Sustainability / Climate Change

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ABSTRACT

Developing alternative energy sources, improving our energy efficiency, and protecting the environment have been central goals of a variety of initiatives in the United States since the energy crisis of the early 1970s. While many of these programs have produced noted successes, our overall goals of becoming a more energy-conscious nation won't be met until both the public and private sectors fully embrace the need to make a difference now to protect our future.

This is a key objective for the Obama administration. Early on in his presidency, President Obama set aggressive goals for addressing global warming, U.S. dependence on imported oil, and alternative and renewable sources of energy. The U.S. economic stimulus plan passed early in 2009 includes numerous provisions—and billions of dollars—aimed at moving forward the energy and environmental agenda. Both the president's energy plan and the stimulus package specifically call for greening buildings and communities. President Obama's national plan for energy and the environment is the most aggressive ever proposed in the United States.[1]

Both the public and private sectors seem to agree that energy management and sustainability programs benefit their bottom line as much as they do our planet. But sustainability goals are easier to announce than to achieve, as the variety and number of opinions, objectives, and providers can be overwhelming.

GREEN BUILDINGS AND THEIR IMPACT ON CLIMATE CHANGE

Managing sustainably, or managing the environmental impacts to meet the needs of both present and future generations, can affect the very core of a business. It influences processes and systems of all kinds, from product design and marketing to corporate governance and facili-

ties management.

Companies throughout the nation, however, are taking their environmental footprint very seriously and expanding efforts to become more environmentally friendly, reduce costs, improve productivity, gain a competitive advantage, and enhance their image.

Although early efforts often focused on highly visable sustainability strategies such as recycling programs and green roofs, the emphasis in recent years has shifted to strategies that are most effective at reducing environmental impact at an affordable cost. In particular, companies have come to realize that energy efficiency programs have two very attractive features: first, they reduce the size of the company's "carbon footprint," since electricity generated from coal-fired power plants is a major contributor to carbon dioxide emissions; and second, reducing energy use also reduces operational cost.

For most non-manufacturing companies, reducing energy use necessarily means improving the energy efficiency of the commercial property they own and lease. Buildings are responsible for 38% of all energy usage and a similar percentage of greenhouse gas emissions. In a typical office building, a 10% reduction of energy use can be done at virtually no cost and without inconveniencing building occupants in any way. Greater reductions may carry an upfront cost, which may or may not be justified by incrementally lower energy bills or, in the case of commercial buildings for lease, by higher occupancy and rent levels as tenants are increasingly attracted to green buildings.

Renewable energy options, including wind, geothermal, and solar power, have the advantage of being visible and therefore beneficial to a building's reputation, but these options tend to be prohibitively expensive, and many owners fear that today's cutting-edge renewable technology may be outdated within a few years. Particularly since the severe economic downturn in 2008 and 2009, companies have come to view energy efficiency as the cost effective solution they are seeking.

Meanwhile, legislation at all levels of government increasingly mandates efficiency, setting higher minimum standards on new buildings and providing incentives aimed at motivating owners of existing buildings to pursue greater levels of efficiency than market dynamics alone dictate.

NEW BUILDING MANDATES

Under the American Clean Energy and Security Act of 2009 (ACES), commonly known as the Waxman-Markey Bill, reducing consumption is not just good business and sustainable practice; it represents a federal mandate. The bill sets energy efficiency standards for lighting, HVAC, and other systems that require new buildings to achieve 30% overall building improvement (compared to 2005 standards) by 2015 and 50% gains by 2020. The same bill provides for a range of tax credits, low-cost loans and loan guarantees, and other incentives to make expensive retrofits palatable to owners in the short run. Although energy efficiency incentives existed in previous federal legislation, property professionals note that the requirements were so stringent and the benefits so small as to be insufficient in all but a handful of cases. In short, this federal bill represents a dramatic paradigm shift.

Although some developers may have been able to gain approval for new buildings "under the wire" before ACES standards took effect, most developers in recent years have found it prudent to include energy efficient features, which cost little in ground-up construction and enhance re-sale value as well as tenant attraction. Unlike other targets of emission improvement, such as automobiles, a building typically has a functional life of 50 years or more. It is less costly in the long run to anticipate increased efficiency requirements now and build them into your new facility than to face costly upgrades in the near future, before building components have completed their life cycles.[2]

LOCAL MANDATES FOR NEW BUILDINGS EMERGING IN SOME COMMUNITIES

Currently, emissions and energy consumption standards have been set by states and municipalities. Standards range from the fairly strict laws of California to states and communities with virtually no energy consumption or emissions restrictions.

California's Assembly Bill 1103 would require a nonresidential building owner or operator to disclose Energy Star Portfolio Manager benchmarking data and ratings for the most recent 12-month period to a prospective buyer, lessee, or lender.[3]

In September 2009, New York Governor David Paterson signed an

amended version of the state's green building construction bill requiring that state-owned buildings be developed or renovated in accordance with sustainability practices, not unlike the commercial building requirements and incentives contained in ACES. The New York State Green Building Construction Act went into effect in mid-2010.

Baltimore, which has been encouraging developers to go green for some time now, made it official when it passed legislation requiring all sizeable projects and major renovations to make energy and environmental upgrades. More progressive than that of most communities, Baltimore's legislation also applies to the private sector and buildings as small as 10,000 square feet. The main goal is storm water management and the reduction of runoff into the Chesapeake Bay and Inner Harbor, to create a cooler city through roof systems and tree planting, and to promote resource conservation and sustainable transportation alternatives.[4]

The Dallas City Council passed a new construction requirement to reduce environmental impact, becoming one of the first major American cities to pass comprehensive building standards for both residential and commercial construction.

In 2005, Washington State Gov. Christine Gregoire signed a law requiring all publicly funded buildings exceeding 5,000 square feet—colleges, offices, prisons, and schools—to meet stringent "green building" standards.

This handful of examples barely scratches the surface of all the state and municipal legislation that has been proposed—and typically enacted—to encourage building owners to follow sustainable practices. Although energy is just one of several ways buildings can become more green, in practice very few building owners pursue sustainability without a primary emphasis on making their energy infrastructure more efficient.

THE PRIVATE SIDE OF SUSTAINABILITY

Despite the potential roadblocks to developing a comprehensive energy plan, many companies throughout the United States have forged on and emerged as leaders in the sustainability field—setting strong examples of what can be accomplished with some foresight.

For example, Procter & Gamble's 1.5 million-square-foot headquar-

ters facility in Cincinnati received an ENERGY STAR label in February 2008, becoming one of the largest of the 650 private-sector office properties to gain such a distinction.

The Bank of New York Mellon announced that it is on the U.S. Environmental Protection Agency's (EPA's) National Top 50 List of the largest green power purchasers after purchasing more than 96 million kilowatt-hours (kWh) of green power—or enough green power to meet nearly one third of the organization's domestic purchased electricity use. The Bank of New York Mellon is buying green power from NextEra Energy Resources and Pepco Energy Services.[5]

EMPIRE STATE BUILDING ANNOUNCES MAJOR ENERGY RETROFIT

In addition to prominent corporations, some of our national landmarks, including Willis Tower (formerly Sears Tower) in Chicago, the U.S. Postal Service building in New York, and USDA's headquarters building in Washington, D.C., are embarking on substantial energy retrofit programs.

The highest profile building to announce a major energy retrofit is also one of the most instructive examples of how energy infrastructure in buildings can be profitably improved. The 78-year-old Empire State Building, convincingly called the world's most famous office building, is undergoing a program to reduce energy use and carbon emissions by nearly 40%, placing it among the top 10% of all buildings in regard to energy efficiency. Announced in April 2009 by owner Anthony Malkin, President Bill Clinton, and New York Mayor Bloomberg (among others), the retrofit 2.5 million-square-foot building will cost a total of $20 million and will save $4.4 million in energy costs annually. More than half the savings will be realized in the first phase that will be done by the end of 2010, with the rest completed by 2013.

As program manager, Jones Lang LaSalle led the collaborative team that also included Johnson Controls and Rocky Mountain Institute, with additional guidance provided by Clinton Climate Initiative and ownership.

The retrofit will reduce carbon emissions from an annual volume of about 24,000 metric tons down to 15,000 tons, once the work is complete, for a total reduction of more than 105,000 tons over the next 15 years.

That is roughly equivalent to taking 17,500 cars off the road for a year.

Once the retrofit analysis was complete from an energy standpoint, Jones Lang LaSalle calculated that Leadership in Energy and Environmental Design (LEED) Gold certification under the new Existing Buildings: Operations & Maintenance (EB:OM) standard would carry an incremental cost of just $600,000, or about $0.25 per square foot over the cost of the energy retrofit, and would provide a strong proof point of the building's overall sustainability commitment.

BENEFITS OF PARTICIPATING IN LEED

The U.S. Green Building Council's LEED® certification is a well-known standard for sustainability, but it is often misconstrued as being prohibitively expensive. Studies indicate that, with proper planning and execution, developing a new building to achieve LEED® Gold certification increases construction costs by an average of only 2%, while paying back up to 40% annually in reduced operating costs.

LEED has emerged as the primary new-building sustainability standard in the United States and, increasingly, around the world. In the past two years the standard has increasingly been applied to existing buildings, although the cost is believed to be higher than for new buildings. Whether or not they choose to pursue certification, owners of U.S. buildings are well advised to register buildings with ENERGY STAR, the program administered by the Environmental Protection Agency. Best known for its labels on household appliances and electronics, the ENERGY STAR program also assesses buildings, using a streamlined technique that is relatively simple and inexpensive for a qualified property manager to implement. The rating can serve as a starting metric for proposed sustainability compliance. By deploying a more holistic assessment of your portfolio's overall sustainability performance, you will be able to add value in several ways, including:

- Promoting high-performing buildings, thereby driving increased leasing activity and tenant satisfaction and retention while meeting the expectations of key stakeholder groups.
- Prioritizing upgrade activities such as operational improvements and capital investments, and pursuing green certifications based on near- and long-term payback.

- Better aligning your sustainability strategy with broader business decisions and objectives, including disposing of under-performing assets.

A LOOK TO THE FUTURE

The American Clean Energy and Security Act of 2009 will likely trigger increases in the cost of energy (particularly in areas relying heavily on coal-fired power generation), stricter efficiency requirements for new buildings, and greater transparency in offering measured sustainability ratings or scores for public review. However, the bill should not be cause for panic, or create an expectation that real estate owners and occupiers already practicing energy efficiency must radically alter their strategies.

The same sustainability initiatives already embraced by many, with a robust new commitment, should prepare real estate stakeholders for life after ACES. Owners should take steps to measure and baseline their portfolio's performance and develop an improvement plan that includes low- and no-cost opportunities supplemented by longer-term, bigger-payoff capital upgrades—or potential disposition strategies—as they seek to "upgrade" their portfolio. Occupiers should aggressively seek space with lowest energy costs and implement plans among their workforces to reduce office heating and cooling, electricity, and water costs. If you're doing this already, stay the course. If not, the timing has never been more auspicious for launching energy efficient initiatives. There is no doubt that sustainability initiatives will continue to hold a growing level of prominence within the many corporate business goals. The undeniable environmental, social, and humanitarian benefits are too great to ignore.

STRENGTH OF PARTNERING WITH A PROVEN LEADER IN SUSTAINABILITY

From sustainable development and retrofits to workplace strategies and occupancy planning to reduce energy and overall portfolio costs, Jones Lang LaSalle is a recognized leader in developing real estate solutions that capitalize on the implications of federal environmental

legislation now and in the future. Whether you are owner or occupier, we offer a practical path for real sustainability that will not only help you mitigate the risks of pending legislation but meet your short-term and long-term business and environmental goals.

References

1. For a comprehensive overview, visit www.whitehouse.gov.
2. Jones Lang LaSalle's "What you should know about The American Clean Energy and Security Act of 2009 (ACES)"
3. http://info.sen.ca.gov/pub/07-08/bill/asm/ab_1101-1150/ab_1103_bill_20070907_amended_sen_v94.pdf
4. *Baltimore Sun*, August 15, 2009
5. Reuters, July 27, 2009

ABOUT THE AUTHOR

Peter Belisle, President of Project and Development Services at Jones Lang LaSalle, oversees more than 1,000 project managers collectively responsible for construction management assignments with a total construction value of $10 billion annually. Jones Lang LaSalle is consistently ranked among the world's 10 largest construction management firms. In the Americas region led by Mr. Belisle, Project and Development Services has experience with more than 88 completed and current LEED certification assignments for new construction, existing building, and commercial interiors. Examples include the Empire State Building energy retrofit, the country's first Platinum LEED new construction high-rise, the first LEED-certified building in Latin America, and several corporate headquarters assignments, such as the LEED Platinum certification of McDonald's headquarters campus. For more information, contact Peter Belisle at +1 213 239 6033 or peter.belisle@am.jll.com.