A CLIMATE FOR CHANGE: GREEN BUILDING POLICIES, PROGRAMS, AND INCENTIVES

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INTRODUCTION

The media is brimming with images of polar ice caps melting, sea levels rising, and statistics showing the earth's temperature steadily increasing. These hallmark images and statistics of climate change are often accompanied by scientists discussing the cause of these changes and how to address them. Although not unanimous, most scientists place the blame for climate change squarely on human action, and specifically on greenhouse gas (GHG) emissions. For this majority, the logical manner for addressing climate change is by altering human behavior to reduce GHG emissions.

With scientific evidence and popular support on their side, state and local lawmakers throughout the United States have taken it upon themselves to reduce GHG emissions. Over the past few years, the attention of state and local lawmakers to climate change has led to the proliferation of various laws regulating GHG emissions (both directly and indirectly). This state and local action has come despite what some consider the federal government's failure to address climate change on the national level.

As one of the major sources of GHG emissions, buildings have received much of the state and local regulatory focus. This focus on buildings is driven by statistics showing that buildings consume 39% of all energy in the United States and 72% of the nation's electricity, while producing 39% of GHG emissions.[4] According to the numbers, buildings are responsible for more GHG emissions than either industry or transportation. The statistics also show a continual increase in the level of GHG emissions from buildings.

Although new laws regulating buildings vary widely, they typically apply green building standards to new construction and substantial renovations. Generally speaking, early enactments addressed public sector buildings through green building mandates and private sector buildings through green building incentives. Since the early enactments, new regulations have become increasingly broad, including mandates by several local governments applying green standards to private sector buildings. Based on current trends and the political atmosphere surrounding climate change issues, the application of mandatory green building standards to the private sector will not only continue, but may eventually encompass existing private sector buildings.

Although the trend toward regulating private sector buildings is clear, the origin of future regulations is still an open question. While states and local governments took an early lead in addressing climate change, the future bodes well for regional pacts and perhaps national regulation from the federal government.

REGULATING CLIMATE CHANGE

Kyoto Protocol

Although the most salient regulatory attempts to address climate change in the U.S. have resulted from the efforts of local lawmakers, former Vice President Al Gore is due much of the praise for the actions of these local leaders. More than any other individual, the efforts of Mr. Gore have brought this issue to the general public, earning him both an Academy Award and a Nobel Prize. Although Mr. Gore's environmental stance dates back many years, his signing of the Kyoto Protocol on behalf of the United States had the potential to be his biggest step toward addressing climate change.

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FIGURE 1. Energy Consumption by Sector, 1949–2006. (*Source:* Energy Information Administration/Annual Energy Review 2006.)

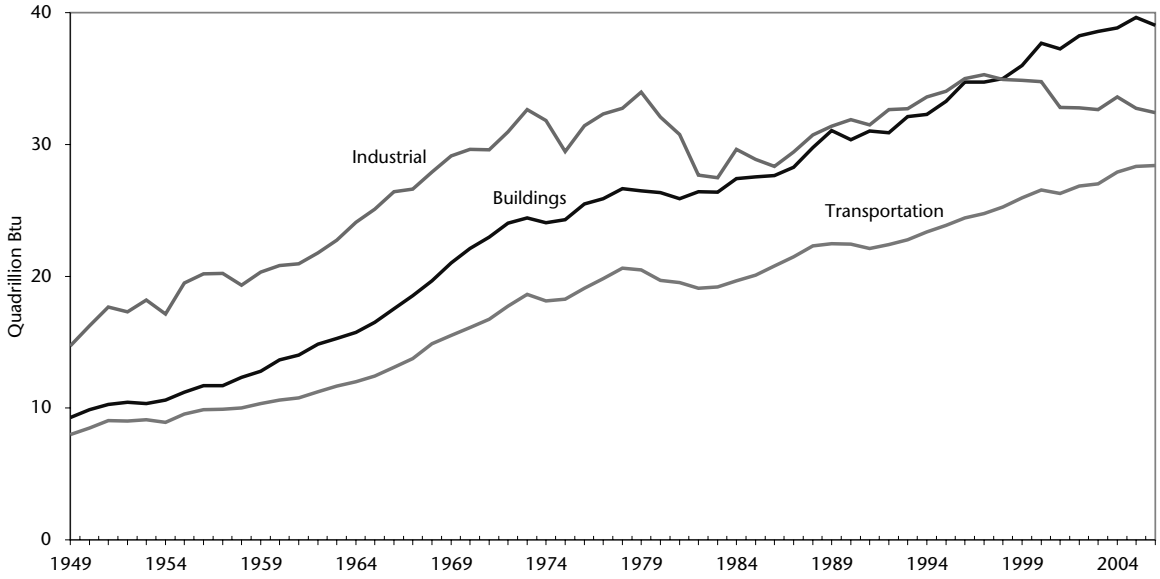


FIGURE 2. Electricity End Use, 1949–2006. (*Source:* Energy Information Administration/Annual Energy Review 2006.)

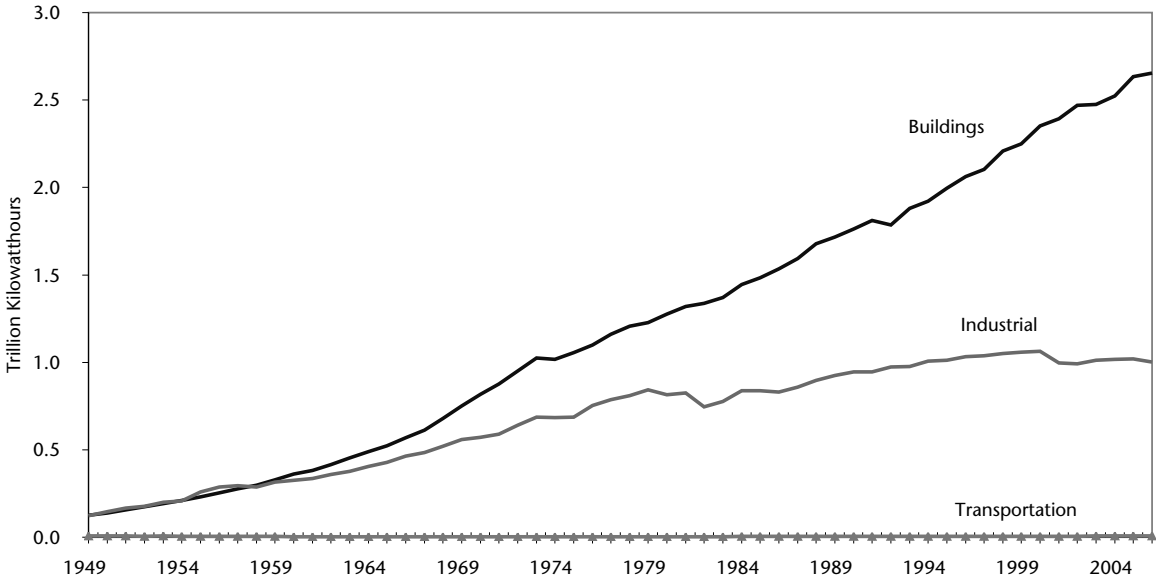
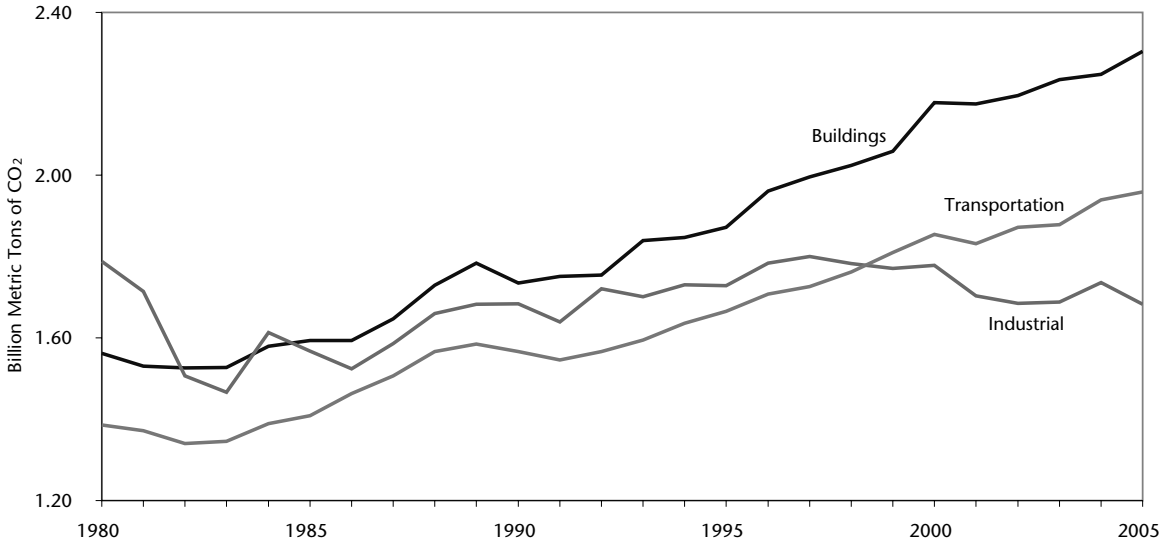


FIGURE 3. CO_2 Emissions from Energy Consumption by Sector, 1980–2005. (*Source:* Energy Information Administration/ Annual Energy Review 2006.)



On December 11, 1997, in an international effort to address climate change, an overwhelming number of nations adopted the Kyoto Protocol.[5] The protocol, with an objective of reducing GHG emissions, would take effect on February 16, 2005.[6] Among the 177 signatories, Vice President Gore signed the protocol on November 12, 1998.[7] Even as Mr. Gore was pressing the pen to the paper, he knew it was merely a symbolic gesture. More than a year earlier, the U.S. Senate unanimously passed the Byrd-Hagel Resolution, which included a statement asserting that adopting the Kyoto Protocol "would result in serious harm to the economy of the United States."[8] Not surprisingly, neither the Clinton nor Bush Administration ever submitted the protocol to the Senate for ratification.

U.S. Conference of Mayors' Climate Protection Agreement

Although never ratified by the United States, the Kyoto Protocol drew attention and gave credence to the issue of climate change. Following the failure of the U.S. to address climate change at the Federal level, on February 16, 2005 (the day the Kyoto Protocol took effect), Seattle Mayor Greg Nickels began a national initiative to address GHG emissions on a more localized level.[9] Mayor Nickels's efforts culminated with the U.S. Conference of Mayors' Climate Protection Agreement (Mayors' Agreement). Under the Mayors' Agreement, participating cities commit to take the following three actions:

1. Strive to meet or beat the Kyoto Protocol targets in their own communities, through actions ranging from anti-sprawl land-use policies to urban forest restoration projects to public information campaigns.
2. Urge their state governments, and the federal government, to enact policies and programs to meet or beat the greenhouse gas emission reduction target suggested for the United States in the Kyoto Protocol—7% reduction from 1990 levels by 2012.
3. Urge the U.S. Congress to pass bipartisan greenhouse gas reduction legislation, which would establish a national emission trading system.[10]

Since its introduction in 2005, the Mayors' Agreement has been signed by 839 Mayors representing all 50 States, Washington, D.C. and Puerto Rico.[11]

In an atmosphere fueled by the popular support for Vice President Gore's message, and led by hundreds of American mayors, many local governments

have implemented strategies to reduce GHG emissions through various forms of legislation. Among these strategies is the regulation of newly constructed buildings or buildings undergoing substantial renovations. Although the green building movement pre-dates the Mayors' Agreement, the agreement certainly added momentum and broadened the movement into new real estate sectors that were previously slow to adopt change from conventional building methods. The momentum resulted from a mix of "carrots" and "sticks"—green building incentives and mandates—that have been implemented by various local governments, states, and the federal government over the past few years.

U.S. Supreme Court

Going one step further than simply legislating the reduction of GHG emissions for their own jurisdictions, several states petitioned the U.S. Supreme Court to hear *Commonwealth of Massachusetts v. Environmental Protection Agency*.[12] Although the case does not address GHG emissions resulting from buildings, it does illustrate the overall political environment surrounding climate change discussions. The primary question posed by the case was whether the Clean Air Act required the EPA to regulate GHG emissions from new motor vehicles.[13] The EPA, under President Bush, argued that the Clean Air Act did not authorize it to issue mandatory regulations to address climate change.[14] On April 2, 2007, the Supreme Court decided against the EPA, remanding the case with the requirement that the "EPA must ground its reasons for action or inaction in the [Clean Air Act]."[15]

Under *Massachusetts v. EPA*, the requirements of Section 202(a)(1) of the Clean Air Act were in question. The Section reads as follows:

> The [EPA] Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare. . . .[16]

The EPA, in its argument against the petitioners, did "not dispute the existence of a causal connection between man-made greenhouse gas emissions and global warming,"[17] nor did it dispute that global warming endangered public health or welfare. The EPA's failure to address these issues, which were required on the face of the act, resulted in the Court's remand.

The attention to this case will linger as many commentators see further proceedings as a potential avenue for forcing a judicial decision as to whether or not climate change is real and whether it is caused by GHG emissions. While a holding in the affirmative on these questions would bolster future policy implementation, in reality, such a decision is not likely necessary considering the actions already occurring on the legislative front.

CURRENT LANDSCAPE: GREEN BUILDING POLICIES AND PROGRAMS

Evolution from Carrots to Sticks

Over the past few years, in an effort to temper the emission of greenhouse gases, the signatories to the Mayors' Agreement have passed various forms of legislation regulating the construction and renovation of buildings in their respective municipalities. From the first forms of legislation to some of the more recent enactments, the regulations have become more rigorous and expansive.

As one of the initial steps toward meeting the goals set by the Mayors' Agreement, the signatories looked at the public buildings in their respective municipalities and began to pass mandates requiring that all newly constructed and substantially renovated public buildings meet various green standards. These mandates followed a trend toward building green in the public sector that had been bolstered by the General Services Administration (GSA) as well as some states. In 2005, for example, the State of Washington passed legislation requiring that all state buildings, including schools, be built to certain green standards.[18]

While the public sector appreciated the benefits in building green early on, the private sector saw only the expense and the impact on their bottom line. The perceived cost of developing green buildings impeded the private sector's move into green building. In an attempt to relieve the private sector

of the cost impediment, local, state, and federal incentives were offered as carrots to drive private sector change. This carrot approach to change was not as successful as some hoped.

When the carrots failed to effect a change in private development, several mayors turned to sticks. Emboldened by the growing popular support of the green movement, and perhaps bolstered by a preexisting aversion to new development in many communities, several major cities, Washington, D.C. being the first, have passed mandates requiring certain private developments to meet specific green building standards.[19] To ensure compliance, these new mandates often include strict enforcement mechanisms, including forfeiture of required bonds or other security and withholding of certificates of occupancy. Since the enactment of the D.C. Green Building Act of 2006, the pace at which municipalities are enacting green building legislation has increased. The next sections of this article will discuss in further detail the policies, programs, and incentives that currently exist at all levels of government—local, state, regional, and Federal.

Local Level Green Building Legislation

Green building legislation at the local level generally falls within three broad categories: (i) mandates applying to public construction, (ii) incentives offered to private developers, or (iii) mandates applying to both public and private construction. While the first two types of legislation have been widely enacted across the country, the effort to compel the private sector to build green has been met with some resistance. Accordingly, many municipalities—particularly larger cities like Boston, San Francisco, and Dallas—have spent significant time and effort developing schemes that purport to balance the competing interests of green building practices with the bottom line consideration of real estate developers. Smaller municipalities without big city resources may instead choose to simply rely on the certification conferred by a third-party organization as the keystone for compliance with local legislation. Other municipalities, however, have refrained from ostensibly turning their local building code over to third-party organizations, and merely required that local projects make a demonstrable effort to execute green design. Nevertheless, the ongoing debate over the implementation of green building legislation demonstrates the inherent tension between environmentalism and capitalism. While there is no magic bullet, the different types of solutions that municipalities across the country have proposed suggest that flexibility may be the most sensible approach to encouraging green building practices.

Green Building Mandates: Public Construction. In an effort to take a leadership role in the push for greener buildings, many municipalities have attempted to self-regulate by imposing mandates on public projects. These types of schemes have generally been enacted through ordinances that amend the local building code. Lawmakers in some municipalities, however, have issued Executive Orders with which city-funded projects must comply, e.g., Albuquerque, New Mexico.[20] Public mandates are significant because, in some contexts, they have been a precursor to more comprehensive regulatory schemes that extend mandates into the private sector.

Typically, the types of facilities that fall under public building mandates include schools, courts, government buildings, or any other project that receives a certain percentage of funding from public coffers. Most schemes have opted to implement the U.S. Green Building Council's (USGBC) LEED system as their rating system of choice. In New York City, for example, Local Law 86 obligates public projects with a projected cost over $2 million—or any project that receives more than 50 percent of its funding from taxpayers—to achieve a LEED Silver rating.[21] Under Local Law 86, schools and hospitals are required to achieve the less stringent LEED Certified designation. Rather than focusing on project costs, other municipalities key their legislative requirements to project square footage. In Philadelphia, former Mayor John F. Street's Executive Order #1-07, coupled with the city's Local Climate Action Plan, mandates that new public projects or major renovations greater than 10,000 square feet achieve a LEED Silver rating.[22]

Not every municipality, however, requires that its own projects formally receive certification from a third-party green building organization, such as USGBC. The reasoning for municipalities not requiring third party certification varies and is not always clear. Smaller municipalities may be concerned

about the perceived additional cost that formal certification implicates. Other larger municipalities may wish to retain ultimate responsibility for determining whether their projects have complied with the local green building mandate, without complete reliance on a third party such as USGBC. In Houston, for example, Green Building Resolution #2004-15, which was enacted on June 23, 2004, requires city-owned buildings greater than 10,000 square feet to use the LEED system "to the greatest extent practical and reasonable" with a target of LEED Silver certification.[23] In Phoenix, the City Council's green building guidelines were passed on June 21, 2005, and do not require formal LEED certification. While Phoenix public projects are directed to follow the LEED system, the guidelines allow the city to pursue actual LEED certification on a "case-by-case basis."[24]

Green Building Incentives: Private Construction. Rather than proceeding directly from public mandates to legislating green across the private sector, many municipalities have instead attempted to promote sustainable development practices by offering incentives to developers for achieving certain levels of compliance pursuant to various green building standards. These incentives range in scope and type—from fast-track building permits to density bonuses and tax credits.

Some municipalities have tied more valuable incentives, such as density bonuses, to formal certification from a third-party organization. The density incentives in Cranford, New Jersey, for example, increase based on the level of LEED certification sought by a project. Like many other municipalities, Cranford offers private developers incentives while requiring publicly-owned or funded projects to earn LEED certification.[25] A number of other municipalities, including Nashville, Tennessee, Arlington, Virginia, and Sunnyvale, California, also offer an increase in FAR (floor area ratio) to projects that achieve various levels of LEED certification. In Nashville, the bonus depends on both the project's neighborhood and the level of LEED certification the project earns. Smaller municipalities that offer density bonuses include Acton, Massachusetts, Bar Harbor, Maine, and Portsmouth, New Hampshire.[26]

Another useful carrot dangled by municipalities is the promise of expedited building permit review for green projects. The Green Building Program in Gainesville, Florida, offers expedited building permit review for LEED projects, as well as a reduced permitting fee of fifty percent for private construction that achieves LEED certification.[27] In Los Angeles, the Department of Water and Power expedites electricity and water connections for projects committing to achieve a LEED Silver rating.[28]

A number of local governments at the county level, including Baltimore County, Maryland, also offer green building incentives.[29] An ordinance in Chatham County, North Carolina, "strongly encourages" all projects to pursue a LEED rating.[30] For projects that earn a LEED Gold rating, the county's Compact Communities Guidelines offer a full state and county property tax abatement for five years. After the initial five-year period, the abatement continues for an additional five years, dropping by twenty percent each year.

While LEED is without question the rating system of choice for most lawmakers, its use is by no means universal. The Sustainable Building Program in Issaquah, Washington, offers preferential building permit review for private multifamily projects that earn 420 points under the Built Green program, a rating system promulgated by the Master Builders Association of King and Snohomish Counties outside of Seattle.[31] A number of municipalities have also modified LEED to fit their own unique interests; Calabasas, California's "Calabasas LEED" system applies to all non-residential public and private buildings greater than 500 square feet, requiring "Calabasas LEED" Certified and Silver for properties up to, and greater than, 5000 square feet, respectively.[32] Applications under the Calabasas program are submitted to, and reviewed by, city officials; for some commentators, this type of scheme may be less problematic than a municipality's reliance upon review by a third-party organization.

Green Building Mandates: Private Construction. At the national level, the green building programs of larger cities such as Boston, Washington, D.C., and Dallas have received a great deal of attention. Each of these cities, following a lengthy review process by a group of local industry stakeholders, has

enacted green building mandates applicable to the private sector.[33] The mechanisms by which each piece of legislation will be enforced differ drastically, and demonstrate that there is no one-size-fits-all approach to local green building laws.

Perhaps the most interesting of all the local legislation is that which was enacted in early 2007 in Boston. Pursuant to Article 37 of Boston's building code, all construction greater than 50,000 square feet must provide to the Boston Redevelopment Authority a "completed LEED scorecard, including any Boston Green Credits" that the particular project aims to achieve.[34] Applicants need only "demonstrate" that the project will satisfy Article 37 "with appropriate supporting documentation and by certification from a LEED Accredited Professional and/or other expert recognized by the Boston Redevelopment Authority. . . . Within five (5) days of its receipt of a completed LEED submission, the Boston Redevelopment Authority shall transmit a copy of the submission to Boston Interagency Green Building Committee."[35]

The Boston Interagency Green Building Committee (BIGBC) is defined in Section 37-2.3 as "an interdisciplinary committee consisting of at least one (1), but not more than two (2) representatives of city agencies including but not limited to, the Boston Redevelopment Authority, the Boston Environment Department, the Boston Transportation Department, the Inspectional Services Department and the Mayor's Office."[36] The purpose of the BIGBC is to "advise the Boston Redevelopment Authority on [a] Proposed Project's compliance with the provisions of this article."[37]

Section 37-4 incorporates LEED into Boston's building code by requiring that a project reach a LEED Certified level (26 of 69 credits under LEED for New Construction) "under the most appropriate LEED building rating system" (i.e., Core and Shell, Commercial Interiors, etc.).[38] Up to four of the twenty-six credits required for compliance may be obtained from the "Boston Green Building Credits," those credits being identified as: Modern Grid, Historic Preservation, Groundwater Recharge, and Modern Mobility.[39] Significantly, however, the legislation only requires projects to be "LEED Certifiable," which it defines in Article 37-2.4 as "a structure that is planned, designed, and constructed to achieve the level "certified" using the LEED building rating system most appropriate" for the given project.[40]

In other words, Boston has not keyed its legislation to the third-party verification process that is performed by USGBC. This type of scheme has been the basis of a great deal of debate within the real estate community. Some commentators have questioned whether the "LEED Certifiable" rubric undermines the credibility of the LEED system itself and is more detrimental to green building practices than anything else.[41] Others have praised Boston for acknowledging the potential for litigation arising out of projects that must receive certification from a third-party organization in order to be compliant under a local building code.[42]

The "Certifiable" versus "Certified" debate also surfaces in the context of smaller municipalities without the resources to put proposed legislation through the rigors of an extended peer review process. In late 2006, Babylon, New York enacted legislation that mandates projects greater than 4,000 square-feet to apply for LEED certification. Projects are required to pay $0.03 per square foot (not to exceed $15,000) into the Babylon Green Building Fund. Should the project earn a rating, Babylon will refund the certification fees that the owner paid to USGBC. Babylon's legislation incorporates LEED "and any future versions of LEED promulgated by USGBC" into the town's local building code.[43]

Despite some of the concerns that may have led Boston and Babylon to shy away from a pure LEED mandate, San Francisco is currently on the verge of the nation's most stringent LEED legislation.[44] The proposed legislation—which is currently winding its way through approvals at the City Council level—would be enacted in phases, giving local stakeholders a period of time to adjust to the green building learning curve. It would require commercial and residential projects greater than 25,000 square feet, or taller than 75 feet, to earn a LEED Certified rating from USGBC in 2008. In 2009 the requirement for commercial projects would rise to Silver and in 2010 to Gold. Residential projects would require a Silver rating beginning in 2010. In an apparent effort to address the LEED premium that can be difficult for smaller projects to absorb, the legislation would require small and mid-sized residential buildings to

receive 25 points under California-based non-profit BuildItGreen's GreenPointRated rating system beginning in 2009. This requirement would increase to 50 points in 2010 and 75 points in 2012 (2011 for multi-family residential buildings with five units or more).

Legislation recently passed by the City Council of Dallas, Texas, also embraces a phased approach to applying green building mandates. The Dallas experience suggests, however, that municipalities are beginning to stress building performance rather than levels of particular rating system certification. The Dallas legislation, which will be phased in over the next few years, provides private developers with the option of achieving the requisite performance under the rating system of their choice—LEED, EPA's Energy Star Program, or Green Built North Texas.

The Dallas City Council adopted its green building ordinance on April 9, 2008.[45] The legislation incorporated recommendations that were made by Dallas's Green Building Task Force, which was formed in December of 2007 and included a number of local stakeholders ranging from USGBC's North Texas Chapter to the Hispanic Contractors' Association. Similar to Washington D.C.'s phased approach, Dallas will first emphasize energy and water efficiency beginning on October 1, 2009, with more stringent construction requirements two years later. Phase I requires that new residential and commercial construction perform 15 percent better than the 2006 International Energy Conservation Code (IECC), demonstrated by an IC3 Energy Systems Lab certificate, a HERS index of 85, or through the use of Energy Star, Green Built North Texas, LEED, or another approved equivalent standard. New residential construction must also meet a number of water reduction requirements, and commercial building owners must allow local utility companies to release their annual consumption data to local officials.

Phase II will come into effect on October 1, 2011, and require all new residential and commercial construction to be "certifiable" under LEED, Green Built North Texas, "or meet an equivalent minimum green building standard certified level." However, formal certification by the promulgating third-party organization is not required. In an interesting contrast to the Boston legislation, Dallas defines LEED and Green Built North Texas certifiable to include specific points relating to water and energy efficiency contained in each rating system.[46] The Task Force has recommended that Dallas provide incentives—including fast-track permitting and tax credits—during Phase I in order to prepare local stakeholders for the more onerous 2011 requirements. Also similar to the Boston legislation, its implementation strategy calls for the creation of a green building plan review team within the City's Building Inspection department.

Regardless of the mechanics of the various mandates, it is clear that local lawmakers are taking the threat of climate change seriously and attempting to foster industry-wide change. What's particularly interesting is the current move away from mandates relying on the stamp of a third-party organization and the new concept of certifiable projects. The Dallas legislation embraces the concept that developers should be free to choose how they arrive at a performance-driven result, provided that performance satisfies the local ordinance. Green building legislation remains in its infancy, and it is far too early to pass judgment on the effectiveness of any particular type of mandate's mechanisms. However, the trend away from pure third-party mandates is clear, particularly at the large municipal level. Trends in development patterns across municipalities with green building mandates over the next few years as programs such as those in Dallas become effective will undoubtedly assist other policymakers in crafting legislation appropriate for their particular municipality.

State Level Green Building Legislation

Although no state has a green building mandate applicable to the private sector, there are various mandates for public buildings, as well as a host of tax credits, expedited permitting systems, and tailored financial incentives that encourage the intrastate proliferation of green buildings. Industry professionals should be cognizant of relevant state programs and the interaction of state and local programs. One of the most comprehensive resources for researching financial incentives is the Database of State Incentives for Renewables & Efficiency, which is freely available at www.dsireusa.org. The following discussion is not intended to be an exhaustive analysis of every state policy, program, and incentive; rather, it

is intended to provide a sampling of approaches used or considered by states across the nation.

Like local government public sector mandates, state mandates have taken the form of both legislation and executive orders. One of the first states to legislate green buildings was Washington, which in 2005 passed legislation requiring that "all major facility projects of public agencies receiving any funding in a state capital budget, or projects financed through a financing contract ... must be designed, constructed, and certified to at least the LEED silver standard."[47] The statute also includes a requirement that agencies monitor and report on the operating costs of certified buildings. Subsequently, various state level mandates and encouragements have been enacted by legislatures in other states, including Arkansas, Colorado, Connecticut, Florida, Hawaii, Illinois, Maryland, Massachusetts, Nevada, New Jersey, New York, Ohio, South Carolina, and South Dakota.[48] Many more states have green building requirements pursuant to executive orders, including Arizona, California, Colorado, Florida, Maine, New Jersey, New Mexico, Rhode Island, Virginia, and Wisconsin.[49] The mandates can differ from state to state depending on the size, cost, and type of project, as well as whether certification is required, encouraged, or merely a guideline.

Statewide property tax abatement is another method of facilitating green building. The State of Nevada, for example, has received national attention for its property tax abatement program passed in June 2005. The program provides a partial abatement for buildings that meet or exceed LEED Silver. The abatement is up to 50% of the property taxes due over a period of up to ten years. It was so successful that as of June 2007, roughly 63 million square feet of development space in Nevada had applied for LEED certification.[50] Thereafter, the program was scaled back to provide a property tax abatement program of up to 25% for LEED Silver, 30% for LEED Gold, and 35% for LEED Platinum buildings over a ten-year period.[51] Buildings must also receive a certain number of energy conservation points within the LEED Rating System to qualify for the abatement.

Tax credits can also be used by states to encourage green buildings. In 2000 the State of New York enacted a tax credit to be used by both corporate and personal income taxpayers, allowing the taxpayer to apply the credit against corporate taxes, personal income, insurance corporation taxes, and banking corporation taxes.[52] The credit applies to eligible buildings that meet certain green standards relating to increased energy efficiency, improved indoor air quality, and reduced environmental impact. The original rendition of the tax credit allowed applicants to apply for a Credit Component Certificate and claim the credit over five years. The newest rendition (or extension of the original program) provides nine taxable years to claim the credits.

Tax incentives have been a popular method for encouraging green buildings. In addition to Nevada and New York, Oregon, Maryland, and New Mexico also have tax-based programs relating to green buildings.

Expedited permitting may also be popular, depending on the development needs of a given state. In 2006 the State of Hawaii enacted a law providing expedited permitting to construction projects that incorporate energy and environmental design in their buildings.[53] The statute requires each county agency that issues building, construction, or development-related permits to establish a procedure for priority processing of permit applications at no additional cost to the applicant. Applicants can meet energy and environmental design building standards by earning either a LEED Silver rating, two Green Globes ratings, or another comparable state-approved, nationally recognized, and consensus-based guideline, standard, or system.

Other non-tax financial incentives have been used to encourage green buildings as well. The State of North Carolina, for example, formally granted permission to cities and counties to encourage green building practices through the use of reduced permitting fees or partial rebates for projects that achieve a certain level of certification from a recognized green building rating system.[54] Also, the Commonwealth of Pennsylvania, through the Governor's Green Government Council, provides a grant for schools to be built more efficiently. The grant is designed to cover costs associated with obtaining LEED for Schools Silver, Gold, or Platinum certification and is administered on a case-by-case basis each year.[55] In the first year of the program, eight schools qualified for financial assistance.

Because states have myriad needs and constituents, the creation of unique green building policies, programs, and incentives will continue to match constituent needs. Going forward, there will be an increasing amount of activity on the state level, and some of it may act to roll up and consolidate various local policies and programs. Almost as laboratories of experimentation with green building policies, programs, and incentives, some of the best local policies will gain interest and likely be incorporated on the state level. Thereafter, successful state policies may lead to greater adoption of green building standards on the federal level.

Regional Level Green Building Legislation

The current regulatory climate is not restricted solely to the state and local level. A number of regional associations spearheaded by individual states are in the process of proposing cap-and-trade regimes in the absence of a command-and-control federal scheme for carbon dioxide emissions. The Midwestern Greenhouse Gas Accord, for example, which was signed on November 15, 2007, aims for implementation of the Accord's proposed cap-and-trade system within the next thirty months. The Accord was signed by the governors of Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, North Dakota, Ohio, South Dakota, and Wisconsin, as well as the premier of the Canadian province of Manitoba. Similarly, in the Western United States, the governors of Arizona, California, New Mexico, Oregon, and Washington launched the Western Climate Initiative (WCI) in February of 2007, which has since been joined by Utah, British Columbia, Manitoba, and Montana. On August 22, 2007, participating WCI states agreed to reduce emissions by 15 percent over 2005 levels by 2020. The WCI plans to complete the construction of a market-based regime—likely cap-and-trade—to achieve this lofty goal by August of 2008.

While the West Coast has been the source of the bulk of the sustainable initiatives that have crossed the country in the past few years, it seems that the East Coast will likely beat it in terms of implementing a regional cap-and-trade regime. On September 10, 2008, the Regional Greenhouse Gas Initiative (RGGI) will launch the nation's first-ever auction of GHG emission allowances. Each of the states that have agreed to participate in RGGI—Maine, New Hampshire, Vermont, Connecticut, New York, New Jersey, Delaware, Massachusetts, Maryland, and Rhode Island—will initially aim to reduce carbon dioxide emissions from local power plants. Once the first phase of the program is implemented, RGGI could expand to other types of power sources, as well as creditable, non-power offsets.

RGGI was informally launched in April of 2003 by then-New York governor George Pataki, who sent a letter to the eleven governors between Maine and Maryland that invited each to discuss a regional cap-and-trade program within the next two years. Given the time frame with which RGGI has operated, it is unlikely that WCI or the Midwestern Accord will imminently launch. However, if RGGI's regional effort is successful, it is not inconceivable that other regions might join such an existing cap-and-trade regime. RGGI has already organized a number of private firms that will assist in the program's implementation. RGGI's auction will take place quarterly. The first compliance period is scheduled to begin on January 1, 2009.

Federal Level Green Building Legislation

Although the federal government has yet to mandate or formally adopt a particular green building standard across the board, it is active in establishing green building policies. Federal activity, in general terms, can be viewed with respect to its policies, programs, and incentives for (1) its own public buildings and (2) the private buildings of others. More specifically, the federal government, as owner of over 445,000 buildings with a total floor space of over 3.0 billion square feet and lessee of an additional 57,000 buildings with a total of 374 million square feet, has adopted various green building policies and programs relating to its own buildings.[56] Federal involvement with private buildings is more limited to a framework of voluntary programs and tax-based incentives for the benefit of various parties to promote and encourage greater adoption of energy efficient buildings.

Federal Public Building Activity. The federal government maintains a significant portfolio of real estate in the hands of its numerous agencies. In September 2003 Federal Environmental Executive John

L. Howard released a report entitled *The Federal Commitment to Green Building: Experiences and Expectations*.[57] The report provided, for the first time, documentation on green building practices, policies, and tools used by the various federal agencies. It also identified certain barriers to green building, such as financial and budgetary structure challenges, educational needs, limited research, and a lack of clear federal policy. The report noted that "an increasing number of agencies and departments [were] turning to the USGBC's LEED rating system as the basis for their green design and construction activities."[58]

When *The Federal Commitment to Green Building* was published, it became clear that several agencies were hard at work greening their buildings, but there was no consistent federal policy guiding all the agencies. For example, the Army and Army Corps of Engineers had committed to green buildings from Spring 2000 by using their own rating tool based on LEED called SpiRiT, an acronym of sorts derived from "Sustainable Project Rating Tool."[59] The Department of Navy began the Whole Building Design Guide in 1997, which slowly began to incorporate sustainability requirements into mainstream specifications and guidelines.[60] The GSA also decided in 2000 that all its buildings starting in 2003 would be certified through LEED (and encouraged to achieve a Silver rating).[61] Thus, the Army, Navy, GSA, and many other agencies were each working toward sustainability, but the agencies were not sharing or collaborating necessarily with their knowledge and experience.[62]

Subsequently, on January 24–25, 2006, over 150 federal leaders gathered at the monumental White House Summit on Federal Sustainable Buildings, where several agency leaders signed the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (MOU).[63] Although not technically binding on the signatory agencies, the purpose of the document was to implement "common strategies for planning, acquiring, siting, designing, building, operating, and maintaining High Performance and Sustainable Buildings."[64] Signatories agreed to the following five guiding principles, or common strategies, of green building: (1) employ integrated design principles, (2) optimize energy performance, (3) protect and conserve water, (4) enhance indoor environmental quality, and (5) reduce environmental impact of materials (Guiding Principles).[65] The MOU was signed by several agencies, some of which included the EPA, GSA, Department of Defense, Department of Energy, NASA, and the Executive Office of the President.

One year later, in an effort to consolidate previous executive orders relating to green buildings, and to make the Guiding Principles mandatory for federal agencies, President Bush issued Executive Order 13423 Strengthening Federal Environmental, Energy, and Transportation Management (EO 13423).[66] EO 13423 established specific goals for heads of agencies, such as to improve energy efficiency and reduce GHG emissions by three percent annually or thirty percent relative to a 2003 baseline by 2015, reduce water consumption by two percent annually or sixteen percent relative to a 2007 baseline by 2015, and ensure that both new construction/major renovations, and fifteen percent of existing federal capital asset building inventory of the agencies incorporate the Guiding Principles by 2015. To help agencies implement the requirements of EO 13423 and define broad strategies for achieving the goals, on March 29, 2007, the Chairman of the Council on Environmental Quality issued Instructions for Implementing Executive Order 13423.[67] As a result, all federal agencies are presented with a basic framework of Guiding Principles for incorporating sustainability in federal buildings.

Two other regulations affect federal agencies and public buildings. First, the Energy Policy Act of 2005 requires federal agencies to use a life-cycle perspective and analysis, where and when cost-effective, to the sustainable design principles of siting, design, and construction of all new buildings.[68] Second, and most recently, the Energy Independence and Security Act of 2007 (EISA) codified the energy efficiency and emissions goals of EO 13423 and mandates that new buildings and major renovations be designed so that fossil fuel-generated energy consumption is reduced by 100 percent by 2030.[69] The bill also created the "Zero Net Energy Commercial Buildings Initiative," which sets forth a nationwide goal of carbon neutrality in all commercial buildings by 2050.

Perhaps the most significant impact of EISA is the requirement that starting in 2010 federal agencies

occupy only buildings with Energy Star designations. In the rare case that the act allows the federal government to occupy non-Energy Star spaces, the landlord must agree to make energy efficiency upgrades. As Andrew C. Burr says in his summary of the act, "the government is essentially mandating the private sector without a private sector mandate."[70] In short, if landlords want federal agencies as tenants, they must have green spaces. Burr goes further to show that because the federal agencies occupy a "considerable" amount of space, including the GSA, which is the "nation's largest commercial real estate agency," the influence of this act upon green building is tremendous.[71] Accordingly, as a result of the substantial policies and programs in place at the federal level, and based on the sheer number of buildings within federal control, the government has been, and will continue to be, a major impetus to the development of policies, programs, and economics to support green buildings.

Federal Private Building Activity. Although the federal government has made significant strides to establish systems that govern federal agencies and federal public buildings, it has yet to establish the same for new construction and substantial renovation of buildings in the private sector. Currently, there is no private sector mandate for green buildings on the federal level. That being the case, the Department of Energy and EPA's joint program, Energy Star, has grown in popularity as a voluntary metric for building owners to show that a building has met a certain level of energy efficiency and is low in carbon emissions.[72] Also, the federal government provides various tax incentives, many of which spring from the Energy Policy Act of 2005. These provisions had near-term sunset provisions and some were extended through the end of 2008. Due to the short-term nature of these incentives, it is likely that the regulatory framework will change going forward. As discussed below, the federal government may decide to become more involved in regulating private building construction and renovations, and that regulation could be based on carbon emissions from buildings. Nevertheless, the following tax incentives are currently driving the market.

The Energy Policy Act of 2005 created both personal and corporate tax incentives for various activities associated with green buildings.[73] There is a corporate deduction that allows taxpayers to deduct the cost of energy-efficient technology installed on a commercial building.[74] The precise amount of the deduction varies from $0.30–$1.80 per square foot, depending on the technology and amount of energy reduction. The deduction can be taken in the year construction is completed for technology such as interior lighting, equipment and building insulation, water heaters, chillers, furnaces, boilers, heat pumps, air conditioners, caulking and weather-stripping, windows, doors, and roofs.

The Energy Policy Act of 2005 also provides two other building related tax incentives. First, there is a tax credit of up to $2,000 for builders of all new, energy-efficient homes, including manufactured homes constructed in accordance with the Federal Manufactured Homes Construction and Safety Standards.[75] Among other specific requirements, homes must reduce energy consumption by 50% compared to the International Energy Conservation Code standard, be substantially completed after August 8, 2005, and be sold by an eligible contract before January 1, 2009. Second, there is a tax credit for solar, geothermal, and microturbine technologies placed in service from January 1, 2006 until December 31, 2008.[76] The credit is 10% for geothermal; 30% for solar, solar hybrid lighting, and fuel cells ($500 per 0.5 kW maximum for fuel cells); and 10% for microturbines for a maximum of $200 per kW.

In addition to the incentives established by the Energy Policy Act, EISA included support for green building initiatives in the private sector by allocating over $1 billion in federal funding over the next decade toward improving energy efficiency in buildings. Shortly following the enactment of EISA, in February 2008 the Economic Stimulus Act, a legislative reaction to a slowing national economy, created a 50% bonus corporate depreciation provision for eligible renewable energy systems acquired and placed in service in 2008.[77] To qualify, the project must satisfy various criteria, including that the technology be acquired and placed in service during 2008. What is important about these last two pieces of legislation is that they highlight the government's growing interest in encouraging energy efficiency in the private sector.

NEXT STEPS: GREEN BUILDING POLICIES AND PROGRAMS

Regulating Existing Buildings

Given the current level of GHG emissions resulting from buildings and considering these, it would not be surprising to see future mandates requiring both the public and private sector to retrofit existing buildings to meet certain energy efficiency standards. Such regulation of existing buildings is further supported by consideration of the aggressive goals being set by various high-level lawmakers, as discussed further below. These goals, varying from President Bush's goal of stopping the growth of GHG emissions by 2025 to Senator Hillary Rodham-Clinton's goals of reducing GHG emissions by 80% by 2050, will not likely be met through continued piecemeal regulation of new construction and substantial renovations at the local level. To meet these goals, expansive regulations, likely including existing buildings, will be required. Even without such mandates, increasing energy costs and other market considerations may drive building owners to retrofit their existing buildings.

As new buildings are built to greener standards, older buildings become obsolete, and without green renovations and retrofits, they will lose value to owners and occupants. In reference to this phenomenon, noted green building expert Charles Lockwood said, "Trillions of dollars of commercial property owned by real estate investment trusts, corporations, and other investors around the world will soon become obsolete—and will drop in value."[78] Additionally, as pointed out in a recent article in *The New York Times* entitled "*'Green' Buildings Don't Have to Be New*," older buildings can be adapted to use less resources such as water and energy and have a healthy indoor environmental quality.[79]

Although older buildings can be green, many are not and they tend to waste money and use large amounts of water and energy. Recognizing the opportunities in existing, non-green buildings, various public and private entities are mobilizing to find ways to green existing buildings. The USGBC recently revamped their LEED for Existing Buildings Ratings System and now allows registration of buildings under the next iteration, LEED for Existing Buildings: Operations & Maintenance.[80] The new version provides a greater emphasis on the efficient operation and maintenance of existing buildings.

Legislation and executive orders at the various levels of state and local government may endorse the LEED for Existing Buildings Rating System outright or may provide for specific actions that need to be taken in renovating a building. For example, in July 2005, Governor Owens signed Executive Order D005 005 adopting LEED for Existing Buildings for all state buildings, to the extent applicable or practicable.[81] Other states such as California and Florida have similar executive orders relating to existing buildings. The same goes for the local level, with various forms of existing building policies in place in counties such as Miami-Dade (Fla.) and Cook (Il.) and cities such as Springfield, St. Louis, Albuquerque, Eugene, Fort Collins, Grand Rapids, Kansas City, Logan, Madison, New York City, and Portland.[82]

Private enterprises are promoting green retrofits as well. For example, President Clinton and the Clinton Climate Initiative announced the formation of the Energy Efficient Building Retrofit Program, which provides cities and their private building owners with access to the necessary funds to retrofit existing buildings with more energy efficient products, typically leading to energy savings between 20 to 50 percent.[83] The Energy Efficient Building Retrofit Program is a good example of the attention being given to older buildings that need to be renovated in a green way. As green building policies and programs proliferate, expect the dialogue to intensify in determining how to deal with the country's aging, inefficient structures.

Regional Action

At the regional level, current efforts are restricted to the implementation of cap-and-trade regimes for carbon dioxide emissions from power plants. The looming launch of RGGI in September of 2008 will likely go a long way toward determining whether states accede to more intrusive regulation at the federal level, or if the regional model is, in fact, viable. Given the long lead time for creating a cap-and-trade system (RGGI has been in the works since late 2003), it would not be surprising if individual regional schemes banded together.

The Chicago Climate Exchange, which is a voluntary, though legally binding, marketplace for the trading of GHG emissions, counts a number of municipalities and private companies as members.[84] It

would be similarly unsurprising if the infrastructure set in place by such private exchanges is either borrowed by, or incorporated into, similar market-based schemes at either the regional or federal level. These scenarios, however, are purely speculative until RGGI comes on line in September.

Federal Action

President Bush's Final Word. In an April 16, 2008 speech, President Bush announced a new national goal: "to stop the growth of U.S. greenhouse gas emissions by 2025."[85] While the President's speech did not include an endorsement of a specific policy for achieving the goal, Mr. Bush did lay out a general framework that relies heavily on the use of incentives. Additionally, the President included statements cautioning against several specific ill-advised methods of achieving the goal.

On the international front, Mr. Bush reiterated the issues that the U.S. Senate had with the Kyoto Protocol, i.e., that developing countries like China and India were not required to comply with the same regulations that would be placed on the U.S. by the protocol, putting the U.S. at a market disadvantage. On this point, President Bush stated: "We're working toward a climate agreement that includes the meaningful participation of every major economy—and gives none a free ride."[86]

On the domestic front, President Bush disagreed with using existing laws such as the Clean Air Act to address the issues. On this point, he specifically referenced the Supreme Court's decision in *Massachusetts v. EPA* and, citing a statement by Energy and Commerce Committee Chairman John Dingell, characterized the decision as potentially leading to "a glorious mess."[87] Part of the "mess" that concerned Mr. Bush was the potential for regulations that would make the "federal government act like a local planning and zoning board," which he said would have "crippling effects on our economy."

President Bush stated that the proper approach to addressing GHG emissions involves elected officials making "an honest assessment of the costs, benefits, and feasibility of any proposed solution."[88] Overall, the President stated that a single, expanded program is the manner for addressing the issue, stating as follows:

> We must all recognize that in the long run, new technologies are the key to addressing climate change. But in the short run, they can be more expensive. And that is why I believe part of any solution means reforming today's complicated mix of incentives to make the commercialization and use of new, lower emission technologies more competitive. Today we have different incentives for different technologies—from nuclear power, to clean coal, to wind and solar energy. What we need to do is consolidate them into a single, expanded program with the following features.
>
> First, the incentive should be carbon-weighted to make lower emission power sources less expensive relative to higher emissions sources—and it should take into account our nation's energy security needs.
>
> Second, the incentive should be technology-neutral because the government should not be picking winners and losers in this emerging market.
>
> Third, the incentive should be long-lasting. It should provide a positive and reliable market signal not only for the investment in a technology, but also for the investments in domestic manufacturing capacity and infrastructure that will help lower costs and scale up availability.[89]

While certainly not providing a specific policy for consideration, President Bush's speech is likely the last that will be heard from him on the topic before leaving office. These parting words could potentially inform the next President as to a more specific approach to reducing GHG emissions.

The Next President. In this election year, the Federal government is poised to take on an additional role in reducing GHG emissions, both domestically and internationally. This role will be defined by whoever is elected as President Bush's successor in November 2008. In the debates and campaigns leading up to the 2008 presidential elections, climate change has been a major topic for each of the remaining candidates—Obama, Clinton, and McCain. All three of the candidates have called for massive reductions in GHG emissions, differing only in percentage; Obama and Clinton call for 80% GHG

emissions reductions by 2050, while McCain calls for 65% by 2050.[90]

To achieve these reductions, each candidate supports the federal implementation of a cap-and-trade system for GHG emissions.[91] Although the candidates have set forth specifics as to their respective systems, many speculate that the systems would be similar to the European Union system. Under the EU system, source polluters such as utilities and industry are regulated while end users like commercial building owners are unregulated. Although commercial building owners would indirectly pay for the costs of source polluter compliance, without direct incentives or regulations applying to commercial buildings, such a cap-and-trade system would fail to directly reduce GHG emissions caused by buildings.

Addressing the built environment specifically, Clinton proposes a "Green Building Fund." The fund would set aside $1 billion toward establishing grants and loans for the purpose of improving energy efficiency in local public buildings.[92] Similarly, Obama states that he would offer "grant and federal match programs to states and localities for encouraging efficiency retrofits in existing buildings."[93] Additionally, both Obama and Clinton have proposed policies requiring corporate disclosure of "climate-change-related risks to the U.S. Securities and Exchange Commission."[94]

CONCLUSION

Although it is difficult to speculate what form real change in the U.S. will take and at what level of government it will arise, it is clear that through a domino effect of action starting at various points both domestically and internationally, the populace is demanding that climate change be addressed. The demand, driven by Al Gore, first translated into local governments, fed up with the lack of federal action, joining together to sign the Mayors' Agreement, whereby they agreed to reduce GHG emissions in their respective jurisdictions. The regulations arising from the Mayors' Agreement have evolved from public-building policies to private-building mandates. These regulations will likely continue to evolve until they eventually include requirements for retrofitting existing buildings. This evolution is a true embodiment of the green motto "think globally, act locally."

With local governments continuing to regulate buildings and in the continued absence of federal regulations, states and regions will continue to form pacts to address climate change at larger-scale levels. Although RGGI is in its infancy, its adoption will lead the way for other such agreements and may inform the Federal government on the best practices for implementing national GHG emission regulations.

On the federal level, it is clear that, no matter who wins in November, aggressive policies will be required to reach the GHG emission reduction goals set by each candidate. One method of achieving these goals will be the implementation of a national cap-and-trade system, which each candidate endorses. What is unclear is how such a system will cause the reductions called for by each of the candidates and the impact of such a system on the built environment.

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NOTES

1. Shannon D. Sentman, LEED AP, is a real estate attorney in the Washington, D.C. office of Holland & Knight, where his practice focuses on sustainable development. Outside of his law practice, Mr. Sentman is on the Executive Committee of USGBC's National Capital Region Chapter (http://www.usgbcncr.org/). More information on Mr. Sentman can be found at http://www.hklaw.com/id77/extended1/biosSDSENTMA/.
2. Stephen T. Del Percio, LEED AP, is an attorney with Zetlin & De Chiara LLP's New York City office where he practices construction law with a focus on sustainable development. Mr. Del Percio shares his green building knowledge through his website http://www.greenbuildingsnyc.com/. More information on Mr. Del Percio can be found at http://www.zdlaw.com/profiles.php?contentarea=Stephen_T_Del_Percio&linksection=associates.
3. Preston Koener is a Salt Lake City attorney with Corbridge Baird & Christensen where he practices real estate law with a focus on sustainable development. Mr. Koener shares his green building knowledge through his website http://www.jetsongreen.com/. More information on Mr. Koener can be found at http://www.jetsongreen.com/about.html.
4. U.S. Department of Energy, *U.S. Energy Information Administration Annual Energy Review 2006*, June 27, 2007, available at http://www.eia.doe.gov/aer/ (last visited Apr. 25, 2008).
5. More information about the Kyoto Protocol can be found on the United Nations Framework Convention on Climate Change (UNFCC) website at http://unfccc.int/kyoto_protocol/items/2830.php (last visited Apr. 25, 2008).
6. *Id.*

7. CNN, *U.S. Signs Global Warming Treaty*, Nov. 12, 1998, at http://www.cnn.com/TECH/science/9811/12/climate.signing/ (last visited Apr. 25, 2008).
8. S. Res. 98, 105th Congress (1997), available at http://www.senate.gov/legislative/LIS/roll_call_lists/roll_call_vote_cfm.cfm?congress=105&session=1&vote=00205 (last visited Apr. 25, 2008).
9. U.S. Conference of Mayors' Climate Protection Agreement, at http://usmayors.org/climateprotection/agreement.htm (last visited Apr. 25, 2008).
10. *Id*.
11. The total number of signatories is through April 25, 2008. The complete list is available at http://www.usmayors.org/climateprotection/list.asp (last visited Apr. 25, 2008).
12. *Commonwealth of Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007).
13. *Id.* at 1446.
14. *Id.*
15. *Id.* at 1444.
16. *Id.* at 1447.
17. *Id.* at 1457.
18. Wash. Rev. Code § 39.35D (2008), available at http://apps.leg.wa.gov/rcw/default.aspx?cite=39.35D&full=true#39.35D.010 (last visited Apr. 25, 2008).
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20. Mayor Martin J. Chavez, Albuquerque, NM, *Executive Order Establishing High Performance Building Standards for City Projects*, Mar. 28, 2005, available at http://www.cabq.gov/sustainability/images/exec-order-greenbldg (last visited Apr. 25, 2008).
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22. Mayor John F. Street, Philadelphia, PA, *Climate Protection, Environmental Stewardship and The Office of Sustainability and Environment*, Exec. Order No. 1-07, Apr. 25, 2007, available at http://www.phila.gov/ethicsboard/pdfs/executive%20orders/9.%20Mayor%20Street/2006/2007/1-07.pdf; see also *Philadelphia Going Green*, available at http://www.phila.gov/green/ (last visited Apr. 25, 2008).
23. City of Houston, Resolution No. 2004-15 (2004), available at http://www.houstontx.gov/environment/pdf/ordinance-greenbuilding.pdf (last visited Apr. 25, 2008).
24. USGBC, *LEED Initiatives in Governments and Schools*, at 32, Apr. 1, 2008, available at https://www.usgbc.org/ShowFile.aspx?DocumentID=691 (last visited Apr. 25, 2008).
25. *LEED Initiatives, supra* note 24, at 21. Cranford's Sustainable Building Standards were enacted as part of a town ordinance and require all new township-owned or funded buildings to earn LEED Silver certification.
26. USGBC, *Summary of Government LEED Incentives,* Apr. 2008, available at http://www.usgbc.org/ShowFile.aspx?DocumentID=2021 (last visited Apr. 25, 2008).
27. City of Gainesville, FL, Ordinance No. 001835, art. I.5, § 6-5 (Oct. 14, 2002), available at http://www.aia.org/static/state_local_resources/adv_sustainability/Model%20Language/Gainsville_ordinance.pdf (last visited Apr. 25, 2008).
28. *LEED Initiatives, supra* note 24, at 27. Municipalities may find that their own unique circumstances drive the types of incentives that they are able to offer. Los Angeles owns its Department of Water and Power and is thus in the position to offer related incentives.
29. *LEED Initiatives, supra* note 24, at 15.
30. Chatham County, NC, *Compact Communities Ordinance, Attachment C* (Apr. 2004), available at http://www.chathamnc.org/Index.aspx?page=40 (last visited Apr. 25, 2008).
31. City of Issaquah, WA, *Sustainable Building Programs*, available at http://www.ci.issaquah.wa.us/Page.asp?NavID=326 (last visited Apr. 25, 2008).
32. *LEED Initiatives, supra* note 24, at 19.
33. San Francisco and Boston, for example, convened twelve-month-long Task Forces at Mayor Gavin Newsome's and Thomas Menino's directive. Constituting a cross-section of local real estate industry interests, each Task Force provided recommendations which formed the basis of legislation that was introduced at each municipal level. However, as is set forth in detail later in this Section, each piece of legislation differs quite drastically in terms of the obligations that it places on private project teams.
34. City of Boston, Art. 37 (Jan. 10, 2007), available at http://www.cityofboston.gov/environmentalandenergy/pdfs/1-1-07_art_37Boarddraft.pdf (last visited Apr. 25, 2008).
35. *Id.*
36. *Id.*
37. *Id.*
38. *Id.*
39. *Id*. at Appendix A.
40. *Id.*
41. Simi Hoque, *LEED Certified versus LEED Certifiable*, Envtl. Design + Constr., Feb. 25, 2008, available at http://www.edcmag.com/Articles/Blog/BNP_GUID_9-5-2006_A_10000000000000268931 (last visited Apr. 25, 2008).
42. *Boston Green Building Law Designed to Avoid Potential Lawsuits*, Inside Green Business, Jan. 10, 2007.
43. City of Babylon, NY, Local Law No. 40 (2006), available at http://www.usgbc.org/ShowFile.aspx?DocumentID=2164 (last visited Apr. 25, 2008).
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46. To be LEED-certifiable, new residential construction must achieve 1 point under the Indoor Water Use credit and a minimum of 4 credits under the Energy & Atmosphere category's Optimize Energy Performance credit. New commercial construction must earn 1 point under the Water Use

Reduction (20 percent reduction) credit, as well as achieve 3 credits under the Optimize Energy Performance credit.

47. Wash. Rev. Code § 39.35D.030 (2005).
48. See USGBC, *Public Policy Search*, at http://www.usgbc.org/PublicPolicy/SearchPublicPolicies.aspx?PageID=1776 (last visited Apr. 25, 2008). USGBC's website includes a function that allows users to search existing public policy.
49. *Id.*
50. *New Bill Cuts Tax Breaks for LEED Rated Projects*, South Nevada Real Estate Monthly, July 2007, available at http://www.rcg1.com/newsletters/Latest_REM.pdf (last visited Apr. 25, 2008).
51. See Geoff Dornan, "*Assembly halts tax breaks for 'green' business buildings*," Nevada Appeal, available at http://www.nevadaappeal.com/article/20070504/ELECTIONS/105040092 (last visited Apr. 25, 2008); Nevada Legislature, Assembly Bill 621; Adopted Regulation R116-07 (2007).
52. N.Y. Tax Law § 19 (Consol. 2008).
53. Haw. Rev. Stat. § 46-19.6 (2006).
54. 2007 N.C. Sess. Laws 2007-381.
55. See Governor's Green Government Council, *High Performance Green Schools Planning Grants*, available at http://www.gggc.state.pa.us/gggc/cwp/view.asp?a=517&q=157146 (last visited Apr. 25, 2008).
56. *Federal Leadership in High Performance and Sustainable Buildings*, *Memorandum of Understanding*, at 1 (2006), available at http://www.doi.gov/greening/buildings/SustBldgsMOU.pdf (last visited Apr. 25, 2008).
57. Office of the Federal Environmental Executive, *The Federal Commitment to Green Building: Experiences and Expectations*, Sept. 2003, available at http://www.ofee.gov/sb/fgb_report.pdf (last visited Apr. 25, 2008).
58. *The Federal Commitment to Green Building*, *supra* note 57, at Section V.
59. *The Federal Commitment to Green Building*, *supra* note 57, at Exhibit B.
60. *The Federal Commitment to Green Building, supra* note 57; see also Whole Building Design Guide, available at http://www.wbdg.org (last visited Apr. 25, 2008).
61. *The Federal Commitment to Green Building, supra* note 57; see also General Services Administration, *Sustainable Design Program*, at http://www.gsa.gov/sustainabledesign (last visited Apr. 25, 2008).
62. Currently, NASA, Smithsonian Institution, Air Force, Army, Navy, Department of Agriculture, Forestry Service, Department of Energy, Department of Energy, Department of Interior, Department of State, EPA, and GSA all have some form of mandate or policy regarding green buildings. See USGBC, *Public Policy Search*, at http://www.usgbc.org/PublicPolicy/SearchPublicPolicies.aspx?PageID=1776 (last visited Apr. 25, 2008).
63. Office of the Federal Environmental Executive, *Sustainable Buildings* (last updated on April 27, 2008), available at http://ofee.gov/sb/sb.asp (last visited Apr. 25, 2008).
64. MOU, *supra* note 56, at 1.
65. MOU, *supra* note 56, at 6-10.
66. Exec. Order No. 13423 (Jan. 24, 2007).
67. Office of the Federal Environmental Executive, *Instructions for Implementing Executive Order 13423*, Mar, 29, 2007, at http://www.ofee.gov/eo/eo13423_instructions.pdf (last visited Apr. 27, 2008).
68. Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (codified as amended).
69. Energy Independence and Security Act of 2007, Pub. L. No. 110-140, H.R. 6, §§ 431, 433.
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71. *Id.*
72. Energy Star website, at http://www.energystar.gov/index.cfm?c=business.bus_bldgs (last visited Apr. 25, 2008).
73. *See* Energy Policy Act, *supra* note 68.
74. *See* 26 U.S.C. § 179D. This deduction was enacted as part of the Energy Policy Act of 2005 and effective from January 1, 2006 through December 31, 2007. Subsequently, the Tax Relief and Health Care Act of 2006, Section 204, extended the deduction through 2008.
75. *See* 26 U.S.C. § 45L. This deduction was enacted as part of the Energy Policy Act of 2005 and effective from January 1, 2006 through December 31, 2007. Subsequently, the Tax Relief and Health Care Act of 2006, Section 205, extended the deduction through 2008.
76. *See* 26 U.S.C. § 48. This deduction was enacted as part of the Energy Policy Act of 2005 and effective from January 1, 2006 through December 31, 2007. Subsequently, the Tax Relief and Health Care Act of 2006, Section 207, extended the deduction through 2008. The 10% geothermal credit was in service prior to 2006.
77. *See* 26 U.S.C. § 168. Some eligible systems include solar water heat, solar space heat, solar thermal electric, solar thermal process heat, photovoltaics, wind, geothermal electric, fuel cells, solar hybrid lighting, direct use geothermal, and microturbines.
78. Charles Lockwood, *As Green as the Grass Outside*, Barron's, Dec. 25, 2006.
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82. USGBC, *Public Policy Search*, at http://www.usgbc.org/PublicPolicy/SearchPublicPolicies.aspx?PageID=1776 (last visited Apr. 25, 2008).
83. William J. Clinton Foundation, *President Clinton Announces Landmark Program to Reduce Energy Use in Buildings Worldwide*, May 16, 2007, available at http://www.

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92. *Id.*
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