such innovations as local "satellite" business offices (which cut commuting times by allowing people to work closer to their homes) are more viable; without government leadership, some of the most significant endeavors, such as improving urban public education (which would draw more families back into cities), are impossible.

Governments would also do well to review the criteria and selection processes they use to fund capital improvements at public and military facilities; in many cases, such processes work at cross-purposes with other efforts within the same government agencies to limit environmental harm.

For their part, business leaders can start to recognize and encourage the potential role of governments as creative partners. Businesses can help governments understand not only what outcomes companies desire, but how current government actions affect their business models. Leading companies have embraced sustainability and are now developing insights that may be helpful to government decision making. And when the three strategies for public-sector innovation described here are pursued, government initiatives, combined with efforts from the private sector and civil society, can catalyze the kind of sea change in public consciousness that is needed to find, and implement, sustainable solutions. ✚

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