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I. Introduction

The adoption of green building codes throughout the United States has generated discussion of a key question of interest to owners, design professionals, and contractors: who is responsible when a construction project fails to achieve a targeted green building standard? In these articles, the authors propound that assessing liability does not require novel legal theories. Rather, the authors assert that traditional construction law doctrines are hardy enough to allow analysis of most green liability questions, especially if parties are attentive to the possible disputes and address them within the contract language.

That is not to say that green liability analysis is easy. Green building codes offer special challenges, and in order to understand how traditional construction law doctrines and construction contracts can provide answers to green liability questions, it is necessary to understand more about green building codes, specifically what they actually require, how they are promulgated, and the extent to which they are prescriptive or merely aspirational. This paper — the first part of our analysis — endeavors to describe the history of green building codes, then discuss some of the details outlined above. In the second paper, we will utilize the background provided herein to set out a mechanism through which future liability questions can best be addressed and that permits the allocation of most liability issues by contract.

This article begins by describing and defining the concepts of sustainability, sustainable design, and green building (Section II), the article then reviews the evolution of the green building codes.
movement and associated legislative developments that changed green building “codes” from aspirational to mandatory (Section III). The article next examines two current leaders in the green building certification process (Section IV), then analyzes recent attempts to move green building review and inspection away from private organizations to public entities (Section V). We conclude (Section VI) with some observations that will preface the analysis in our Part II article.

II. Definition of Sustainability, Sustainable Design and Green Building

The definitions of “sustainability,” “sustainable design,” and “green building” vary from source to source. Because these terms are used frequently throughout this report, this nomenclature is defined below to allow the reader to understand the authors’ intent. Moreover, it is important to understand how these terms tie together — green building evolved from the sustainability movement and sustainable design is the design component of green building.

The U.S. Environmental Protection Agency (“EPA”) notes that the public sector’s view of “sustainability” covers policies and strategies that “meet society’s present needs without compromising the ability of future generations to meet their own needs.” The EPA contends that the private sector’s concept of sustainability (which has evolved since the 1970s) differs from the public sector’s view — the private sector considers sustainability as the long-term increase in shareholder value, with concurrent focus on material and energy conservation and reduction of negative impacts to the environment. Hence, the public sector view is legislatively-based while the private sector is return-on-investment based. One facet that both share is the need for economic growth while reducing the environmental impacts of such growth. For the purpose of this article, any reference to sustainability is taken from the public sector’s point of view.

The term “sustainability movement” first entered the American

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1 Environmental Protection Agency, What is Sustainability?, http://www.epa.gov/sustainability/basicinfo.htm. The sustainability movement was otherwise known as the “environmental movement” in the 1970s. For this reason, the terms “sustainability movement” and the “environmental movement” can be used interchangeably in this report for the section that covers the 1970s.

2 Environmental Protection Agency, What is Sustainability?, http://www.epa.gov/sustainability/basicinfo.htm. Of course, these views are often compatible, but they are generated from very different motives.
lexicon in the 1980s. Sustainable design is the design component of green building. As explained by the American Institute of Architects, sustainable design incorporates principles of economic, social and ecological sustainability.

Although the phrase “green building” has taken on a common understanding roughly equivalent to “environmentally conscious building,” a more precise definition has gained acceptance within the construction and development communities. According to the United States Green Building Council (“USGBC”), green building is the practice of design and construction that uses strategies “aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO2 emissions reduction, improved indoor sustainability quality, and stewardship of resources and sensitivity to their impacts.” In essence, green building refers to design and construction practices that reduce the usage of energy, natural resources and impacts to the environment.

III. A Brief History of the Green Building Movement
From a Legislative Perspective

Green building is a byproduct of the sustainability movement that took shape in the 1970s as a result of the energy crisis. The U.S. government started to take actions in the early 1970s to mitigate U.S. dependence on foreign oil imports and to mitigate environmental impacts from energy production and usage. The Nixon and Carter administrations created the EPA and Department of Energy, respectively, to consolidate and focus this effort. In the early 1990s, federal legislation and private organizations started to promote the greening of the design and construction industry; this effort was largely voluntary in nature and primarily focused on private commercial projects.

In the early 2000s, federal agencies, such as the General Services Administration (“GSA”), mandated green building requirements on a number of high profile construction projects. States joined this movement shortly thereafter with the passage of green building legislation on certain state-funded projects, which solidified green building as a permanent facet of the design and construction industry. The following is a chronology of this move-

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ment and related regulatory and legislative actions that has led to prescriptive green building requirements. As the reader will discern, current green building codes have evolved from energy and environmental conservation issues that arose decades ago.

A. 1960 — 1969

The energy crisis of the late 1960s triggered the start of the U.S. sustainability movement. The oil embargo of 1967 created public awareness of the dangers associated with U.S. dependency on imported petroleum. Shortly after the Six-Day War, several Middle Eastern countries limited oil shipments to the U.S. because of U.S. support to the Israeli military.\(^6\) In the aftermath of the Six-Day War, a collection of Arab oil states formed the Organization of Arab Petroleum Exporting Countries (“OPEC”) in an effort to prevent embargos due to political reasons.\(^7\)

In January of 1969, President Johnson signed the National Environmental Policy Act (“NEPA”). NEPA mandated that all federal government agencies prepare environmental assessments and environmental impact statements to identify the environmental effects of proposed federal agency actions.\(^8\) Congress’s patent intent was to mitigate or prevent future governmental actions that would have negative environmental consequences.

Later in 1969, a Union Oil Co. platform stationed six miles off the coast of Santa Barbara, California released 200,000 gallons of crude oil into the Pacific Ocean. This spill caused an oil slick that marred portions of the California coastline.\(^9\) Wisconsin Senator Gaylord Nelson came up with the idea for Earth Day after he witnessed the effects of this spill. Based on his efforts, the first Earth Day took place on April 22, 1970, where approximately 20


million Americans participated to promote a healthy and sustainable environment.10

B. 1970 — 1979

The energy crisis escalated throughout the entire decade, as did the sustainability movement.11 In July of 1970, President Nixon signed his Reorganization Plan No. 3, which created the EPA.12 This executive order consolidated 15 fragmented governmental units that dealt in varying degrees with environmental issue into one independent agency.13 The creation of the EPA was based on a “growing public concern and a grass roots movement to ‘do something’ about the deteriorating conditions of water, air, and land.”14

In October of 1973, some members of OPEC implemented an oil embargo against the U.S. because the U.S. furnished Israel with arms during the Yom Kippur war. Unlike the oil embargo of 1967, this embargo caused extreme oil shortages in the U.S. Although the fighting lasted less than one month, the oil embargo continued through March of 1974.15 This energy crisis placed the sustainability movement on the national platform.

In late 1973, the AIA formed an energy committee to review how to construct energy-efficient buildings.16 In 1974, Congress passed the Solar Energy Research Development and Demonstration Act, which led to the creation of the Solar Energy Research Institute in Golden, Colorado.17 The Solar Energy Research Institute opened in 1977 and was later named the National Re-
newable Energy Lab ("NREL") and made part of the Department of Energy. NREL is the only federal laboratory dedicated “to the research, development, commercialization and deployment of renewable energy and energy efficiency technologies.”


President Carter signed the Department of Energy Organization Act in 1977. This legislation resulted from the continued energy crisis and, like President Nixon's formation of the EPA, it consolidated a number of fragmented entities into one department. The following year, President Carter signed the National Energy Act, which directed the Department of Energy to establish a minimum energy performance standard, which replaced the standards set by the Energy Policy and Conservation Act of 1975. The act also required federal agencies to perform energy surveys to identify ways to reduce energy consumption of non-renewable energy resources in buildings. In addition, this act enabled the government to offer loans to families for the purchase and installation of solar heating or cooling.

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equipment and created a grant program to schools that planned
to use energy conservation techniques.\(^{25}\)

In March of 1979, an accident occurred at the Three Mile Island
nuclear power plant, located just outside of Harrisburg,
Pennsylvania.\(^{26}\) This accident raised awareness about operational
dangers associated with nuclear power plants.\(^{27}\) Several months
later, in June of 1979, President Carter announced a program to
increase the nation’s use of solar energy and increase funds for
solar energy research and development.\(^{28}\) In July of 1979, Presi-
dent Carter proclaimed a national energy supply shortage.\(^{29}\)

**C. 1980 — 1989**

The energy crisis eased during the 1980s. As a result, the
sustainability movement lost steam with the exception of brief
periods after man-caused disasters and political crises, none of
which had effects that lasted long enough to generate sustained
attention to developing long-term solutions. Still, in June of 1980,
President Carter signed the Energy Security Act to promote
alternative energy sources.\(^{30}\) This act included legislation to
promote synthetic fuels, biomass energy, alcohol fuels, solar
energy, geothermal energy and hydroelectric power.\(^{31}\) In Septem-
ber of 1980, Iraq invaded Iran and both countries attacked each
other’s oil facilities, which caused an immediate increase in the
price of oil.\(^{32}\) After President Carter left office, the energy crisis
subsided.

\(^{26}\) United States Nuclear Regulatory Commission, Background on the Three
\(^{27}\) United States Nuclear Regulatory Commission, Background on the Three
\(^{30}\) The Library of Congress, Bill Summary & Status, 96th Congress (1979 —

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In April of 1986, a Soviet nuclear accident occurred at Chernobyl Reactor #4. In March of 1989, the Exxon Valdez oil spill occurred in Prince William Sound, Alaska, when the oil tanker bound for Long Beach, California struck Prince William Sound’s Bligh Reef and spilled up to 750,000 barrels of crude oil. To some degree, the Chernobyl and Exxon Valdez accidents reignited the sustainability movement due to the environmental impacts and loss of life associated with both man-caused disasters.

D. 1990-1999

Green building separated itself from the sustainability movement in the 1990s. Public and private sector innovation bolstered green building products and techniques, which led the federal government to set regulations to promote green building products and green building certification. This aspirational effort eventually led to prescriptive legislation on the federal, state, and local levels in the 2000s.

In August of 1990, Iraq invaded and seized Kuwait, which created an international crisis and caused an immediate spike in oil prices. The effects of this war placed the sustainability movement back on the political stage. Later that year, AIA formed the “Committee on the Environment” (“COTE”) to focus on energy efficiency and sustainable design. The EPA provided funding to COTE for the development of a building products guide based on a building’s life-cycle analysis. The individual product evaluations were eventually compiled in the AIA Sustainability Resource Guide.

In 1991, the EPA introduced the “Green Lights” program to promote efficient lighting systems in commercial and industrial

buildings. The following year, the EPA and the U.S. Department of Energy integrated the Green Lights program into the “Energy Star” labeling program to identify and promote energy-efficient residential and commercial products. Congress passed the Energy Policy Act in 1992, which amended the National Energy Act of 1978. This act reestablished minimum commercial building energy codes and set minimum residential codes. The National Energy Act also established efficiency standards for commercial and residential products, and provided federal support for renewable energy technologies.

President Clinton was instrumental in pushing green building forward on the federal level. He created the Office of the Federal Environmental Executive in 1993 to promote the construction or renovation of federal buildings in accordance with sustainability strategies. In 1993, President Clinton established the President’s Council on Sustainable Development to develop and recommend a national sustainable development action strategy to foster economic vitality.

A key development that promoted the development of broader green building standards was the incorporation of the USGBC in 1993. USGBC — which has widespread and vocal supporters and detractors — is a membership based, 501(c)(3) non-profit organi-
zation that by its own statement is “committed to a prosperous and sustainable future for our nation through cost-efficient and energy-saving green buildings.” In 1998, USGBC launched its Leadership in Environmental and Energy Design (“LEED”) green building rating system, which is currently the dominant rating system in the U.S. USGBC initially marketed LEED to private owners and developers of commercial buildings but has since pushed to get its rating system specified as the controlling standard within federal, state and local legislation.

In 1998, President Clinton issued Executive Order 13101 to promote the “greening” of government “through waste prevention, recycling and federal acquisition.” The following year, President Clinton issued Executive Order 13123 to encourage “Greening the Government through Efficient Energy Management,” which set aspirational goals to reduce energy consumption.

E. 2000 — 2009

The 2000s brought a shift from aspirational legislation to prescriptive legislation. As a result of President Clinton’s Executive Order 13123, several federal agencies started to define and specify prescriptive green building requirements on capital improvement projects. In 2000, the Navy became the first federal agency to have a project LEED certified. Shortly after the completion of this project, GSA, the nation’s largest landlord

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49 The name of the project is the Bachelor Enlisted Quarters at the Great Lakes Naval Training Center located in Great Lakes, Illinois and the Navy achieved LEED Bronze certification. The project was designed by Wight & Company and built by James McHugh Construction. See Garratt Hasenstab, Special Operation Navy Green—The Naval Standard of Sustainable Design (Sep. 23, 2010), http://www.greenbeanchicago.com/special-operation-navy-green/
and the federal agency responsible for meeting the space requirements of federal agencies, set forth regulations to mandate that all capital building projects achieve LEED certification.  

After the GSA specified green building on its construction projects, many other federal agencies fell in line with similar requirements, including the Department of the Interior, National Aeronautics and Space Administration, Smithsonian Institution, U.S. Air Force, U.S. Army, U.S. Navy, U.S. Department of Agriculture, U.S. Department of Energy, U.S. Department of Health and Human Services, and the EPA. In 2000, President Clinton signed Executive Order 13148, “Greening the Government through Leadership in Environmental Management,” which mandated that all federal agencies integrate sustainability accountability in day-to-day decision-making and long-term planning.

In 2001, states started to follow federal green initiatives when Maine Governor John Elias Baldacci became the first governor to issue an executive order that implemented green building requirements for all new or expanding state buildings. California was the second state to suggest green building standards when Governor Schwarzenegger signed an executive order in 2001 that recommended that the design, construction, and operation of all new and renovated state-owned facilities be certified LEED Silver. After Maine and California started this trend at the state level, a number of other states followed suit. In addi-

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51 For a complete list of federal legislation related to green building, please refer to: http://www.usgbc.org/PublicPolicy/SearchPublicPolicies.aspx?PageID=1776.


55 See the following section for a detailed review of all state level legislative developments.
tion, a number of cities followed state legislative action by imposing their own green building requirements.56

The G.W. Bush Administration also pushed green building and sustainability initiatives, similar to the Clinton Administration. In 2005, President Bush signed a new Energy Policy Act.57 The act provided tax incentives and loan guarantees for energy production of various types other than petroleum.58 The act also contains tax credit provisions for commercial buildings that make improvements to their energy systems.59 In 2006, various federal departments executed the Sustainable Buildings Memorandum of Understanding.60 This memorandum represents a federal initiative to develop a single green building standard and to provide leadership in the design, construction, operation, and maintenance of high-performance and sustainable federal buildings.61


Later in 2007, President Bush signed into law the Energy Independence and Security Act of 2007. This act contains a number of provisions related to green buildings and energy efficiency standards. As a result of these legislative developments, which applied to government-owned buildings, USGBC membership (consisting largely of participants in the private sector) grew steadily between 2000 and 2007.

The effects of the recent “Great Recession” slowed green building momentum, due in large part to the compression of the construction industry. The Great Recession created a credit crunch that led public and private owners alike to shelve projects throughout the country. Nevertheless, despite the soft construction market and the steady decline in USGBC membership, the legislative push for green building continued in 2008 and 2009.

In 2008, the Executive Council of the American Federation of Teachers adopted a Green Schools and Colleges Resolution, urged states to adopt green building legislation for school projects. President Obama issued Executive Order 13514 in 2009 that set sustainability goals for federal agencies, which focused on

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66 Membership figures are listed in past USGBC newsletters that can be found at: http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1940.

67 The federal government looks mainly to the National Bureau of Economic Research to determine when the U.S. enters and exits recessionary cycles. The NBER confirmed that this most recent recession started in December of 2007 and ended in June of 2009. See http://www.nber.org/cycles.html. Construction revenue figures, otherwise known as “put in place construction” are listed by the U.S. Census Bureau month and can be found at: http://www.census.gov/const/www/c30index.html.

68 Membership figures are listed in past USGBC newsletters that can be found at: http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1940.

sustainability, energy, and economic performance. This order requires that 95% of all applicable construction contracts meet specific sustainability requirements.

**F. 2010 — 2012**

The passage of green building legislation started to lag in 2010, due primarily to the downturn in the U.S. economy. According to the National Bureau of Economic Research, the recent recessionary cycle started in December of 2007 and ceased in June of 2009, and it was the longest and most severe economic downturn since the Great Depression. Recovery in the U.S. has been slow, particularly in the construction sector, where unemployment remains at a historically high level. Construction revenue in 2011 (approximately $827 billion) was two-thirds of what it was in 2007 (approximately $1.2 trillion). The downturn in the construction industry has shifted focus away from the green building movement, which will likely remain somewhat stagnant until the private market rebounds.

Congress has not passed legislation encouraging sustainability or green building since 2009. The only legislation to pass between 2010-2012 was House Resolution 1540. HR 1540, the “Department of Defense Reauthorization Bill,” was signed in December of 2011 and actually prohibits the use of funds for any LEED Gold or Platinum certification: “No funds authorized to be appropriated by this Act or otherwise made available for the Department of Defense for fiscal-year 2012 may be obligated or expended for achieving any LEED gold or platinum certification.” This is a shift from prior legislation that mandated or encouraged LEED...
certification in Federal and State construction projects. Still, private construction markets have shown signs of life in 2012, primarily due to the turn in the residential construction industry, which may return focus to the green building movement.

Although the green building movement has lagged for the past several years, man-caused and natural disasters continue to remind U.S. citizens of the importance of sustainability. In April of 2010, British Petroleum's Deepwater Horizon rig sank into the Gulf of Mexico and a ruptured pipe dumped as much as 4.9 million barrels of oil into the sea before the pipe was plugged and the well capped in mid-July. This disaster is the largest accidental release of oil in world history, which again reminded the public of the drawbacks of fossil fuel reliance. On March 11, 2011, a 9.0 earthquake triggered a thirty-foot tsunami that damaged several nuclear reactors at the Fukushima Dai-ichi nuclear power plant in northern Japan. Japan's nuclear accident is on par with the 1986 Chernobyl disaster in terms of the amount of radiation released. Moreover, the recent spike in oil prices continues to remind the public and its elected officials of the risks associated with foreign oil dependence.

G. A Review of Green Building Legislation on the State Level

States legislation to date that relates to green building is either aspirational or prescriptive and typically comes in the form of a bill or executive order. Between 2003 and 2011, several states have passed aspirational legislation and more than two dozen have passed prescriptive legislation. Aspirational legislation encourages state agencies to use green building strategies on capital improvements that are funded in whole or in part by the state. In certain instances, the state bills sets forth state incentives within the aspirational legislation. For example, the State of North Carolina enacted Senate Bill 581 on August 2, 2007, which permits counties and cities to provide building permit fee reductions or partial rebates to encourage construction of buildings using sustainable design principles to achieve energy efficiency:

achieve certification. It expressly permits certification where it can be accomplished at no additional cost (Section 2830(b)(4)), and permits waiver of this limitation by the Secretary of Defense (Section 2830(b)(2)).

76Ian Yarett and Kathy Jones, A timeline of the disastrous BP oil spill in the Gulf of Mexico, Newsweek, (May 22, 2010), http://www.newsweek.com/photo/2010/05/22/oil-spill-timeline.html#.

In order to encourage construction that uses sustainable design principles and to improve energy efficiency in buildings, a county may charge reduced building permit fees or provide partial rebates of building permit fees for buildings that are constructed or renovated using design principles that conform to or exceed one or more of the following certifications or ratings: [LEED, Green Globes, Similar].

The majority of prescriptive legislation passed by states to date provides an escape clause in the event that the greening effort is not economically feasible. Certain states define economic feasibility by a percentage of direct costs or by a rate of return over time. Others simply use more general terms to require green building “to the extent practicable,” or some similarly imprecise standard. For example, on February 11, 2005, Arizona’s Governor Napolitano signed Executive Order No. 2005-05, which requires all state-funded buildings to achieve green building certification:

All Executive Branch agencies shall implement to the extent practicable the following standards in all new state-funded facilities: C. LEED Standard — All state funded buildings constructed after the date of this Executive Order shall meet at least “silver” Leadership in Energy and Environmental Design (LEED) Standard.

As noted above, the executive order requires certain agencies to meet a number of items “to the extent practicable,” and one of the items requires agencies to obtain green building certification on state-funded buildings. This language is subjective in nature, and could be arguably optional. Other states, such as Colorado, provide definitive measures on escape clauses. On April 16, 2007, Colorado’s Governor Ritter signed Senate Bill 51 entitled “A Requirement for Increased Resource Efficiency for State-Assisted Buildings.” Senate Bill 51 enacted additions to Colorado Revised Statute 24-30-1305, providing:

(9)(b) A State Agency or Department controlling the substantial renovation, design, or new construction of a state-assisted facility shall perform the substantial renovation, design, or new construction to achieve the highest performance certification attainable as certified by an independent third party pursuant to the highest performance standard certification program for purposes of this paragraph (b), a certification is attainable if the increased initial costs of the substantial renovation, design, or new construction, including the time value of money, can be recouped from decreased operational costs within fifteen years.

(9)(c)(1) If the state agency or department estimates that such increased initial costs will exceed five percent of the total cost of the substantial renovation, design, or new construction, the general assembly’s capital development committee shall specifically examine such estimate before approving any appropriation.
Colorado, unlike Arizona, provides a formula to determine if green building is not practicable. If the increased initial costs of the project can be recovered within fifteen years through decreased operational costs, the green building standards are implemented. In addition, Colorado’s capital development committee must examine all estimates where green building costs increase a project’s budget by more than five percent.

By far the most progressive state in terms of green building legislation is California. California is the first and only state to adopt its own green building code, CALGreen. CALGreen sets forth a number of mandatory statewide code provisions and certain optional code provisions for local jurisdiction consideration.

According to the USGBC, the top ten states with the most LEED certified green buildings per capita are: (1) District of Columbia; (2) Colorado; (3) Illinois; (4) Virginia; (5) Washington; (6) Maryland; (7) Massachusetts; (8) Texas; (9) California (10) New York. California has over 71.5 million square feet of LEED certified space, more than any other state in the country, but ranks only number nine as the per capita metric only gives each person in the state 1.92 square feet of LEED certified space.

Appendix A to this article summarizes green building legislation on a state-by-state basis. One trend we note begins with the observation that early LEED standards provided a convenient off-the-shelf set of criteria that could be adopted as the standard by a jurisdiction enacting legislation. Since 2010, however, green building legislation has moved away from specifically recommending or requiring LEED certification. Rather, recent legislation is more focused on overall energy conservation and renewable energy imperatives. Of all the legislation passed in 2011, only five states use LEED in the statutory language, and of the five LEED is only used as a guideline or compliance pathway, not a mandate.

IV. A Review of the Leed and Green Globes Rating Systems

As we note below, competing green standards will likely be adopted in the place of LEED standards in future legislation. Nonetheless, because LEED is in many ways the best-defined


and historically most widely-adopted standard, we have chosen to investigate its details as well as those of the Green Globes rating system.

Popular green building rating systems around the globe include: LEED (U.S.); Green Globes (Canada); GEM (U.K.); Green Star (Australia); and HQE (France). In the U.S., the LEED and Green Globes program (Green Globes is promulgated by an organization known as the “Green Building Initiative” (“GBI”)) together encompass nearly the entire market, although that domination is unlikely to last. In the mid-1990s, USGBC largely targeted developers of new buildings for LEED certification, while GBI mainly targeted owners of existing buildings to gain Green Globes certification.\(^80\) Both organizations refocused their marketing efforts in the late 1990s and started to target public agencies and legislative bodies in an effort to gain market share in the public sector.

Currently, the number of commercial buildings in the U.S. with Green Globes certification (333 since 2008)\(^81\) is a small fraction of those with LEED certifications (31,267 as of March 26, 2012).\(^82\) However, newer state and federal level green building legislation frequently cites both LEED and Green Globes as acceptable certification standards. In addition, Green Globes is now the ANSI Standard for Commercial Green Building and GBI recently signed a memorandum of understanding with both ASHRAE and AIA.\(^83\)

In early 2011, the U.S. Department of Veterans Affairs announced that it will assess 173 hospital facilities using the Green Globes sustainability assessment and rating system. Since the VA hospitals are federally owned and must comply with Executive Order 13514, GBI was also contracted to measure conformance in all 173 hospitals. The Department of Veterans Affairs is the only government entity that has employed GBI to manage its sustainability compliance path. LEED is greatly favored by the states, but will most likely not gain any legislative ground in


\(^{82}\)The LEED data is listed at http://www.usgbc.org; GBI does not post the number of Green Globes certified projects in the U.S. on its website, the Green Globe data was listed at: Wayne Robertson, LEED and Green Globes: Which is For You? Energy Ace, Inc., http://srappa.ua.edu/LEED%20vs%20Green%20Globes,%20Which%20is%20Best%20for%20You%.pdf.

\(^{83}\)GBI, What is Green Globes?, http://www.greenglobes.com/about.asp.
2012 due to the release of the International Green Construction Code ("IGCC") and its likely adoption by many jurisdictions. Note, South Carolina, Arizona, and Florida have adopted the IGCC in the past month.

Although most construction attorneys have a rudimentary understanding of green building standards, the assessment of liability for green building failures\(^\text{84}\) will sometimes turn on details of those standards with which many attorneys (and courts) are not familiar. We now turn our attention to those two standards.

A. U.S. Green Building Council and Its LEED Certification Program

1. A Brief History of the USGBC

David Gottfried, an engineer, Mike Italiano, an attorney, and Rick Fredrizzi, a marketing consultant, founded the USGBC in 1993.\(^\text{85}\) The co-founders attended several of AIA's "Committee on the Environment" meetings in the early 1990s and determined that a volunteer committee led by representatives of a number of disciplines, not just design professionals, was necessary to further the growth of the sustainability movement.\(^\text{86}\) The co-founders turned out to be right: the USGBC "proved to be one of the most significant moves in advancing the building industry towards sustainability."\(^\text{87}\)

In 1994, the USGBC began development of the LEED point-based green building rating system to help determine the level of green design for any particular building.\(^\text{88}\) LEED "helped the designer with a structure of designated points in several broad categories including energy, water, materials, indoor sustainability, air quality, and site design."\(^\text{89}\) Robert K. Watson, a senior scientist for the Natural Resources Defense Council, spearheaded the

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\(^{84}\) We use the phrase "green building failures" to denote the failure of a building to satisfy applicable green building standards.


\(^{88}\) Jason F. McLennan, The Philosophy of Sustainable Design: The Future of Architecture, at 32.

\(^{89}\) Jason F. McLennan, The Philosophy of Sustainable Design: The Future of Architecture, at 32.
LEED program. Mr. Watson was a founding chairman of the LEED Steering Committee that gained consensus among various non-profit organizations, government agencies, architects, engineers, developers, builders, and product manufacturers.

The LEED certification program gained widespread attention in the construction industry, especially considering its relatively short existence. LEED rating systems are currently available for new construction, existing buildings, commercial interiors, core and shell, schools, retail, and homes. LEED certification is generally voluntary, but over the past seven years the federal government, various state governments, and a number of local governments passed legislation to mandate or encourage LEED certification for public construction projects that relate to commercial buildings.

2. Vision & Mission of the USGBC

USGBC’s vision is that “buildings and communities will regenerate and sustain the health and vitality of all life within a generation.” USGBC endeavors to build on this vision through its mission, “to transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life.” USGBC attempts to achieve this mission through the LEED rating system, educational programs, local chapters, Green Building conferences, and public policy advocacy.

3. LEED Green Building Certification Program

The LEED green building certification program allows developers and owners to arrange for the design of buildings of nearly any type, in an effort to gain LEED certification. LEED certification (which requires payment of a fee) is available for both new construction projects and existing building renovations.

The USGBC developed the LEED green building rating system as a point-based system to measure green building design,

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90 Jason F. McLennan, The Philosophy of Sustainable Design: The Future of Architecture, at 32.
94 USGBC also offers a variety of green building educational programs such as workshops, podcasts, online courses, and videos.
construction operations, and maintenance. Various LEED programs address nearly all building types such as commercial, institutional, residential, and neighborhood development. According to the USGBC, the LEED building criteria is designed to:

- Optimize the use of natural resources;
- Promote regenerative and restorative strategies;
- Maximize the positive and minimize the negative sustainability and human health impacts of the buildings industry;
- Provide high quality indoor environments for building occupants.

The mission of LEED is to encourage and accelerate global adoption of sustainable green building and neighborhood development practices through green standards and performance criteria. In line with those goals, certification requires inclusion of certain prerequisites and a threshold number of optional design components. The LEED rating system is broken down into five areas: (1) Sustainable Sites, (2) Water Efficiency, (3) Energy and Atmosphere, (4) Materials and Resources, and (5) Indoor Environmental Quality.

USGBC offers several levels of LEED certification based on the number of points earned. For example, on new construction projects, the point breakdown is as follows: LEED Certified (40-49 points); LEED Silver (50-59 points); LEED Gold (60-79 points); and LEED Platinum (80 points and above). The Green Building Certification Institute (“GBCI”), a separate 501(c)(3) company that interfaces with the USGBC, manages the LEED certification process so as to avoid the potential conflicts of interest that might otherwise be contained within the certification process.

4. USGBC’s 501(c)(3) Corporate Status

USGBC is frequently mistaken as a federal agency. Although based in Washington, D.C, USGBC is a private 501(c)(3) non-profit organization. This fact is important, and those who follow green building and green building certification should be mindful of the political forces that will shape green building certification in the future.

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A 501(c)(3) corporation is a tax-exempt organization that must operate for exempt purposes set forth in section 501(c)(3) (religious, charitable, scientific, testing for public safety, literary, educational, foster amateur sports, or prevention of cruelty to children or animals). No part of the net earnings of a 501(c)(3) corporation shall inure to the benefit of any private shareholder or individual.\textsuperscript{99} If a 501(c)(3) organization engages in a transaction that causes an excess benefit to a person that has substantial influence over the organization, an excise tax may be imposed on the person and any organization managers agreeing to the transaction. Section 501(c)(3) organizations are also somewhat restricted in how much political and legislative (lobbying) activities they may conduct. For 2010, USGBC’s lobbying ceiling was $6 million.\textsuperscript{100}

Although private organizations, USGBC and GBI (its erstwhile competitor) have been able to get their rating products specified in federal, state, and local legislation throughout the country over the past decade. As discussed later in this report, a move to eliminate this private, third-party inspection requirement is taking place at the state level.

5. LEED Rating System

The LEED rating system is designed for rating new and existing commercial, institutional, and residential buildings, as well as neighborhood development. LEED rating systems include the following components:\textsuperscript{101}

- **Minimum Program Requirements:** A project must possess minimum program requirements in order to be eligible for LEED certification. LEED certification may be revoked in the event of noncompliance with the minimum program requirements.


\textsuperscript{100} Form 990, Schedule C, pg.2 available at GuideStar, \url{http://www2.guidestar.org/organizations/52-1822816/u-s-green-building-council.aspx#}.

\textsuperscript{101} The USGBC periodically issues LEED program updates to take into account the evolution of technology, construction techniques, and available building materials. In addition, the new versions often add LEED programs for new building types and new markets. USGBC currently offers LEED certification for: Core & Shell, New Construction, Schools, Existing Buildings: Operations & Maintenance, Neighborhood Development, Retail, Healthcare, Homes, and Commercial Interiors. For the readers’ benefit, we note that the following versions of LEED standards have been published: LEED Version 1.0 (August 1998); Version 2.0 (March 2000); Version 2.1 (2002); Version 2.2 (2005); Version 3.0 (2009). The frequency with which new versions are promulgated counsels parties to be careful in the manner in which they specify compliance with LEED standards.
• **Rating System Structure:** The following categories are used in the LEED Rating System: Sustainable Sites; Water Efficiency; Energy and Atmosphere; Materials and Resources; Indoor Sustainability Quality; Awareness & Education (Homes); Location and Linkages (Homes); Smart Location and Linkages (ND); Neighborhood Pattern and Design (ND); Green Infrastructure and Building (ND); Innovation in Design/Operations; and Regional Priority.

• **Credit Structure:** All LEED standards contain four principal types of requirements: (1) Prerequisites; (2) Core Credits; (3) Innovation Credits; and (4) Regional Priority Credits. The credits and prerequisites in all LEED versions are presented in a common format.

1. **Prerequisites:** Required elements, all of which must be met before a project can be considered for LEED certification.

2. **Core Credits:** Specific actions a project may take in the various categories (i.e., Sustainable Sites; Water Efficiency; Energy and Atmosphere; etc.). Core Credits are voluntary, but each level of LEED certification requires that certain thresholds of credits used must be met.

3. **Innovation Credits:** Bonus credits given for exemplary performance beyond Core Credit performance levels or implementation of innovative actions that confer significant sustainability benefits not covered in the rating system.

4. **Regional Priority Credits:** Bonus credits that acknowledge the importance of local conditions in determining best sustainability design, construction, and operations practices.

The USGBC understands that each LEED program should be modified over time. The USGBC promotes performance-based credits, rather than prescriptive-based credits, wherever possible.

• **Weighting of Points:** USGBC allocates points based on direct human benefits and direct sustainability benefits. USGBC assigns the greatest weight to credits that most directly address prioritized impacts such as global warming, greenhouse gas emissions, fossil fuel use, and air and water pollutants. USGBC also contemplates market conditions when it assigns credit weights.

• **Regionalization:** USGBC offers bonus points for the achievement of credits that address issues that are important in a project’s location. USGBC local councils and chapters help identify important regional issues. USGBC re-evaluates regionalization credits in every LEED development cycle.
6. LEED Rating Example — LEED 2009 for New Construction and Major Renovations

The LEED rating systems for new construction and major renovations includes 100 possible base points, 6 possible Innovation in Design, and 4 possible Regional Priority points. There is a substantial amount of variation in the manner in which a building can achieve certification, and similarly, a substantial number of ways in which a building may fail to achieve certification — a point we will discuss in more detail in Part II.

i. Available Core Credits:

   a. Sustainable Sites (26 possible points)

   - Construction Activity Pollution Prevention (required)
   - Site Selection (1 point)
   - Development Density and Community Connectivity (5 points)
   - Brownfield Redevelopment (1 point)
   - Alternative Transportation — Public Transportation Access (6 points)
   - Alternative Transportation — Bicycle Storage and Changing Rooms (1 point)
   - Alternative Transportation — Low Emitting and Fuel Efficient Vehicles (3 points)
   - Alternative Transportation — Parking Capacity (2 points)
   - Site Development — Protect or Restore Habitat (1 point)
   - Site Development — Maximize Open Space (1 point)
   - Stormwater Design—Quantity Control (1 point)
   - Stormwater Design — Quality Control (1 point)
   - Heat Island Effect — Nonroof (1 point)
   - Heat Island Effect — Roof (1 point)
   - Light Pollution Reduction (1 point)

   b. Water Efficiency (10 possible points)

   - Water Use Reduction (required)
   - Water Efficient Landscaping (2-4 possible points)
   - Innovative Wastewater Technologies (2 points)
   - Water Use Reduction (2-4 possible points)

   c. Energy and Atmosphere (35 possible points)

   - Fundamental Commissioning of Building Energy Systems (required)

d. Materials and Resources (14 possible points)

- Storage and Collection of Recyclables (required)
- Building Reuse — Maintain Existing Walls, Floors and Roof (1-3 possible points)
- Building Reuse — Maintain Existing Interior Nonstructural Elements (1 point)
- Construction Waste Management (1-2 possible points)
- Materials Reuse (1-2 possible points)
- Recycled Content (1-2 possible points)
- Regional Materials (1-2 possible points)
- Rapidly Renewable Materials (1 point)
- Certified Wood (1 point)

e. Indoor Sustainability Quality (15 possible points)

- Minimum Indoor Air Quality Performance (required)
- Sustainability Tobacco Smoke (ETS) Control (required)
- Outdoor Air Delivery Monitoring (1 point)
- Increased Ventilation (1 point)
- Construction Indoor Air Quality Management Plan — During Construction (1 point)
- Construction Indoor Air Quality Management Plan — Before Occupancy (1 point)
- Low-Emitting Materials — Adhesives and Sealants (1 point)
- Low-Emitting Materials — Paints and Coatings (1 point)
- Low-Emitting Materials — Flooring Systems (1 point)
- Low-Emitting Materials — Composite Wood and Agrifiber Products (1 point)
- Low-Emitting Materials (1 point)
- Indoor Chemical and Pollutant Source Control (1 point)
- Controllability of Systems — Lighting (1 point)
- Controllability of Systems — Thermal Comfort (1 point)
- Thermal Comfort — Design (1 point)
- Thermal Comfort — Verification (1 point)
• Daylight and Views — Daylight (1 point)
• Daylight and Views — Views (1 point)

ii. Available Innovation Credits (6 possible points)
• Innovation in Design (1-5 possible points)
• LEED Accredited Professional (1 point)

iii. Available Regionalization Credits (4 possible points)
• Regional Priority (1-4 possible points)

7. LEED Certification Levels\textsuperscript{103}

The LEED rating system is based on a 100-point scale with 10 bonus points available for innovation in design, exemplary performance, or regional importance in a project’s location. LEED project certification is awarded according to the following scale:

• Certified: 40-49 points
• Silver: 50-59 points
• Gold: 60-79 points
• Platinum: 80 points and above

Although we will reserve a full discussion of the ramifications of this rating system for Part II, the reader can get some sense of the issues that will arise through a simple example: suppose a design-bid-build project requires that a building attain “Silver” LEED certification. If you walk through the point system, you will see that the owner, contractor, and design professional all influence the completed building, and with it, accept some potential responsibility for a green-building failure. Where a failure to obtain LEED Silver certification arises from a one-point shortfall in the final building’s attributes, that missing point might be traced to design issues for which the architect was responsible, to construction flaws for which the contractor was responsible, to material flaws for which a supplier is responsible, or perhaps to the overall certification strategy that the owner chose.

8. LEED Appeal Procedure\textsuperscript{104}

Given the stakes in some green projects, parties may not be willing to live with a certification decision, and an appeal system is in place for challenges. The GBCI manages the LEED certifica-


tion process and serves as the third-party administrator for the LEED appeal process, should a final decision on a LEED credit be contested.\textsuperscript{105} The GBCI’s appeal process has two levels—a First Level Appeal and a Final Level Appeal. With each level there is an appeal fee of $500 ($1,000 for an expedited appeal).

A First Level Appeal must be filed within twenty-five days of the initial determination and include: “1) supplemental documentation supporting such MPR, prerequisite and/or credit; as well as 2) an explanation addressing the issues in the technical advice provided with the denial of the MPR, prerequisite and/or credit.”\textsuperscript{106} Evaluation of supporting documents is then conducted by GBCI agents with no prior involvement with the credit in question. GBCI aims to deliver its determination with 25 days.

GBCI’s Final Level Appeal process involves additional resources. An appellant must file a Final Level Appeal within 25 days of the First Level Appeal determination. Upon issuance of a timely Final Level Appeal, the GBCI Chair appoints a three-person board. An appellant has 10 days to notify GBCI of any concerns or reasons to disqualify the appointed board members. The board must issue its Final Level Appeal determination within 60 calendar days. The board’s decision is made based on a majority vote. Expedited appeals follow the same procedure but the board must issue Final Level Appeal determinations within 30 days.\textsuperscript{107} Appeals can be taken by “(a)ny party with a direct and material interest, who may be adversely affected by actions or inactions inconsistent with the USGBC procedures with regard to the development, approval, revision, reaffirmation, or withdrawal of a LEED Green Building Rating System.”\textsuperscript{108} The appellant has the burden of proof of showing that proper GBCI procedures were not followed.

If the appeal panel rules in favor of the appellant, it may recommend that the LEED certification process (or part of it) be repeated, or provide another procedural correction to cure the GBCI’s action or inaction. In the event that the appeal panel rules against the appellant, it may recommend that the executive committee dismiss the appeal.

\textsuperscript{107}Id.
The most prominent appeal to date is the appeal for decertification of LEED Gold status for the Northland Pines High School, which is located in Eagle River, Wisconsin. The appeal for decertification was made by local residents who were licensed professional engineers. Appellants sought a revocation of LEED Gold certification for the Northland Pines High School (completed in 2006) because the building did not comply with the mandatory ASHRAE prerequisite standards for LEED certification. Appellants argued that any instance of non-compliance with ASHRAE Standard 62.1-1999 and 90.1-1999 for any level of LEED certification was prima facie grounds for denial. Appellants further contended that USGBC and GBCI promised a transparent process for the appeal, but appellants asserted that USGBC had not been forthcoming with key documentation. Taylor, the USGBC’s independent consultant, noted that many of the ASHRAE violations were corrected through the change order process. Appellants responded that certain violations likely still existed, which supported revocation of the LEED Gold status. For instance, appellants argued that no evidence existed to confirm that the precommissioning requirement for LEED certification ever took place.

Appellants argued in essence that USGBC’s and/or GBCI’s scrutiny of LEED applications was severely lacking. The USGBC disagreed and GBCI rejected appellants’ appeal. Although this appeal was rejected, the prospect that a certification once granted may be revoked is important in considering legal consequences.

B. Green Building Initiative, Inc. and Its Green Globes Certification Program

1. History of the Green Globes Program

The Building Research Establishment ("BRE") is a construction and sustainability research group that was created by the UK government but is now a private organization.

In 1990, BRE created a voluntary rating system to measure green buildings (BRE Sustainability Assessment Method ("BREEAM")). The Canadian Standards Association modified this rating system and labeled it “BREEAM Canada” in 1996. Thereafter, a private Canadian sustainability firm, ECD Energy & Environment Canada Ltd. (“ECD”), worked with the Canadian government to again streamline the BREEAM Canada rating

109 As noted below, the USGBC has been replaced by the GBCI for certification issues.

system. In 2000, the revised BREEAM Canada rating system was renamed, “Green Globes.”

In 2004, the Green Building Institute acquired the rights to distribute Green Globes in the United States. GBI was established in 2004 “to support mainstream design and building professionals.” Because of Green Globes’ narrow market share (when compared to LEED), GBI’s marketing efforts assert the importance of multiple rating systems (including Green Globes) to promote an atmosphere of healthy competition and to ensure continual improvements to sustainable design and construction methods and thereby lower costs.

In 2005, GBI became the first green building organization to be accredited as a Standards Developing Organization by the American National Standards Institute (“ANSI”). GBI and ANSI formed the “GBI ANSI technical committee” in 2006. GBI gained 501(c)(3) status in March of 2006.111 The by-laws for GBI list its purpose as: (a) Educating its audience about energy efficient and environmentally sustainable building practices; (b) Developing standards for energy efficient and environmentally sustainable building practices through a consensus based standard procedure; and (c) Promoting the adoption of standards for energy efficient and environmentally sustainable building practices.112

2. Vision & Mission of the GBI

GBI is a 501(c)(3) not-for-profit organization whose mission is “to accelerate the adoption of building practices that result in energy-efficient, healthier and environmentally sustainable buildings by promoting credible and practical green building approaches for residential and commercial construction.”113 GBI’s vision is bringing green to mainstream residential and commercial construction.114

GBI is fighting an uphill battle for market share of green building certification. GBI pursues this fight mainly with legislative efforts. GBI’s president, Ward Hubbell, notes that “Having more than one rating system helps to drive improvements and lower

costs. It’s good for building owners and developers, who benefit from access to a greater number of green building professionals, and it’s good for the environment because it encourages a greater number of people to design and build green.”

GBI markets Green Globes as a more cost-effective, less cumbersome alternative to LEED. To date, no fewer than twenty states have passed legislation that recognizes Green Globes as an equal option to LEED and/or other credible systems.

3. GBI’s 501(c)(3) Corporate Status

GBI is a private 501(c)(3) non-profit organization, as is USGBC. GBI’s lobbying ceiling amount, $1.5 million, is only a quarter of USGBC’s. Just as USGBC has faced scrutiny, so will GBI to the extent it appears to be operated more as a business than as a non-profit.

4. Green Globes Overview

Green Globes is a green building rating system that measures “the overall sustainability performance and sustainability of commercial buildings.” According to GBI, buildings that receive Green Globes certification: use less energy; conserve water resources; emit fewer pollutants (i.e., greenhouse gases, airborne pollutants, liquid effluents, solid waste, etc.); and provide a healthier indoor environment for occupants. Third-party assessors interface with project teams and building owners during the assessment process. Green Globes certification is available for commercial and residential buildings, and for new and existing buildings. In addition, GBI develops material to support the

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118 See http://www.thegbi.org/green-globes/.
Green Globes rating system, such as live web seminars, pre-recorded web seminars, videos, customer training, white papers, and other reference resources.

5. Green Globes System

The Green Globes rating system is designed for rating new and existing commercial and residential buildings. Green Globes rating systems include the following components:

- **Minimum Program Requirements**: A project must possess minimum program requirements in order to be eligible for Green Globes certification.

- **Rating System Structure**: The Green Globes program assesses sustainability impacts on a 1,000 point scale in the following categories: (1) Project management policies and practices; (2) Site; (3) Energy; (4) Water; (5) Resources, building materials, and solid waste; (6) Emissions, effluents, and other impacts; and (7) Indoor environment.

- **Credit Structure**: The Green Globes differs from LEED in that it only has one type of point credit, as opposed to LEED's prerequisites, core credits, innovation credits and regional priority credits.

- **Regionalization**: Green Globes does not appear to offer points for a project's location.

6. Rating Example — Green Globes New Construction Criteria and Point Allocation

The Green Globes rating system for new construction includes 1,000 possible points. The points are broken down as follows:

i. Project management policies and practices (50 possible points)
   a. Integrated design process (20 possible points)
   b. Sustainability purchasing (10 possible points)
   c. Commissioning plan — documentation (15 possible points)
   d. Emergency response plan (5 possible points)

ii. Site (115 possible points)
   a. Development area (30 possible points)
   b. Minimization of ecological impact (30 possible points)
   c. Enhancement of watershed features (15 possible points)
   d. Enhancement of site ecology (40 possible points)

iii. Energy (361 possible points)

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a. Building energy performance (100 possible points)
b. Energy demand minimization (99 possible points)
c. Energy-efficient systems (66 possible points)
d. Renewable sources of energy (20 possible points)
e. Energy-efficient transportation (76 possible points)

iv. Water (57 possible points)
a. Water performance (30 possible points)
b. Water conservation features (27 possible points)

v. Resources, building materials, and solid waste (80 possible points)
a. Systems and materials with low sustainability impact (35 points)
b. Materials that minimize consumption of resources (16 points)
c. Building durability, adaptability, and disassembly (14 points)
d. Reuse and recycling of construction/demolition waste (5 points)
e. Facilities for recycling and composting (10 possible points)

vi. Emissions, Effluents, and Other Impacts (55 possible points)
a. Minimization of ozone depletion (25 points)
b. Avoiding contamination of sewers or waterways (5 points)
c. Pollution minimization (25 possible points)

vii. Indoor environment (180 possible points)
a. Ventilation (50 possible points)
b. Source control of indoor pollutants (35 possible points)
c. Lighting (45 possible points)
d. Thermal comfort (20 possible points)
e. Acoustic comfort (30 possible points)

7. Green Globes Certification Levels

The point threshold for the various levels of Green Globes certification are as follows:

- **One Globe:** 350 — 540 points (Per GBI, this demonstrates movement beyond awareness and a commitment to good energy and sustainability efficiency.)
- **Two Globes:** 550 — 690 points (GBI asserts this demon-
The GBI accepts appeals from those affected by its decisions. The appellant has the burden of proof at the appeals hearing to establish an improper GBI action/inaction, damage from such action/inaction, and a reasonable solution to cure the situation. The Secretariat has the burden to prove the subject Committee took reasonable action/inaction. A further appeal may be made to ANSI if the appellant followed the appeals process properly. In such instance, the appellant must provide notice of such further appeal to GBI.

C. Differences Between LEED and Green Globes

LEED and Green Globes both endeavor to green the design and construction process through a rating system. Green Globes attempts to differentiate itself from LEED by its promotion of a “user-friendly” web-based system, whereas LEED markets the fact that it implements a “consensus-based” process for the development of green building standards. Currently, Green Globes’ methodology is the simpler of the two, as it employs an interactive guide to assess and integrate green design principles for buildings.

USGBC recently narrowed this “user-friendly” differentiation when it launched its own online-based system for LEED, but critics claim “it remains more extensive and requires expert knowledge in various areas.” Similarly, GBI narrowed the “consensus-based” differentiation when it was named as an accredited standards developer for the American National Standards Institute (“ANSI”). ANSI requires a consensus-based process for

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standard development. Green Globes’s recent launch of its Design v.1 criteria represents a shift to an increase in transparency, prescriptive methods, and performance based outcomes.

All in all, the two systems are similar and only a few notable differences exist. Approximately 80% of available points in the Green Globes system are addressed in LEED 2.2 and approximately 85% of the points specified in LEED 2.2 are addressed in the Green Globes system. One notable difference between the two systems is the point value that is assigned to certain aspects of green building. For example, Green Globes emphasizes Energy Use above all other categories. In contrast, LEED allocates more points to the Materials section. Another notable difference is the use of prerequisites. LEED requires a no-point minimum performance level in categories such as energy use, erosion control, and indoor air quality, while Green Globes awards points for similar actions. Because of this difference, Green Globes certification is arguably easier to attain than LEED certification. One last difference is the award of points for strategies vs. outcome. Green Globes awards points for certain strategies and outcomes, whereas LEED allocates points for only performance achievement.\(^\text{123}\)

Although the LEED and Green Globes programs are explicitly cited as an approved independent third-party certification program, recent moves on the state level suggest a move away from private third-party certification requirements to statewide green building code adoption, which would likely eliminate the need for third-party certification. This topic is discussed in detail in the following section.

V. The Move in Green Building Review From Private Organizations to Local Building Inspectors

The green building movement is maturing and green construction products, techniques, and costs are better understood by owners, designers, and constructors. Although the vast majority of domestic green building legislation has specified private third-party certification rather than green building requirements, current legislation is more focused on the passage of green building codes.

For example, the State of California recently adopted “CAL-Green,” a mandatory statewide green building code for nonresi-

dential structures. California’s adoption of CALGreen signifies a move away from private third-party review, inspection, and certification of green building components, to a more traditional approach where local building inspectors review and inspect the design and construction of a project for code compliance.

The State of California adopted CALGreen in January 2010, and it went into effect in January of 2011. The stated purpose of CALGreen is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: 1. Planning and design; 2. Energy efficiency; 3. Water efficiency and conservation; 4. Material conservation and resource efficiency; and 5. Environmental quality. CALGreen also notes that it is not a code substitute or certification program. Rather, CALGreen is simply a part of California’s building code.

If other states follow in California’s footsteps and develop their own green building code, then green construction products and techniques will be incorporated into projects by mandate; therefore, some third-party certification process, while a benefit, may no longer be needed to ensure green building practices. On the other hand, the International Code Council (“ICC”) might eliminate these obstacles.

The ICC develops codes, such as the International Building Code, that are used to construct residential and commercial buildings. All fifty states have adopted ICC codes at the state level. State agencies also follow ICC codes. The ICC published

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its International Green Construction Code early this year.\textsuperscript{131} The IgCC is written in mandatory language, with its purpose “to produce environmental benefits on a massive scale: a scale impossible to attain with purely voluntary green building programs and rating systems.”\textsuperscript{132} The ICC acknowledges that voluntary certification programs pioneered the foundation of the green building movement; the IgCC’s aim is to cause a market transformation for the segments that don’t use voluntary programs.\textsuperscript{133}

The ICC is clear to point out that the IgCC is not a rating system; nevertheless, it incorporates project electives that exceed minimum requirements — as do rating systems.\textsuperscript{134} The IgCC allows jurisdictions to customize the code to address local environmental concerns. ICC promotes the fact that once a jurisdiction selects the options, the program is mandatory so that it limits the choices made by owners and design professionals.\textsuperscript{135} In other words, the IgCC is composed mostly of mandatory requirements (a number of which are selected by the local jurisdiction) with very few choices left to the owner and/or designer. ICC contends that this approach will produce more predictable performance results.\textsuperscript{136}

Should states and federal agencies adopt the IgCC, the design and construction industry will implement green building practices on nearly all construction projects throughout the country. To date, Maryland and Oregon are the only states to have implemented any legislation mentioning the IgCC. Maryland passed House Bill 972 which simply authorizes adoption of the IgCC by its local jurisdictions. Oregon incorporated Public Version 2.0 of the IgCC as a baseline for its “2011 Oregon Reach Code,” which is an optional green building guideline amended to fulfill other jurisdictional codes in Oregon. Such adoption could change the complexion of the green construction industry as it could cause a significant setback for private organizations like USGBC and GBI. If there is a mandatory green building code, the need for third-party green building certification would evaporate — green construction would be inspected by local building inspectors just as on traditional construction projects. More-


\textsuperscript{132} ICC, Synopsis of the IGCC, (Mar. 2010), at 2.

\textsuperscript{133} ICC, Synopsis of the IGCC, (Mar. 2010), at 2–3.

\textsuperscript{134} ICC, Synopsis of the IGCC, (Mar. 2010), at 2–3.

\textsuperscript{135} ICC, Synopsis of the IGCC, (Mar. 2010), at 2–3.

\textsuperscript{136} ICC, Synopsis of the IGCC, (Mar. 2010), at 2–3.
over, owners may no longer see the benefit of private certification when green building practices are required by code — why would an owner pay USGBC to certify that its project is constructed in compliance with the International Green Construction Code?

Since the introduction of CALGreen, LEED certification in California has dwindled. Before the introduction of CALGreen and at the height of Congress supporting the sustainable movement in 2009, California had 1,423 buildings registered for LEED certification. In 2011, after the introduction of CALGreen, the state had only 786 LEED registered buildings. The authors anticipate seeing a small increase in LEED certified buildings throughout 2012 as the average time between registration and certification averages out at 843 days (roughly 2 years and 4 months). Over the long term, however, the authors expect a decrease in LEED certified buildings as more and more states and their local jurisdictions adopt the IgCC.

The LEED program is also expected to be negatively influenced by Congress’s passing of the Department of Defense Reauthorization bill (HR 1540). This act prohibits the DoD from using funds for LEED gold or platinum certification. It also calls for a cost/benefit analysis where ASHRAE 189.1, ASHRAE 90.1, ANSI and LEED Gold and Platinum certifications have been used as a design standard for DoD buildings, to be submitted by June 30th of this year. To exacerbate the blow of the loss of the DoD’s support, on March 7, 2012 the Deputy Under Secretary of Defense stated that the Army will no longer be using LEED certification; it will instead be using its own construction code which is to be substantially based on ASHRAE 189.1 and released later this year.

If the forecast is grim for LEED and the USGBC for new DoD construction, there has been an encouraging surge of LEED certifications for existing buildings. In 2011, LEED-certified existing building square footage transcended that of new construction by over fifteen million square feet. This trend is likely to continue.

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139 Statement made before the House Appropriations Committee by Dr. Robyn http://www.greenbuildinglawupdate.com/uploads/file/03_07_12%20Dorothy%20Robyn%20Testimony%20copy.pdf.
through 2015, or until the IgCC becomes more widely adopted. In addition, the USGBC has proven that its standards and business models are malleable, and USGBC may adopt changes in both to remain an important market participant.

States and local authorities may be slow to adopt the IgCC because of the impact it will have on the cost of construction. If initial construction costs increase, the economic viability of planned development projects could be jeopardized, constraining building development just as the country struggles to recover from the recent recession. In addition, the adoption of the IgCC somewhat skews the accepted purpose of building codes — public health, safety, and welfare. Green building parameters are mainly focused on energy efficiency and conservation, not safety.

VI. Conclusion and a New Introduction

As noted at the outset, this article is the first of two papers. Its function is to identify some of the background for our subsequent discussion of the assessment of liability for green building failures. In this closing Section, we want to suggest some ways in which the discussion above will serve as the basis for our next paper.

A. Conclusion

The legislative developments over the past forty years that relate to sustainability and green building changed the design and construction industry. Federal legislation in the 1970s and the early 1980s set minimum energy efficiency parameters for mechanical, electrical, and plumbing systems, and promoted alternative energy sources such as wind, solar, and geothermal. The green building movement grew from this legislative push for sustainability. In the early 1990s, the public and private sectors worked alike on greening the design and construction industry. Green building initially took shape in the private commercial market from these efforts.

Once the LEED certification program gained wide recognition and USGBC started to effectively lobby its product to government entities, President Clinton issued a number of aspirationally-based executive orders that encouraged federal agencies to implement green building practices. Several federal agencies, such as the GSA, took this request to heart in the early 2000s and mandated that all new capital improvement projects gain LEED certification. In 2001, states followed suit and started to enact aspirational or prescriptive-based legislation, as green building costs, products, and techniques became more widely understood. It must be noted that most of these prescriptive-based enact-
ments included an escape clause for public agencies in the event green building was not practicable for a particular project. One could argue that an escape clause makes legislation of this sort quasi-prescriptive in nature, rather than purely prescriptive. At the federal level, however, it is abundantly clear that HB 1540 is prescriptive as to DoD projects, in the other direction.

Much of the recent green building legislation to date specifies LEED and Green Globes as acceptable third-party certification programs. While the need for at least two qualified rating systems formerly carried importance for market reasons, diversity of certification programs may well become largely irrelevant with the promulgation of legislation in the form of sustainable building codes.

California’s adoption of a mandatory statewide green building code, CALGreen, represents a trend to move green building review and inspection away from private organizations and over to local building inspectors. Over time, this dynamic will assuredly alter the green building regulatory process. If more states start to adopt a green building code, third-party certification would be an extravagance — designers could simply design to the green code, constructors would install work per code, and building inspectors would inspect the design and the construction process, as is now the case with traditional construction practices.

The ICC published its green building code, IgCC, in March 2012. Although California developed its own green building code, it is not likely many other states have the facilities or capacity to undertake such a separate endeavor. The United States Army is developing its own building code and the other armed forces are likely to follow suit, eliminating federal support of the LEED program. The publication of the IgCC will allow states to adopt a uniform green building code that is consistent throughout the country but can still be amended to comply with existing local jurisdictional legislation based on the level of compliance chosen. In addition, all fifty states follow the International Building Code, which is an ICC product, as well as other ICC products. Therefore, the IgCC provides states with an easy path for state-wide green building code adoption. If states move in this direction, the obligatory independent third-party inspection requirement will fall out of the legislative process, representing a significant impact to the relevance USGBC and GBI have on green building legislation.

In sum, green building legislation will continue evolving as

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141 http://www.iccsafe.org/cs/igcc/Pages/default.aspx.
B. A New Introduction

Why is all this background important — or even interesting — to questions related to the allocation of liability for green building failures? At the outset, we have recited the fundamental purposes of green building regulations and the goals they are designed to achieve. The assumption that green building codes actually achieve the results they are designed to achieve is not as clear as one might think. What if green building codes themselves — aspirational or mandatory — do not actually promote real energy savings, cleaner water, or healthier working environments? Suppose a project fails to achieve the status of a purported “energy savings” building, but those savings cannot reliably be shown to result from compliance with the green code. Is there any damage? Is anyone responsible?

With respect to a project’s failure to satisfy a green building code, a brief review of the manner in which some buildings are certified as green (especially by third-party services) reveals that the owner may be responsible for a failure to obtain certification, although the failure may be traced to a bad design or some failure by the contractor to satisfy construction mandates. While we have used the phrase “green building failure” as shorthand for a project’s failure to obtain certification, it cannot be understood as denoting a particular source of such failure, any more than “retaining wall collapse” attributes blame to an individual party — there are many possible sources.

Turning to the adoption of mandatory green building codes — as opposed to merely aspirational codes — questions will arise concerning the extent to which the violation of such a code constitutes negligence per se. As we will explore, the issue may turn on the nature of a green building code — is it a safety code, a socioeconomic code, an aesthetic code? Exactly who is intended to be protected by green building codes? Owners? Occupants? Society at large?

Although the promulgation of green building codes raises many questions, the authors believe that traditional construction law tools provide a framework for allocating responsibility for green building failures. In Part II of this article, we will develop that framework in detail.
Appendix A

The following describes legislation in states that have enacted green building legislation — aspirational or prescriptive.¹

- **Alabama** (Aspirational): In May of 2006, Governor Riley issued Executive Order 33, which encourages all state departments to employ the latest energy conservation practices in the design and construction of buildings (i.e., purchase Energy Star equipment whenever cost effective).
- **Alaska**: No green building laws.
- **Arizona** (Prescriptive): In February of 2005, Governor Napolitano signed Executive Order 2005-05 that requires all state agencies to design and construct state funded buildings such that at least 10% of the energy is generated from a renewable source (most likely solar due to the abundant sunshine in AZ) and to meet at least the LEED Silver standards.
- **Arkansas** (Aspirational): In February of 2005, Arizona enacted a bill to promote the conservation of energy and natural resources in the design and construction of state buildings (Arkansas code 22-3-1801 through 22-3-1808). This bill requires that state agencies evaluate construction strategies on all new buildings and renovations with one of the stipulated rating systems (LEED or Green Globes). This bill also applies to Public Private Partnerships and projects that receive public funding.

**2011/12 (Prescriptive):** Act 803 was passed to “promote the conservation of energy and natural resources in buildings owned by public agencies and institutions of higher education; and for other purposes.” Amongst implementation of issuance of energy efficiency policies and water conservation, this bill also calls for baseline reductions as per ASHRAE 90.1-2007 standards. This bill also calls for action when, after one year’s time, a building is not performing in accordance with expected reductions.²
- **California** (Prescriptive — 1st State to Adopt a Green Build-

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ing Code): In January of 2010, California’s Building Standards Commission adopted the 2010 edition of the California Green Building Standards Code (CGBSC). This adoption represents the nation’s first statewide Green Building code. The code took effect on January 1, 2011. Governor Arnold Schwarzenegger praised the development, saying, “With this first-in-the-nation mandatory green building standards code, California continues to pave the way in energy efficiency and sustainability protection.” See http://www.gov.ca.gov/press-release/14186/. This new standard includes: indoor air standards to improve air quality; a 20% reduction in indoor water use; a 50% reduction in construction waste; occupant recycling, maintenance and operation information; and a comprehensive appendix which contains measures local government may use to go beyond the mandatory code minimum in a uniform statewide manner.

- **Colorado** (Prescriptive): State congress passed Bill 07-051 in September of 2007, which requires state funded building projects to achieve the highest attainable performance certification if the increased initial cost of this certification can be recouped by virtue of lower operational costs within fifteen years. If the initial cost is greater than 5%, the General Assembly’s Capital Development Committee shall review and approve such higher initial expenditures. This bill also allows for a compliance exemption for extenuating circumstances.

2011/12: HB 1160 was passed which requires the governor’s energy office to create an incentive based pilot program in which homeowners who are purchasing energy efficient, green-built homes will be given a grant to make their current primary residence more energy efficient. The current primary residence of the homeowner must be below the current minimum standards for energy efficiency and their new home purchase must be built highly energy efficient.

- **Connecticut** (Prescriptive): In October of 2009, congress passed Senate Bill 2052 which sets forth tax credits for citizens who construct buildings that achieve LEED Gold certification (or equivalent certification). In June of 2007, the governor signed House Bill 7432 titled “An Act Concerning Electricity and Energy Efficiency.” The act requires certain state funded commercial construction projects to achieve LEED Silver (or equivalent) certification. Applicable projects include: state facility construction of $5 million or more, and public school renovations of $2 million or more.

2011/12: HB 1243 (now Act 11-80) was passed. This act cre-
ates a “green bank” used to loan funds for green projects as authorized by the Clean Energy Finance and Investment Authority. This is the first “green bank” in the nation.

- **Delaware** (Prescriptive): In July of 2010, Delaware enacted Amendment 3 to Bill 59, which requires local governments to adopt the “the highest available energy conservation code [as determined by the Delaware Energy Office] of the ICC/IECC.” This amendment also notes that energy standards for state funded new buildings shall meet the latest available standard of ASHRAE/IESNA (except agricultural structures).

- **Florida** (Prescriptive): In July of 2007, Governor Crist signed Executive Order 07-126 which requires that state agencies and departments adopt LEED standards for all new and existing buildings and enter into lease agreements for office space that meet Energy Star building standards (unless no other viable options exist).

- **Georgia**: No green building laws.

- **Hawaii** (Prescriptive): In 2006, Hawaii passed Bill 2175 that requires LEED Silver standards for buildings that receive 50% or more in state funding.

- **Illinois** (Aspirational (small projects) & Prescriptive (large projects)): In July of 2009, Illinois passed Public Act 096-0073, which requires: all new state funded construction and major renovations of existing state owned facilities seek
LEED or Green Globes certification; all state funded projects to achieve the highest level of certification possible that is within the project budget; and for state funded projects of 10,000 square feet or more the minimum certification must meet LEED Silver certification (or equivalent). The act includes a waiver for non air-conditioned buildings and for projects where certification does not make financial or functional sense.

- **Indiana** (Prescriptive): In June of 2008, Governor Daniels signed Executive Order 08-14 which requires that all new state buildings be designed and constructed to meet green building standards (LEED Silver, two globes rating under Green Globes, Energy Star, or equivalent rating system that is accredited by ANSI) to “the extent this can be accomplished on a cost effective basis, considering construction and operating costs over the life cycle of the building.” A similar goal is stipulated for renovations to existing state buildings, but the minimum certifications (like LEED Silver) are not listed.

- **Iowa**: In July of 2009, Iowa passed legislation that allows building officials to certify a project as sustainably designed. Iowa’s Building Code Bureau charges fees for this certification, which would be on top of third party certification, like LEED.

- **Kansas**: No green building laws. The state did pass Senate Resolution 1856 in which it congratulated the first LEED Gold certified high school for its LEED achievement.

- **Kentucky** (Aspirational): In 2010, Kentucky passed an Act (KRS Chapter 157) that relates to the efficient design in school buildings. The act encourages the Kentucky Department of Education and all school districts to: meet or exceed efficient design standards; use life-cycle cost analysis; and consider net zero building. In addition, this act encourages the application for LEED Silver certification (or equivalent).

- **Louisiana** (Aspirational): In 2007, Louisiana passed Act No. 270, which encourages energy efficiency and conservation requirements for certain state funded projects. This act calls for the optimization of energy performance and the reduction of the discharge of pollutants from state funded buildings. Specifically, this act encourages the application of the Energy Star designation and the certification from a third party rating system.

- **Maine** (Prescriptive): In 2003, Governor Baldacci issued Executive Order 08FY04/05, which requires that all state build-
ings be constructed and renovated per USGBC LEED standards provided this can be accomplished on a cost-effective basis.

- **Maryland** (Prescriptive): In April of 2008, Governor O’Malley signed Senate Bill 208, “High Performance Building Act.” This act *requires* buildings constructed or renovated solely with state funds to be high performance buildings (LEED Silver or two globes in the Green Globes rating System) if this can be accomplished on a cost-effective basis (the Secretary of Budget and Management to make this decision).

  **2011/12** (Prescriptive): HB630\(^3\) was passed on October 1, 2011. This requires that any new residential structure receive a silver rating of the International Code Council’s 700 National Green Building standards or LEED Silver certification as defined by the USGBC’s LEED for Homes rating system. HB 972\(^4\) was passed which authorizes the “... Department of Housing and Community Development to adopt by regulation the International Green Construction Code; authorizing local jurisdictions to adopt and make local amendments to the International Green Construction Code ...”.

- **Massachusetts** (Prescriptive): In April of 2007, Governor Patrick issued Executive Order 484, “Leading By Example — Clean Building and Efficient Buildings.” This E.O. *requires* that all new construction at state agencies and significant renovation projects over 20,000 square feet meet a Massachusetts LEED Plus building standard. This standard *requires*: LEED Certification; energy performance of 20% or better than MA Energy Code; independent 3rd party commissioning; reduction of outdoor water consumption by 50% and indoor water consumption by 20% relative to standard baseline projections; and conformance with at least 1 of 4 identified smart growth criteria.

- **Michigan** (Prescriptive): In November of 2007, Governor Granholm issued Executive Directive 2007-22, “Enhanced Energy Efficiency and Conservation by State Departments and Agencies.” This E.D. *requires* that all state funded construction projects (all new projects and renovation projects over $1 million) be designed and constructed in accordance with LEED standards.

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\(^3\) [http://mlis.state.md.us/2011rs/chapters__noln/Ch__135__hb0630T.pdf](http://mlis.state.md.us/2011rs/chapters__noln/Ch__135__hb0630T.pdf)

\(^4\) [http://mlis.state.md.us/2011rs/chapters__noln/Ch__369__hb0972E.pdf](http://mlis.state.md.us/2011rs/chapters__noln/Ch__369__hb0972E.pdf)
- **Minnesota** (Prescriptive): Minnesota Statute 16B.325, “Sustainable Building Guidelines,” notes that all new buildings and major renovations (over 10,000 square feet) receiving state funding must adhere to Minnesota’s sustainable building guidelines.

- **Mississippi**: No Green Building laws.

- **Missouri**: No Green Building laws.

- **Montana**: No Green Building laws.

- **Nebraska**: No Green Building laws.

- **Nevada** (Aspirational): In 2009, Governor Gibbons signed into law Senate Bill 395, which notes that the design and construction of state buildings (new construction and renovations), if economically feasible, should consider LEED certification, Green Globes certification, Energy Star standards, ASHRAE standards, Federal Energy Management standards, and/or International Energy Conservation Code standards.

- **New Hampshire**: No Green Building laws.

- **New Jersey** (Prescriptive / Aspirational): In 2008, Governor Corzine signed Senate Bill 843 and 2146, which revised Title 52 of New Jersey’s Revised Statutes. This bill mandates that all new state buildings of 15,000 square feet or more be designed and constructed to meet high performance green building standards (LEED Silver; Green Globes two globe rating; or comparable rating). In 2002, Governor McGreevey issued Executive Order 24, which encourages that all new schools that receive state funding to be designed and constructed to incorporate LEED guidelines.

- **New Mexico** (Prescriptive): In January of 2006, Governor Richardson issued Executive Order 2006-001, “State of New Mexico Energy Efficient Green Building Standards for State Buildings.” This E.O. mandates that the design and construction of certain state buildings (new buildings and renovations) follow green building practices (LEED Silver for new buildings and renovations over 15,000 square feet). In April of 2009, Governor Richardson signed Senate Bill 291 “Sustainable Building Tax Credit.” This S.B. provides tax credits to building owners (residential and commercial) that achieve LEED Silver certification or higher.

- **New York** (Prescriptive / Aspirational): In August of 2009, Governor Paterson signed the State Green Building Construction Act. This act requires that the construction or substantial renovation of public buildings conform to LEED, Green Globes, and/or ANSI programs, to the maximum
extent practicable. This law supersedes several executive orders (Executive Order 111 and 142, both signed by Governor Pataki). In August of 2008, Governor Paterson signed Senate Bill A10684-B which established a green residential building grant program to encourage the construction of new homes and renovations that follow green building standards (LEED for Homes or equivalent).

- **North Carolina** (Aspirational): Congress passed Senate Bill 581 in 2007 which allows counties and cities to provide building permit fee reductions or partial rebates to encourage Green Building construction.

**2011/12** (Prescriptive): SB 708 was passed in 2011 and became effective January 1, 2012 and mandatory as of March 1, 2012. This act requires mandatory compliance with the North Carolina Energy Conservation Code (NCECC). The NCECC is for both commercial and residential new construction and will realize compelling energy savings through stricter code on various building components such as building envelope enhancements and window performance.

- **North Dakota**: No Green Building laws.

- **Ohio** (Prescriptive): In September of 2007, the Ohio School Facilities Commission passed Resolution 07-124 which sets a LEED Silver standard for school projects. This resolution also notes that LEED fees will be paid by the Commission and directs a supplemental allowance to project budgets to attain LEED points in the energy and atmosphere category.

- **Oklahoma** (Prescriptive / Aspirational): In May of 2008, Oklahoma enacted Enrolled House Bill No. 3394, which requires the design and construction of public buildings (with at least 50% state funding and that are greater than 10,000 square feet) to follow LEED or Green Globe guidelines if financially feasible (test: if the increased construction costs can be recouped within 5 years). This resolution also encourages Energy Star designation by the EPA.

- **Oregon** (Prescriptive): In January of 2006, Governor Kulongoski issued Executive Order 06-02 titled “Sustainability for the 21st Century.” This E.O. requires all new state buildings to meet, at a minimum, LEED Silver or equivalent status. Major renovations are also required to achieve LEED Certified (or equivalent status).

**2011/12**: HB 3672 is a tax credit provision offered for commercial construction or retrofitting of an existing building. This act accepts LEED Platinum certification as a qualifier for said tax credit. Oregon also passed HB 2960 and HB
2325 relating to energy tax credit provisions. Lastly, on July 1, 2011 the state’s Building Codes Division set notice of permanent rule of the adoption of the 2011 Oregon Reach Code. The 2011 Oregon Reach Code is based off of version 2.0 of the IgCC (International Green Construction Code) and is to be used voluntarily by those who choose to go above and beyond the existing state code.

• **Pennsylvania** (Aspirational): In July of 2005, Governor Rendell signed House Bill 628 into law (Act 46 of 2005). This statute provides funding to public schools that achieve LEED Silver or Two Green Globes certification or higher.

• **Rhode Island** (Prescriptive): In October of 2010, Rhode Island enacted the Green Building Act. This act requires that all public buildings, including schools, be constructed or renovated to meet LEED Silver or equivalent standards. In August of 2005, Governor Carcieri signed Executive Order 05-14 titled “Energy and Environmental Performance Standards for New Public Buildings.” This E.O. stipulates that any new or renovated state funded building must be designed and built to achieve LEED certification (goal of LEED Silver or higher), if economically feasible.

• **South Carolina** (Prescriptive): In June of 2007, Congress overrode a Governor veto to pass the “Energy Independence and Sustainable Construction Act.” This act mandates that all major facility projects be designed, constructed, and at least certified as two globes per the Green Globes rating system or the LEED Silver standard. A major facility project includes: a state funded building larger than 10,000 square feet; a state funded renovation that involves more than 50% of the replacement value of the facility or a change in occupancy; or a state funded commercial interior tenant fit-out project that is larger than 7,000 square feet.

• **South Dakota** (Prescriptive): In February of 2008, Governor Rounds signed Senate Bill 188 which established high performance building design and construction standards for newly constructed or renovated state-owned buildings. Specifically, this act requires these buildings to achieve LEED Silver or two globe Green Globes rating, if economically feasible (if the increased costs can be recouped from decreased operational costs within 15 years).

**2011/12** (Aspirational): SB 0094 was passed which applies to residential and commercial buildings and states that North Dakota has adopted the International Energy Conservation Code and encourages but does not require its usage.
Tennessee: No Green Building laws.


Texas: No Green Building laws.

2011/12: HB 51 was passed. This act requires high performance design, construction and/or renovation of any state building or university. The standards are defined by the State Energy Conservation Office (SECO) and each building must be certifiable as high performance by the evaluation system(s) approved by SECO. HB 1728 was also passed which calls for “energy savings performance contracts and energy efficiency planning” as it relates to the state’s Education Code.


Vermont: No Green Building laws.

2011/12 (Aspirational): The state enacted HB 446, an appropriations bill, with Section 47 relating to State Energy Use. The bill calls for energy consumption reduction goals and progress tracking. One specific goal stated within the bill is a 5% reduction in fuel, measured by Btu, from state employees traveling to and from meetings during the workday.

Virginia (Prescriptive): In June of 2009, Governor Kaine signed Executive Order 82 (2009) titled “Greening of State Government.” This E.O. mandates that the design and construction of all new state buildings greater than 5,000 square feet, and all renovations where the cost of the renovation exceeds 50% of the value of the building, shall meet “Virginia Energy Conservation and Environmental Standards” for energy performance and water standards, and such buildings shall conform to LEED Silver or Green Globes two globe standards, unless an exemption is granted by the director of the Department of General Services. This E.O. supersedes an earlier executive order issued in 2007 (E.O. 48 (2007)). In March of 2008, Congress passed H 239, which set forth tax benefits for certain certified energy efficient buildings (buildings certified by either: Green Globes, USGBC, EarthCraft, or Energy Star).
Washington (Prescriptive): In 2009, Congress passed green building legislation titled “High-performance public buildings” (Chapter 39.35D RCW). This legislation requires certain state funded construction projects (major facility projects and public school projects) to be designed, constructed, and certified to at least the LEED Silver standard or Washington sustainable school design protocol.

2011/12: HB 2020 was enacted. This act, as it relates to capital project funding, appropriates funding for “energy operational cost savings improvements to school facilities,” and will be granted if they meet the requirements of the bill.

West Virginia: No Green Building laws.

Wisconsin (Prescriptive): In April of 2006, Governor Walker signed Executive Order 145 which set LEED green building guidelines (or comparable guidelines) for the construction of new state buildings and for the renovation of existing state buildings.

Wyoming: No statewide Green Building laws. 2011/12: HB 179 was passed. It gives local municipalities the authority to adopt energy efficiency and/or renewable energy improvements within their local jurisdictions. This has been noted as a hallmark bill by the USGBC as it enables “... policy innovation at the local government level...”