Counsel's Role in Sustainable Solutions: Pay Now or Pay Later

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ABSTRACT

What, if any, connection is there between law and sustainability or sustainable development? Law, like sustainability, seeks to conserve our rights and those of others. Logic dictates that these fields must intersect. A full analysis of all statutory, regulatory, and jurisprudential authority that pertains to sustainability principles would be voluminous and daunting, not only to the author but also to the reader. This article aims instead at more modest and efficient goals by providing an overview of the prevalent legal issues associated with sustainable development while also offering potential solutions to these issues.

Attempts to define sustainability have been offered by many trade organizations and textbooks. Perhaps the most cited definition of sustainability was formulated at the 1987 convention of the Brundtland Commission; however, that definition is lacking, as it utilizes a negative in defining sustainable development, instead of encouraging positive and proactive action and thought.

The first sustainable development pioneers did not even realize they were founding a movement. Legislation began to more prevalently influence sustainability during the presidential administrations of the 1960s and 1970s. Although legislative and regulatory authority has expanded over the last thirty to forty years, including the introduction of tax credits and other incentives related to sustainable development, the largest strides have resulted from standards developed by non-profit organizations. As technology evolves, sustainability law must also evolve to keep pace with the technology and principles developed by private organizations.

Many of the legal issues surrounding sustainable development are neither new nor novel; they are issues encountered on most construction and development projects. Some of the more common issues relate to contract formation, breach of the standard of care, breach of contract, breach of warranty, and intellectual property issues. Sustainability principles offer a twist on these issues, however, which may have dire

consequences for the unwary.

Some suggestions or proposals to mitigate risk and address these issues include self-education and awareness, client education and interaction, and if necessary, engagement of legal counsel during the negotiation and drafting of the contract, employing sustainable objectives.

INTRODUCTION

What, if any, connection is there between law and sustainability or sustainable development?[2] For all practical purposes, these fields *should* share minimal common ground. Law seeks to establish a set of rules or processes that govern how societies are to act and the consequences for failures to act accordingly.[3] Conversely, sustainability or sustainable development requires innovative and progressive thought that pushes its pioneers to operate predominantly outside an established system of rules, if solutions are to be provided to many of the underlying issues necessitating the sustainability movement.[4]

Despite the counterintuitive forces behind these disciplines, law is a necessary precept of sustainability and the solutions it seeks. Many sustainability pioneers are engineers or scientists who thrive on structure, which is one of the foundations of law and legal systems. The contributions of these individuals increase when known constants and parameters exist by which they can adapt their actions, methods, and research. More importantly, the opportunity to innovate and develop new technology heightens the opportunity to deceive and operate haphazardly or negligently. Without law, sustainability would be chaotic and merciless, as fossil fuel exploration and development was in the late 19th and early 20th centuries.

Recall the film *There Will Be Blood*, and one of the most memorable lines, when Plainview explained to Eli:

> *Drainage! Drainage, Eli! Drained dry, you boy! If you have a milkshake and I have a milkshake and I have a straw and my straw reaches across the room and starts to drink your milkshake. I drink your milkshake! I drink it up!*[5]

Without a legal system and principles to guide and deter actors in all fields, we could all go underground and drink our neighbor's milkshake

with no possibility of recourse. Law, like sustainability, seeks to conserve our rights and those of others.

Sustainability isn't merely the opportunity to conserve but is also the ability to create a new future. This brave new world requires not only innovative thought but capital and the ability for sophisticated and educated parties to corroborate. This is impossible without some sense of order to govern relationships and foster the trust necessary to ensure progress of the sustainability discipline and all of the divisions it will ultimately produce. Although one would logically expect these fields to move in vastly different directions, logic dictates that they must intersect.

A full analysis of all statutory, regulatory, and jurisprudential authority that pertains to sustainability principles would be voluminous and daunting not only to the author but also to the reader. This article aims instead at more modest and efficient goals by providing an overview of the prevalent legal issues associated with sustainable development while offering potential solutions to these issues.[6]

What Exactly is Sustainability or Sustainable Development?

The term sustainability is one of the trendy buzzwords making the rounds in political and media circles over the last several years.[7] The *green* movement has become a focal point for snake oil salesmen and charlatans posing as proprietors with a conscience.[8] Many laypeople have diminutive knowledge of sustainable principles and what these principles can accomplish for this generation and its descendants. Instead, for them, sustainability evokes thoughts of hybrids, hippies, granola, melting glaciers, and endangered species. Green has become the new green.[9] Sustainability is not Birkenstocks, Save the Whales, or following the dogma of *An Inconvenient Truth*. It is a process built on efficiency, effectiveness, and progress. More specifically, sustainability and sustainable development are not synonymous with the USGBC or LEED.[10] While LEED standards promote sustainable development, they are a small piece of the pie.

There is no perfect definition for sustainability or sustainable development. Thumbing through various pieces of literature on the subject reveals that each textbook, trade association, and governmental organization has crafted a slightly different definition for sustainability, sustainable development, sustainable construction, and sustainable design. These definitions utilize some of the following phrases:

- Cradle-to-cradle thinking[11]
- Green building principles[12]
- The integration of natural systems into design principles
- Development that has a positive impact on building while having minimal impact on future generations
- Reducing non-renewable resource consumption, minimizing waste, and creating a productive environment
- A positive, integrated, and holistic method of design, construction, and operation that focuses on all phases in the life cycle of a building or structure
- The efficient utilization of resources in the natural environment for future societal benefit

Perhaps the most cited definition of sustainability was formulated at the 1987 convention of the Brundtland Commission, formed by the United Nations to study and address the dangers of environmental degradation and its effect on continued economic and human development. The report issued by the Commission produced a definition of sustainable development frequently used throughout the world:

> *Development that meets the needs of the present without compromising the ability of future generations to meet their own needs*

Many of the definitions strive for the unattainable, as sustainability and its principles are continually evolving. While the definition provided by the Brundtland Commission does go beyond the other definitions, it lacks one imperative factor—it utilizes a negative in defining sustainable development, as it focuses on actions we should not be doing, instead of encouraging action and thought for future generations to act more responsibly and efficiently than their ancestors. Another failure of the foregoing definitions is that each views sustainability or sustainable development as a straight or static line, which is counterintuitive to the definition itself. If we do not continue to progress and evolve, we will digress, which by its very nature, is unsustainable.

In an attempt to join the list of culprits, the following is offered as an alternative definition for sustainable development:

> *Sustainable development is the implementation of thought, ideas, and actions that address the needs of the present while enabling and en-*

couraging future generations to act more efficiently and responsibly in meeting their needs while continuing to evolve contemporaneously with their environment.

As can be seen from this exercise, there are many definitions that share common characteristics and slightly similar meanings but remain somewhat different. As discussed in greater detail herein, if either the term sustainability or sustainable development is utilized in an agreement, document, or proposal, it is imperative to establish a definition of the term between the parties. Otherwise, a court, arbitration panel, or other tribunal will be left to interpret the meaning of sustainability as it pertains to your project.

The Infancy and Growth of Sustainability

The first sustainable development pioneers did not even realize they were founding a movement. Many architects and engineers raised during the Great Depression, and who subsequently lived through the rationing during World War II, began recycling or experimenting with recycled materials in their building designs in the late 1940's and early 1950s.[13] These practices, however, were not precipitated out of a sense of social responsibility for future generations but out of experience and self-preservation.

Recycling and rationing learned during one global upheaval eventually expanded, due to later global upheavals centering on the exploitation of natural resources. Subsequent to the formation of OPEC and the Oil Crisis of 1973, westerners became concerned about energy independence and the ability to sustain their way of life. Out of the Johnson, Nixon, Ford, and Carter administrations arose the first legislation that would serve as a precursor and impetus to the sustainability movement.

The Clean Air Act was enacted in 1963 to control air pollution within the United States.[14] This act provides authority for—and mandates—the addressing, monitoring, and fighting of airborne contamination due to toxic substances. Not only was the act one of the first national environmental laws enacted in the United States, it was also one of the first laws to provide an environmental cause of action for aggrieved individual citizens.

When the Clean Air Act was amended in 1970, Congress also passed the National Environmental Policy Act (NEPA) and formed the

EPA.[15] NEPA sought to protect, maintain, and enhance the environment, in large part through enforcement of its policies by the EPA.

Additional legislation was enacted by Congress in 1975 with the passage of the Energy Policy and Conservation Act (EPCA) of 1975. Among other things, EPCA set specific efficiency standards for heating, ventilation, and air conditioning (HVAC) equipment.[16] Over the last several years, EPCA has been criticized as being archaic, which has even spawned litigation, as discussed in greater detail herein.

What could and should have been the most beneficial legislation aimed at sustainability principles was passed in 1978 as part of the National Energy Act. The Public Utility Regulatory Policies Act (PURPA) sought to create and foster the development of renewable energy by providing for (1) the conservation of energy; and (2) the optimization of efficiency in use of facilities and resources by public service companies.[17] PURPA also intended to increase the market for electric power production and alternative electricity sources by establishing a market from which to obtain power from non-utility power plants. More precisely, PURPA sought to force public service companies to buy power from independent power producers at an avoided cost rate, the rate the utilities would incur if they were to generate power from another source. Although PURPA did accelerate deregulation and conservation, which are two of many branches of sustainability, it has many weaknesses. As noted by Robert U. Ayres and Ed Ayres in their book *Crossing the Energy Divide*, one of the fundamental weaknesses of PURPA was that it didn't efficiently encourage competition in local power production and distribution because it left the power of enforcement to the states.[18] Certain states, such as the author's home state of Louisiana, have completely ignored PURPA.[19] The Ayres accurately summarized the problems with PURPA, concluding, "…the Act has no teeth."[20]

Another problem with PURPA is a revision of administrative law that should have provided it some strength. With the deregulation of the utility markets and open access to electricity transportation arising from FERC Order 888 and its progeny, utilities now have a much larger market by which to purchase and trade power, thereby alleviating the few restrictions placed on utilities by state regulatory agencies and public service commissions. Were electricity distribution in the United States more similar to that in Europe, Order 888 would have stimulated the effects of PURPA.

Despite its deficiencies, some have credited PURPA with the devel-

opment of cogeneration and tri-generation, which have played an active role in the renewable energy and sustainability revolutions. PURPA continues to exempt some projects from certain restrictive regulations, thereby enabling some renewable energy projects that would otherwise be destroyed by bureaucracy.

Over the last thirty years, new legislation, procedures, and edicts associated with the sustainability movement have been enacted or issued, including the following:

- The Clean Water Act of 1977 and the Water Quality Act of 1987[21]
- The Kyoto Protocol
- The creation and expansion of numerous federal and state tax credits that encourage sustainable projects
- The enactment of energy efficiency performance contracting laws
- The enactment and establishment of green or sustainable building and construction codes
- The establishment of grading systems such as the Leadership in Energy and Environmental Design (LEED) scoring system[22]

The last 18 months have seen substantial action on the legislative and regulatory front. On October 5, 2009, President Obama signed Executive Order 13514. The Order acknowledges that the federal government is the largest consumer of energy, as well as addresses carbon management initiatives and sustainability goals.[23] In January 2010, the SEC released interpretative sustainability guidance for publicly traded businesses.[24] The regulations require publicly traded businesses to provide information on the impact of legal or business developments related to climate change, including:

- Impact of legislation and regulation
- Impact of international accords
- Indirect consequences of regulation or business trends
- Physical impacts of climate change

It is unknown what the lasting impact of this guidance will be, if any. No new regulations or further information has been provided by the SEC since January 2010.

A new version of the *Guides for the Use of Environmental Marketing Claims* was also issued in 2010, although this guidance is provided for

members of the public concerning green marketing and promotion, as opposed to substantive sustainability policy.[25]

In December 2010, the EPA announced that in July 2011 it will propose revised standards for power plants to reduce greenhouse gas (GHG) emissions, which will become final in May 2012 and November 2012.[26]

There remains no set of established sustainability rules or procedures similar to the Internal Revenue Code, U.S. Bankruptcy Code, or SEC Regulations.[27] Similar to sustainable development, sustainability law is a new frontier and must continue to evolve based on existing legal principles and the progression of the sustainable development movement.

BUILDINGS, BUILDING REGULATIONS, AND SCORECARDS

Buildings

When asked what the largest energy consumer is in the United States, most Americans would immediately and mistakenly answer automobiles. Many would be shocked to learn they were incorrect, as the largest energy culprit is our buildings. Annually, approximately 40% of all energy consumed, 70% of all electricity consumed, 40% of carbon dioxide emissions, and 40% of raw materials consumed in the United States is from the construction, maintenance. and operation of buildings.[28] Of this amount, approximately 52% is attributed to residential buildings, with 48% attributed to commercial buildings. The numbers continue to increase, as there are currently more than 82 million residential buildings and over 75 billion square feet of commercial office space in the United States.[29] Buildings are also the largest consumers of water and contribute the most to water contamination. Buildings unquestionably consume vast natural resources and their construction creates mounds of waste, while the continued operation of buildings is the biggest pollutant on our planet.

Inevitably, we can't promote sustainability without promoting energy efficiency, and by the same token, we can't promote energy efficiency without promoting building efficiency. While lawmakers have been slow to act, many of the engineers and scientists leading the sustainability revolution are cognizant of these facts, as supported by the recent push to modify and retrofit existing buildings while ensur-

ing that the design and construction of new buildings emphasizes zero sum energy buildings, or even energy plus buildings.[30] These practices are directed primarily at building or design principles that seek to consume, waste, or pollute less. In more recent years, there have been attempts to develop written sustainable building standards on the local, national, and international levels. One of the more successful set of standards is premised on voluntary compliance, as established by the U.S. Green Building Council (USGBC) in 1993. The USGBC is not a governmental entity but a private non-profit organization that originally obtained funding from private and government grants but now utilizes membership dues to fund its operations and refinement of its standards. It currently has over 19,000 members, and its standards and initiatives are found in almost every state.

LEED[31]

The USGBC is best known for the establishment and administration of the LEED thirty-party certification program, a rating system for developing high-performance, sustainable buildings. LEED was developed to provide a definition and common standard of measure for green building, promote integrated holistic design practices, and raise consumer awareness of green building benefits. Through LEED, the USGBC has defined and published rating systems for the implementation of sustainability measures in various building types.

The LEED standards are performance-based; a building may earn points for satisfying criteria tied directly to the impacts of design, construction, and operation of the building. Over the last twelve years, the standards have been modified, with the newest iteration (LEED v3) being released in February 2009. LEED v3 (also known as LEED 2009) includes a new development process, an updated version of LEED online, revisions to the third-party certification program, and revisions to the rating system. LEED 2009 also provides a scoring section that is applicable to specific regions of the U.S., where climate and humidity may be vastly divergent. Perhaps the most important change in LEED 2009 is the focus on building practices that improve energy efficiency and reduce carbon dioxide emissions, to which previous versions assigned less weight.

An additional revision in LEED 2009 is the establishment of minimum project requirements (MPRs). If the MPRs are not met, a project will automatically be denied certification. Some of the more important

MPRs include compliance with all environmental laws and providing all energy use data to USGBC for five years, as well as site and occupancy requirements. Although LEED remains far from perfect, the revisions are a step in the right direction.

LEED rating systems are available for the following types of construction: (i) new construction and major renovations; (ii) existing buildings and operations & maintenance; (iii) commercial interiors; (iv) retail interiors; (iv) core & shell; (v) schools; (vi) retail; (vii) healthcare; (vii) neighborhood development; and (viii) homes.

The rating systems are further subdivided into the following categories: (i) sustainable sites; (ii) water efficiency; (iii) energy & atmosphere; (iv) materials & resources; (v) indoor environmental quality; and (vi) innovation & design credits.[32] Points are awarded for items that have sustainable features or benefits in each of the categories.

Through LEED v3, a project can receive the following scores:

- Certified (40-49 points)
- Silver (50-59 points)
- Gold (60-79 points)
- Platinum (80 points or more)

The maximum score a project may receive is 110 points. The rating system for new construction and major renovations is the predominant system and the cornerstone of LEED. It sets high performance standards for commercial and industrial new construction and major renovation projects, including offices, governmental buildings, recreational facilities, and manufacturing facilities. The remaining systems are becoming more utilized but still do not enjoy the widespread acceptance of the new building standards.

LEED is not a self-certifying process. To receive certification, construction must be complete, with the building ready for occupancy. The process for certification commences with pre-design registration with the USGBC and must be updated during design and construction. Supporting documentation (such as photos and other records) and verification with LEED compliance at each step of the construction process is required. Upon completion of construction, the grading is performed by the Green Building Certification Institute (GBCI), which is a third-party affiliate of USGBC.[33] GBCI reviews the documentation for each point that the applicant asserts it has earned. If satisfied with the information provided, GBCI will total the points, or credits.[34] The higher the rating

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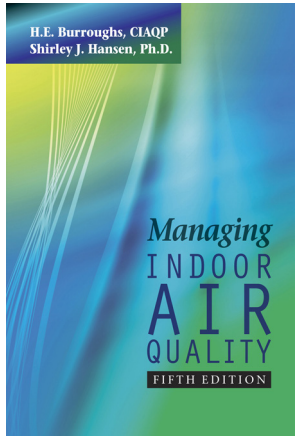

H.E. Burroughs, C.I.A.Q.P., and Shirley J. Hansen, Ph.D.

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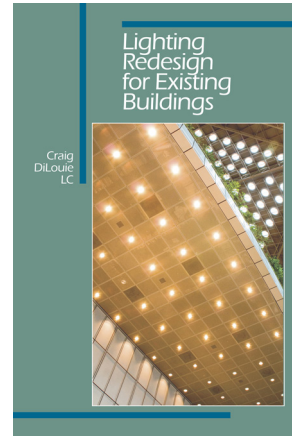

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level, the more high-performance and sustainable is the building, according to USGBC. The rating system may also produce adverse results, whereby the project may fail to achieve the minimum number of points and thus fail to become certified at one of the foregoing levels.

Applicants have at least one chance to appeal rejected points and to provide clarification or documentation to substantiate the requested points. Appeal fees are $500 per credit; an appeal must be submitted within 25 days of certification or failure of a project to be certified. Upon receipt, the USGBC has an additional 25 days to render a decision. If the decision is still adverse to the applicant, there is the possibility for additional review through a GBCI special committee. Final decisions are ultimately made by the USGBC, with no other right of review. The USGBC frequently notes that LEED is not a dispute resolution procedure but a certification process.

Even after certification, a project may be challenged within the first two years for failing to comply with certification standards. If the complaint has merit, decertification is probable.[35] Decertification may also occur during the five-year audit of energy performance. One may ask how the two-year and five-year periods mesh vis-à-vis one another. The provisions are not mutually exclusive, as the two-year period is for compliance purposes only and generally arises out of a complaint by an interested person. Conversely, under the five-year period, decertification can only occur through failure to maintain performance, the question of which must be raised by the USGBC.

While not universally accepted, over the last fifteen years, many cities and states have adopted the LEED certification principles through statutes, regulations, and ordinances governing construction within their jurisdictions. The adoption of LEED and other standards have assisted in progressing and promoting sustainable development principles, but they have also created several problems, as discussed herein.

Green Building and Construction Codes

Partly due to the rise of the standards promulgated by USGBC, over the last decade the development and implementation of green building or construction codes has increased in many states and cities. Legislation and regulation are actually more responsible for the increase in green construction, as opposed to green construction being responsible for the increase in statutes and regulations adopting LEED and other standards.

Much of the legislation, however, focuses on incentives related to sustainable development, as opposed to penalties. This is due to the potential for political backlash and green building codes conflicting with individual property rights, as well as to uninformed legislators and councilmen. For example, states such as North Carolina allow cities to reduce building permit fees for green construction. Other states offer incentives tied to reduced permit fees, bonus density, and tax incentives. Some of the most progressive cities on the green building front are Arlington, Virginia; Baltimore; Oakland, Monterrey, and Santa Monica, California; Chicago; San Francisco; Seattle; New York City; and Gainesville, Florida.[36] Two other cities have made strides on the sustainability front by seizing on opportunities resulting from disasters—New Orleans and Greensburg, Kansas.[37] Although this is a topic for another day, the examples of these two cities show that one of the silver linings of a disaster may be the opportunity to retrofit the infrastructure and building codes of communities, instead of mere individual buildings.

Boston was the first major metropolitan area to mandate green requirements for private construction and development. In 2007, the city amended its zoning codes to mandate that all new buildings over 50,000 ft^2 and all substantial renovations of buildings over 100,000 ft^2 be LEED certified. Neither USGBC nor GBCI is the party that makes the final determination, however, as this falls on agencies within the municipality, such as the Boston Redevelopment Authority and the city green building committee.[38]

While Boston was the first metropolitan area to mandate compliance with certain green requirements, Washington, D.C., has developed perhaps the most comprehensive requirements of any metropolitan area with the enactment of the D.C. Green Building Act in 2006.[39] While the D.C. law is premised on LEED and its requirements, it is not a series of standards but rather statutory law, and it applies to any new construction or substantial improvement of commercial property with 50,000 square feet of floor space (or more) subsequent to 2012. As with Boston, all private construction must achieve LEED or equivalent certification.[40]

Potential problems may arise upon implementation of the D.C. Green Building Act. For example, prior to commencement of construction, the owner must provide a performance bond to the city. If the project does not achieve certification, the bond will be forfeited to the district. The maximum amount of the bond is $3 million, depending on the size of the project. Parties have an alternative to this process by

providing a letter of credit or an escrow account, both of which may also be forfeited to the district.[41] This provision is not only strict and punitive, but potentially unconstitutional.

Although green building codes have not been implemented in any state, California recently passed legislation that takes effect in 2011. The legislation is known as CalGreen and focuses on energy efficiency and water consumption.[42] In all likelihood, other states will soon follow the lead of California.

Many states have also offered tax incentives and other initiatives, such as subsidies to cover the increased up-front costs associated with sustainable construction, all of which are aimed at encouraging greater sustainable construction and development.[43] Many of these standards have worked, as government intervention has pushed the sustainable development movement. As sustainable construction is evolving, so are sustainable building policies and laws. Despite these advancements, there is no perfect set of laws or standards that will be adopted on the state, national, or international level in the foreseeable future.

An initial step to achieving an international standard may have occurred when, in March 2010, the International Green Construction Code (IgCC) was released for public comment. It is anticipated to be finalized and released by Summer 2012.[44] IgCC was developed by the American Association of Architects (AIA), ASTM International, American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), International Code Council (ICC), USGBC and Illuminating Engineering Society (IES).

IgCC is distinguishable from LEED standards developed by the USGBC, as it doesn't promote standards or scoring criteria but mandates requirements for energy efficiency and promotes renewable energy systems. In this regard, LEED 2009 promotes many of the same objectives as IgCC. If widespread adoption is accomplished, it has the potential to significantly reduce energy consumption in building design, construction, and operation.

IgCC is not intended to replace building codes such as the International Building Code (IBC) but will be supplementary to existing building codes. IgCC must be adopted by ordinance or enacted by legislative ambit and will be administered by governmental employees, as opposed to the USGBC. As adopted, IgCC would apply to all new and existing buildings. If enacted, its requirements will be mandatory and non-compliance will result in fines, penalties, or required renovations

and retrofits to bring the buildings into specific compliance with IgCC. Not unexpectedly, the enactment of IgCC could be costly for developers, contractors, and, ultimately, consumers.

Are Green Building Codes Legal?

There are potential fundamental problems with green building laws and construction codes—Do the regulations impermissibly intrude on the property rights of citizens and the constitutional requirements of due process?

Without providing a full legal analysis of the constitutional requirements, limitations, and procedures for constitutional violations, which are beyond the scope of this work, the major issues of concern are: (i) what appeal rights there are when a non-governmental actor is the party determining whether the law has been violated; (ii) whether cities may enact their own building codes; and (iii) the weight of government control and society as a whole versus the right of the private property owner to utilize land and resources as the owner chooses.[45]

Due Process Concerns

Several municipalities, such as the District of Columbia, have begun to mandate that private buildings meet LEED certification standards or an equivalent standard.[46] Certification is determined, however, by a non-governmental actor, without the right of appeal through a court or administrative judge. It is highly doubtful that this was ever intended by the USGBC—and it certainly was not intended by the U.S. Constitution. Most attorneys and political scientists would agree that these standards violate constitutional protections, and they would be correct. Without providing substantial detail, it is highly probable that a party will soon challenge these standards, either by (i) asserting that the building code is unconstitutional, as it includes no due process protections for review; and/or (ii) filing suit against the USGBC.[47] Although both scenarios are possible, the best bet for success lies with the former.

Preemption

In certain circumstances, local building codes may be preempted by federal law. This is what happened in the case of AHRI v. City of Albuquerque.[48] In AHRI, the City of Albuquerque passed a city code that was more stringent than federal law (EPCA). The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) brought suit, arguing that the city code conflicted with EPCA. Although the judge ruled that

EPCA preempted Albuquerque code, this may not have been the correct result. EPCA addressed performance standards for equipment, whereas the city code addressed building standards. The question left open by the court was, Does the federal code cover buildings or products? This question has yet to be answered.

Other issues have arisen more recently. BIAW v. State of Washington was a case that gained notoriety through the publication of the petition on the website of Attorney Shari Shapiro.[49] BIAW concerns the conflict of PACE grants and the Washington Building Code. The Building Industry Association of Washington (BIAW) filed suit, with a complaint structured similar to the complaint of AHRI. The case has not yet been decided, but as noted by Shapiro, the Washington code is not blanket or mandatory.[50] If it is not mandatory, one wonders how the code could preempt federal law? The argument that BIAW will likely offer is one of substance over form—that although the code does not state it is mandatory, by application it is mandatory. The Washington State Building Code Council has sought to have this matter dismissed based on an exception in EPCA concerning its interaction with local and state building codes. It remains to be seen how the court will decide this issue, and whether the decision will make its way up the appellate ladder.

The question is, Who is right and has the power to enact building codes—the states or the federal government? Traditionally, building codes have been a local issue reserved to the states, and thereafter reserved to local governments. Additionally, states acted and passed progressive codes, while the federal government remained sedentary. One advantage to federal legislation, however, is that it would be uniform. The argument will persist until the passage of a national energy building code, or the question is decided by the courts.

Property Rights

A final issue regarding legality concerns the property rights of private parties versus society as a whole. Consider the following illustration. A developer purchases a certain tract of land and intends to subdivide it for commercial development. At the time the land is purchased, there are only normal building and zoning restrictions. After the developer has advanced the initial purchase price and other development costs into the land, such as paving, highway, and electric and sewage infrastructure, the municipality in which the property is located

passes certain green building restrictions that require the developer to either completely ditch the project or spend substantial sums in rehabilitation fees. Does the developer have a right to sue the municipality on the basis that it has improperly expropriated his land or infringed on the right to fully utilize his land for full economic benefit? Perhaps, but as with all legal answers, it depends on other facts and circumstances, such as the knowledge the developer possessed of the building code modifications, procedural due process, appeal rights of the developer, and the basis and necessity for the passage of the ordinance. One way for the city to address some of these issues is through an appeal process wherein a waiver of restrictions is permitted in certain circumstances, or through grandfathering certain property or developments that have not yet been permitted for construction but for which substantial work has been undertaken by the developer.

Ultimately, it will be up to individual courts and jurisdictions to determine the ability of governments to encroach on private property rights, and initially there will likely be some differing opinions, depending on the region or jurisdiction in which the issue is located. If previous judicial opinions are any indication, courts in the Southern United States and parts of the Midwest will side with the property owners, while courts in the Northeast and on the Pacific coast will side with the governmental agency.

While no cases have fully addressed these issues, one recent case, Okeson v. City of Seattle, 150 P. 3d 556 (Wash. 2007), did address some of these issues. In Okeson, Seattle City Light adopted plans to promote sustainability principles. At the order of the Seattle City Council, City Light developed a plan to offset GHG emissions by paying other electricity generators to reduce their emissions. Ratepayers challenged the authority granted to City Light. The ratepayers did not believe that City Light was empowered to adopt the program, yet they admitted fighting global warming was a permissible governmental objective. Portions of the Court not only believed it was a permissible objective but also a meritorious one. Despite these considerations, the Okeson court ultimately invalidated the actions by City Light, as they served only general governmental purposes as opposed to proprietary purposes, which were required.[51]

As one commentator notes, the issues raised by City Light and the ratepayers raise some basic property rights questions concerning whether long-range global issues, such as global warming, are so

remote as to invalidate governmental restrictions on private property rights.[52] The ratepayers felt the nexus between the two was missing or was too extenuated to serve the purposes sought by the City. While the Okeson Court accepted the general governmental purpose of the resolution passed by the City Council that ordered the City Light plan, the problem was that it did not serve a proprietary purpose.[53] Several of the concurring and dissenting opinions were better reasoned but were also more polarizing. This inevitably sets the stage for a debate on this issue in the future. Arguably, courts could use a similar basis to uphold a statute that imposes restrictions on private property rights due to concerns about global sustainability, or a court could overturn a law based on the lack of a nexus between the regulation or statute and its purpose when weighed against private property rights.

A statute or regulation that bears a rational relationship to public health and safety may survive a due process challenge. Common law property theories allow the exercise of police power to impose reasonable property restrictions, and provided the standards are not "clearly arbitrary and unreasonable, having no substantial relation to the public health, safety, morals, or general welfare," they should be permitted.[54] Returning to the above hypothetical concerning the "in too deep" developer, if the governmental action only regulates land use and doesn't interfere with possession, the developer would likely have no right to compensation unless it could be shown that he had been denied an economically viable use of his land.[55] In large part, in both instances, the outcome will depend on the venue and the interest of the jurisdiction in promoting sustainability. The Okeson decision foreshadows that governmental objectives may soon outweigh the interests of private citizens. While sustainable building codes, statutes, or ordinances may affect individual property rights, striving for balance between both is necessary for a functioning and evolving society.

NEW LAWS AND THE EVOLUTION OF TECHNOLOGY

Tax Credits and Other Incentives

The previous section shows that government has played a significant role in the promotion and expansion of sustainable development, renewable energy production, and energy efficiency legislation. A fundamental premise of this movement has not been the stick but the

carrot, which has frequently been offered in the form of tax credits and other incentives. Following the lead of the federal government, many states have enacted statutes aimed at increasing investment in renewable energy such as solar, wind, hydroelectric, geothermal, nuclear, and biofuels. Unfortunately, comprehensive incentives to promote investment in energy conservation and retrofitting—the true foundations of sustainable development principles—have yet to be enacted.[56]

Despite increased incentives at the state level, federal legislation still provides the bulk of incentives. Federal legislation authorizing energy tax credits for the production and development of energy projects is located at 26 USC §48. Generally, a 30% federal tax credit is authorized for investment in solar, fuel cell, and small wind projects, while a 10% credit is authorized for geothermal, microturbine, and combined heat and power (CHP) projects. The credit is authorized for the construction, reconstruction, or erection of energy property (any of the foregoing classes of property) completed by a taxpayer, of which original use commences with the taxpayer. The investment tax credit is earned when the equipment is placed into service.

While the intention of the credit was to offset upfront investment in renewable energy projects and provide economic incentives to develop and deploy more renewable energy technologies, most private industries still find the costs too prohibitive and opt for conventional energy investments. Another deterrent applies to renewable projects undertaken by governmental agencies. When municipalities seek to employ renewable energy projects, they often do so through tax exempt financing, which in large part, eliminates the ability to utilize the federal investment tax credit.[57]

In addition to the federal investment tax credit, there also exists a federal production tax credit, which is equal to 2.2¢/kWh for wind, geothermal, and closed-loop biomass, with 1.1¢/kWh for other eligible technologies. The production tax credit is applicable to the first ten years of facility operations.[58]

Numerous other federal incentives exist, such as the energy efficiency commercial buildings tax deduction; bonus depreciation of equipment or projects; financing through the utilization of clean renewable energy bonds and qualified energy conservation bonds; renewable energy block grants; energy efficient mortgages; and loan guarantees. Most recently, the American Recovery and Reinvestment Act of 2009 (ARRA) expanded available energy incentives by extension of the fed-

eral energy tax credits; grants in lieu of tax credits; energy manufacturing credits; increased federal spending for renewable energy and energy efficiency, including electricity grid development; and the extension of bonding and loan authority for clean or renewable energy projects.[59] Interestingly, ARRA required states to upgrade their energy efficiency codes to comply with the International Energy Conservation Code prior to accepting funding under the bill.

The legislative push has not slowed, as there have been several attempts by the 2010 U.S. Congress to pass more comprehensive sustainability legislation, including the proposed Clean Energy Jobs and American Power Act, The National Energy Efficiency Enhancement Act (which raises the standards for HVAC equipment), and the Renewable Electricity Promotion Act of 2010. Currently, it does not appear that any of these bills in their current form (or similar legislation) will garner enough votes to pass. These issues may instead be addressed by regulatory actions of the EPA and other governmental agencies.

On the state level, many incentives are being provided to sustainable developers. For example, New Mexico provides a sustainable building tax credit for the construction of a sustainable building or conversion of an existing building into a sustainable building, whereby the amount of credit increases based upon the LEED rating level of the building. New York offers a tax credit for both new construction and energy efficient renovations. Arizona, California, Florida, Hawaii, Illinois, North Carolina, Oregon, Virginia, and Washington also offer some of the most beneficial incentives related to sustainable development; nearly every state has some form of incentive for energy efficiency.[60] Many of these states, as well as local governments, are allocating funds for incentives in the form of grants, loans, waivers, and fee reductions through the establishment of sustainable energy financing districts, energy efficient and retrofit grants, tax credits for renewable and energy efficient purposes, and other incentives.

With more governmental involvement by local citizens and trade associations, these laws should increase and expand. Education of our politicians and their aides is fundamental to this expansion, as many politicians are oblivious to the benefits of sustainability incentives, which often results in the inability to enact substantial legislative amendments, or compromised legislation that is useless or fails to achieve its objectives. A prime example is the state of Louisiana, where energy efficient performance contracting law has been butchered to the

point that it is unrecognizable and cost prohibitive—both on the back and front end—of undertaking new energy efficient projects financed through energy efficiency contracts.[61]

In order for incentives to remain effective as new technologies develop, legislation must keep pace to ensure that not only are additional tax credits and other incentives provided to encourage innovation and development but also that everyone plays by the same rules.

New Technologies

As new technologies are developed or more widely utilized, our national energy policy must continue to evolve. For example, although there are certain regulations now governing the production and distribution of nuclear power, were it to become more widespread the regulations would have to be amended accordingly.[62]

Similarly, many politicians are pushing for various restrictions or caps on carbon emissions, whether through the institution of a carbon tax, flat carbon restrictions, or the introduction of a variation of a cap and trade system as utilized in Europe. Each of these restrictions is only proposed, whether through the media or individual members of Congress, and only as hypothetical policies; these items are not addressed in this article. The important thing to note is that as the game changes, the rules governing the game will also change. It is even more probable that whichever rules are most advantageous to the then present lawmaking body will comprise the game that is played, while the others will either falter or succumb to legislative force.

A brief example of the potential problems, issues, and policies associated with the intersection of several legal disciplines (as is probable with future sustainable development projects) is found in the smart grid. The smart grid is commonly referred to as a hybrid internet-electricity distribution system, as it integrates new or refined technology with existing electrical infrastructure. DOE provides that the smart grid proposes to transform the electrical distribution system from a "centralized, producer-controlled network to one that is less centralized and more consumer-interactive. The move to a smarter grid promises to change the industry's entire business model and its relationship with all stakeholders, involving and affecting utilities, regulators, energy service providers, technology and automation vendors, and all consumers of electric power."[63]

While the smart grid is innovation at its best—addressing problems with failing electrical infrastructure, waste, inefficiency, and un-

necessary costs—there are many unanswered questions. Who manages the grid? Who owns the grid? How is the grid divided? How is power sold? What are the requirements or standards for regulation? Who is responsible for maintenance of the grid? Who is responsible for tortuous or negligent conduct arising from the production, distribution, and transmission of power throughout the grid? What if bodily injury or property damage results from utilization or improper maintenance of the grid? Currently, it is impossible to answer these questions, or even to provide more than a speculative basis to analyze the potential issues associated therewith.

Even implementing the grid requires the navigation of several legal hurdles. Although FERC Order No. 888 and its progeny provided open access to electricity transmission and has been instrumental in deregulation, in reality, the electrical system is still controlled and regulated by the states, with some oversight by FERC. Since there is no uniform and established set of rules that are consistently enforced to regulate the production, distribution, and sale of power, it is practically impossible for the smart grid to materialize. Until national policies are established governing the production and sale of electricity, the smart grid will be little more than science fiction or another piece of an overall inefficient and patchwork grid.

In considering the various laws and standards discussed herein, one factor sticks out like a sore thumb—no national master organization to promote, regulate, and manage sustainability and sustainable development. Due to the interconnection and overlap of many disciplines, some aspects of sustainable development are controlled by the EPA, while others are controlled by the DOE, FERC, the IRS, multiple state agencies, and even private organizations. A uniform set of sustainable laws and regulations organized under a central governing agency is necessary to promote, manage, and regulate all aspects of sustainable development. The creation of such an agency does not appear likely for the foreseeable future.

ENERGY EFFICIENCY PERFORMANCE CONTRACTING[64]

Energy efficiency performance contracting began in the late 1970's through a joint effort and consortium of several corporate and governmental entities.[65] As model legislation was drafted, federal and state

governments began adopting energy savings statutes. According to Dr. Shirley Hansen, the mother of performance contracting, most of the early performance contracts and energy savings models were based on shared savings agreements.[66] Shared savings agreements were based on a model in which the user (i.e., the governmental entity) and the energy savings company (ESCO) shared a pre-determined split of energy cost savings, as calculated under the performance contract.[67]

Although these contracts could take many forms, depending on the risks to be negotiated and borne by each party, it was typical for the user to retain the risk of fluctuating utility rates, which prevented the ESCO from "betting" on the energy markets; instead it and the governmental entity bet on the efficiency of the installed energy conservation measures (ECMs). The shared savings model worked well when utility rates stayed the same or escalated; however, when paybacks began to exceed the contract length, the ESCO industry almost collapsed.

Out of the shared savings model, a new model to measure energy savings arose—the guaranteed savings model. Under the guaranteed savings model, an ESCO would guarantee a reduction in energy consumption or energy units to the user. Under most guaranteed savings contracts there were no upfront capital costs to the user, as the services were included in the project's costs and were repaid out of energy savings. The risks of fluctuating utility costs still typically remained with the user, as did variables related to weather and fluctuations in consumption. The ESCO guaranteed that the units of energy consumed would be reduced as a result of the installed ECMs. As protection against fluctuating utility or fuel costs, typical contracts would include ceilings, floors, or other stipulated amounts for unit costs of energy. Occasionally, parties negotiating an energy savings contract would utilize both a guaranteed and a shared savings model in the same contract. This is not typically recommended, as it only serves to create confusion for the benefit of the legal profession.

Over the past thirty years, practically every state has created legislation enabling energy efficiency performance contracts. During this time, performance contracting has allowed many federal, local, and state agencies to reduce energy consumption and operating costs at their facilities while resolving deferred maintenance issues and funding capital expenditures that would have otherwise been practically impossible to fund through typical capital outlay mechanisms and funding. The most successful entities utilizing performance contracts have been

municipal and state governments, universities, schools, and hospitals (MUSH markets), where tax exempt financing is available. In recent years, however, performance contracting has expanded into the private sector. With the potential for increased energy efficiency tax incentives in the near future, this market will likely grow exponentially.

Through the rise of this industry, several guidelines and standards have been established that define appropriate performance contracting principles and measurement and verification (M&V) standards. Two of the most well known are the International Performance Measurement and Verification Protocol (IPMVP) and the Federal Energy Management Program (FEMP).[68] The IPMVP has been adopted by many state, local, and international organizations and has been translated into over ten languages. It is the standard in the industry for measurement and verification purposes. The latest version of the IPMVP covers three volumes: Volume I—Concepts and Options for Determining Energy and Water Savings; Volume II—Indoor Environmental Quality Issues; and Volume III—Applications. One of the most fundamental provisions in the IPMVP is the establishment and formulation of a standardized M&V plan, which is imperative to the accurate calculation of energy savings. Savings measurement is also addressed and is based on the following formula:

> Energy Savings = Base Year Energy Use – Post Retrofit Energy Use + or – Adjustments[69]

Perhaps one of the lasting legacies of the IPMVP is the creation of four savings measurement options from which the field of measurement is drawn:

- Option A (Retrofit Isolation-Key Parameter Measurement). Option A is typically utilized for lighting retrofit projects, where estimations of certain parameters are more cost effective than actual measurements.
- Option B (Retrofit Isolation-All Parameter Measurement). Option B measures all key performance parameters and is also utilized in lighting retrofit projects.
- Option C (Whole Facility). In Option C, energy savings are measured throughout the facility; it is commonly utilized where ECMs affect the whole facility.

- Option D (Calibrated Simulation). In Option D, savings are measured for the whole facility but are determined based on calibrated simulation. Option D is typically utilized where ECMs have been installed in a facility in which no historical information is present.

FEMP does not enjoy as widespread acceptance as IPMVP, having been used almost exclusively in federal performance contracting. Unlike IPMVP, FEMP provides a better framework and best practices for the calculation of operation and maintenance savings occurring from the installation of ECMs. Accordingly, an understanding of both IPMVP and FEMP is essential to mastering energy efficiency performance contracting.[70]

Although the performance contracting process has stumped many lawmakers, attorneys, and facility administrators, it is actually straightforward. Typically, an engineering audit or feasibility study is conducted to determine the necessity and viability of energy efficient measures. The feasibility study is based on the analysis of historical information concerning existing equipment and operating expenses. Utilizing this information, an ESCO can develop a pro forma evaluation that analyzes and compares energy consumption and operating expenses, utilizing real world equipment and services versus alternative hypothetical world equipment and services. Based on this assessment, the user (typically a governmental entity) determines whether to proceed with the performance contract.

Once the contract is executed and the ECMs are installed and services commence, the former real world no longer exists. It is the new hypothetical world that must now be compared with the new real world that results from the installation of the equipment and services under the performance contract. The performance contract contains parameters and stipulations negotiated and agreed upon by the parties that allow the parties to most accurately measure the new real world against the new hypothetical world.

Despite the benefits of performance contracting, in recent years it has come under attack in several states. Although the exact origin of these attacks is unclear, one of the biggest harms has resulted from ill-willed corroboration among eager salesman and sly governmental administrators. These individuals have combined to alter the intent of the performance contracting legislation, and instead of implementing performance contracts as service contracts, they have utilized the

contracts as an alternative financing mechanism to combat deferred maintenance expenses and obtain much needed infrastructure.[71]

Louisiana[72]

Louisiana was one of the first states to enact performance contracting laws in 1978, with the enabling legislation following the Model Procurement Code and recommendations of the National Conference of State Legislatures. In 1991, Louisiana performance contract law was significantly amended to allow contractual terms of 20 years and include a mandate that maintenance savings must be included in any calculation of energy savings.[73]

From 1991-2004, all but one performance contract entered into by local and state governmental agencies in Louisiana contained stipulated maintenance and operational savings. In large part, these savings were stipulated because the value of operating expenses eliminated were often fixed budgetary costs (in the form of eliminated maintenance contracts or labor), or they were based upon the installed price of equipment under the performance contract. These performance contracts were negotiated, approved, and accepted as legal and binding governmental obligations under Louisiana state law.

Beginning in 2002, performance contracts began to come under attack. Most of the issues stemmed from disinformation, a failure to properly educate state legislators, and a perception that ESCOs were inappropriately exploiting governmental entities. Every legislative session from 2002 through 2010 brought changes to Louisiana performance contracting law, with substantial changes coming in 2004. During this period, only three performance contracts were executed with governmental agencies within the state.[74] The current requirements for a valid performance-based energy efficiency contract in Louisiana are vague, ambiguous, and burdened with unnecessary bureaucracy.

Around the time many of these changes were occurring, Siemens Building Technologies, Inc. ("Siemens") and the Iberville Parish School Board (IPSB) proposed to amend an existing performance-based energy efficiency contract to expand the original scope of work under the contract. At the advice of a state legislator, the Louisiana Legislative Auditor (the equivalent of the federal GAO) inserted itself into this situation and issued an advisory report finding that amendment was prohibited, while also finding that the initial contract did not qualify as a performance-based energy efficiency contract because it did not

produce guaranteed energy savings as required by law. The opinion of the Louisiana Legislative Auditor was based on the fact that the operational savings under the performance contract were stipulated, as opposed to measured. From a reading of the report prepared by the Legislative Auditor, it is clear that his analysis was rooted in a failure to understand performance contracting and the basis for operational savings, as well as in a misinterpretation of Louisiana law.

In late 2006, IPSB counsel sought the advice of the Attorney General, seeking a determination that both the performance contract and stipulated operational savings were legal under Louisiana law. Ironically, IPSB argued for the validity of the contract. IPSB believed they would receive a favorable ruling from the Attorney General based on his previous opinions concerning performance contracting law. In March 2007, the Attorney General issued an opinion agreeing with the opinion of the Legislative Auditor, finding the contract illegal.[75] There were several consequences that flowed from the decision of the Attorney General, including an administrative amendment to the requirements for a valid performance-based energy efficiency contract in Louisiana, changing them from:

(a) A guarantee in the reduction of gross energy consumption and operating expenses under the contract

to

(b) A guarantee of actual energy costs savings based on a comparison of pre- and post-contract costs

The Attorney General effectively found that the measurement for energy savings must be based on pre-contract and post-contract costs, shifting all risks (including utility rate fluctuations, weather, changes in consumption, and changes in billing by the electric service provider) to the ESCOs. If savings were this easy to measure, why are best standards such as the IPMVP necessary? All that would be necessary is a comparison of the user's electricity bills from one year to the next. This sounds like a transaction only Enron could love.

The other key finding of the ruling was that stipulated operational savings contained in the contract were illegal, thereby invalidating the entire contract, although the reasoning was clouded in ambiguity. The following portion of the opinion personifies its latent ambiguity:

> To be clear, it is not our opinion that stipulated savings can't be included in performance-based energy efficiency contracts. How-

> ever, for the stipulated operational savings to be included in the total guaranteed savings, those savings must actually be guaranteed. In order for the operational savings to be guaranteed, the contract would have to provide for some type of measurement and/or verification of the operational savings and require Siemens to reimburse IPSB for any deficiency.

The Attorney General provides that stipulated savings may be included in performance contracts, but must be measured and verified. The common and accepted definition of the term stipulated is that something is a condition or term of an agreement—the item is what it is and not subject to question, discussion, measurement, or verification. The opinion, however, provides that the stipulated savings must be guaranteed, measured, and verified, thus eliminating the possibility of a stipulation.

The Louisiana Attorney General ultimately found that the contract between IPSB and Siemens did not guarantee actual energy cost savings but contained stipulated operational savings. The opinion reasoned that if operational costs were not being measured in reality, then the costs could not be included in the cost savings guarantee. It eliminated the inclusion of the stipulated operational savings from the cost savings guarantee under the contract and found that the contract was illegal.[76] This opinion effectively disregarded the findings of previous opinions and, arguably, the international and accepted principles of performance contracting law, which have, ironically, since been adopted by the Louisiana legislature.

On December 12, 2007, the Louisiana Legislative Auditor issued another information report dealing with all performance contracts entered into by state agencies. (A similar report was informally issued concerning performance contracts entered into by local governmental agencies.) In this report, the Legislative Auditor provided its analysis of the requirements to form a valid performance-based energy contract, as well as findings on the legality of stipulated savings. Relying in part on a 2007 opinion of the Louisiana Attorney General and litigation that had arisen between Siemens and IPSB, the Legislative Auditor determined that any contract with stipulated savings may not be valid under Louisiana law.

During this time, IPSB filed suit against Siemens as a result of the report issued by the Legislative Auditor. The Attorney General intervened in this suit, alleging the contract was illegal. Relying on the

decision of the attorney general, the trial court granted partial summary judgment for IPSB in the matter of Siemens Building Technologies, Inc., v. Iberville Parish School Board, effectively finding that the performance contract was illegal under Louisiana law.[77] Siemens sought supervisory writs with both the First Circuit Court of Appeal and the Louisiana Supreme Court. The writs were denied in both instances; the matter is currently still pending. Once a final judgment is issued, it may be reconsidered at the appellate or Louisiana Supreme Court level. Currently, the ruling of the trial court is only binding on Siemens and IPSB and has no effect on any other performance contract in the State of Louisiana.[78]

It should be noted that over the last five years, at least six other cases have been brought in Louisiana state or federal courts pertaining to energy efficiency performance contracts entered into with governmental agencies. Considering that approximately thirty-two contracts are still in their performance period, more will likely be litigated.

The last two years have seen further changes and alterations to Louisiana law. In 2010, legislation was passed that establishes an energy efficiency procurement support team comprised of state administrators and legislative staff. All contracts approved by the support team must also be approved by the Joint Legislative Committee on the Budget. It is highly suspect that any contracts will be executed under this regime.

Meanwhile, the Louisiana Attorney General recently revised its 2007 opinion. In La. Atty. Gen. Op. 10-0138, the Attorney General held that while energy savings must be guaranteed, stipulated savings are not illegal. However, stipulated savings must be measured and verified in some manner, and the contract must contain a mechanism to require reimbursement for any deficiency and/or default due to a failure to achieve the guaranteed energy savings. While this does not remedy the numerous issues with performance contracting in Louisiana, it does perhaps show a change in attitude by Louisiana officials and the opportunity for the ESCO industry to rebound in the state. There are many energy savings opportunities, given the absence of performance contracting for the last seven to eight years.[79]

Oklahoma

Louisiana isn't the only state where performance contracting is under attack. On November 19, 2009, the Oklahoma Attorney General issued Okla Atty Gen Op. 09-32, which addressed similar issues to those addressed in the 2007 and 2010 Louisiana Attorney General opinions.

In the pertinent part, the questions posed in Op. 09-32 were (i) whether capital cost avoidance may be included as an avoided cost in performance contracts if the item replaced is at the end of its useful life; and (ii) whether stipulated savings may be used in evaluating energy savings under a performance contract.

Similar to the Louisiana Attorney General, the Oklahoma Attorney General failed to view the contract as a services contract, but instead as a method to circumvent bid laws. Finding there were no Oklahoma cases that addressed this issue, the Oklahoma Attorney General analyzed Oklahoma performance contracting law for the first time. After reviewing the statutory authority allowing operating costs to be included in the savings calculation, the Oklahoma Attorney General found avoided capital costs to be different from avoided operating costs. Accordingly, it was held that capital cost avoidance cannot be taken into account in evaluating energy savings under a performance contract, regardless of whether a piece of equipment is at the end of its useful life and would otherwise have to be replaced through the capital outlay process.

With regard to whether stipulated savings were permissible under a performance contract, the Attorney General held that stipulated savings were impermissible or irrelevant, as they were not truly guaranteed for purposes of Oklahoma law.

Over the last several years, similar issues have arisen concerning performance contracts and the calculation of actual versus guaranteed savings in other jurisdictions.[80] Although some of these issues have arisen from the accuracy or permissibility of stipulated savings, others have focused strictly on energy savings and the discrepancy between contractual savings and rising energy costs that governmental entities are attempting to pass on to ESCOs.

Can these Problems be Fixed?

Considering the foregoing, can the problems occurring under performance contracts be remedied? Likely, but several proactive measures must be undertaken. Governmental agencies and other users of energy efficiency services and ECMs must receive appropriate education and training. Engineers promoting performance contracting to their customers must ensure that customers are adequately informed as to what exactly they are bargaining for and how savings will be measured. If your client believes the IPMVP is an award given to the best baseball player in America, its representatives are probably uneducated. Consequently,

it is imperative that engineers and financial and sales professionals visit with their clients to explain all aspects of the performance contracting process.

The education process does not end with the customer. Although organizations such as NAESCO have attempted to educate legislatures on performance contracting, a more active educational process is needed with state legislatures. These individuals are in charge of formulating and passing the laws that allow performance contracts, and if they don't fully comprehend the potential effects of the laws, statutory authority may be repealed. State governments have the keys to the car, and if ESCOs want to borrow it, it is up to them to ensure that it is operating correctly.

It is also a good recommendation to be familiar with the legal landscape and bid requirements of the jurisdiction in which the energy efficiency services are being provided. These requirements can change weekly, and generally, ignorance of the law is not an excuse for potential fault.

Other proactive measures that can solve some of these problems are the inclusion of clearly defined terms such as guaranteed savings, energy savings, and method of measurement in the performance contract. This makes it much more difficult for an administrative body or court to find the contract illegal five years into the performance period. Ultimately, no contract is infallible, but through the engagement of experienced counsel and other due diligence measures, some contractual certainty can be achieved to ensure that performance contracting continues to thrive.

MOST LEGAL ISSUES ARISING IN SUSTAINABLE DEVELOPMENT ARE COMMON TO OTHER AREAS OF LAW

Most legal issues arising in sustainable development projects are neither new nor novel but are very similar to legal issues arising in other construction and development projects.[81] Despite meticulous planning, all construction projects have substantial risks and pitfalls, and they rarely turn out as expected for the owner, contractor, or design professional.[82] As in conventional development projects, most of the problems arise from miscommunication, unforeseen circumstances or other complications, cost overruns, delays, unrealistic expectations,

the failure to perform according to agreed-upon contractual terms and conditions, or one party attempting to take advantage of another party.

Persons undertaking a sustainable development project have greater expectations than those in a standard construction project, which heightens the risk for contractors and design professionals. If the contract governing the project fails to address these expectations and the specific concepts pertaining to green or sustainable building, then instead of being *green*, the project may turn out in the *red* for all parties. Some of the more prevalent pitfalls that can occur in these construction contracts follow.[83]

The Failure to Properly Define Risk and Other Contractual Terms in the Contract

The origin of most disputes in all construction or development projects—and all areas of law—is due to miscommunication and a failure of both parties to fully document their intentions in the contract. Frequently, this can arise due to the parties having assumptions as to what is agreed upon under the contract, or from issues one party didn't anticipate when the contract was executed.

One of the more prevalent problems that parties fail to properly address is the assumption that all parties have a common understanding of the scope of work or services to be provided under the contract. For example, an unsophisticated owner may assume the engineer or contractor has taken on the responsibility to perform tasks or duties that are typically the responsibility of the owner, such as obtaining geotechnical surveys or other information and approvals from governing authorities. The easiest way to avoid these issues? Conduct comprehensive meetings with the owner prior to execution of the contract and the commencement of construction to ensure that all parties understand the duties and obligations for which the owner is responsible, as well as the duties and obligations of the contractors and engineers. It is much easier to manage expectations and desires during contractual negotiations as opposed to during contractual performance.

Another item of dispute that may arise is the failure to properly define contractual terms in the contract. As discussed, infra, when terms of art are utilized in a contract, upon which certain expectations are built, they must be appropriately defined to ensure that all parties have a clear understanding of the contract. If a performance contract is being undertaken, it is necessary to establish definitions for energy savings

and guaranteed savings under the contract, with care also being taken that such definitions are in compliance with applicable law.

Similarly, in other sustainable development contracts, expectations must be defined with well-drafted definitions of key terms. If a party is contracting for a green, sustainable, or high performance project, these items must be defined within the contract to ensure that all parties have a common understanding of the contractual requirements. Otherwise, the parties may be left to wonder, Did the project meet expectations? Is it sustainable? And what is the benchmark for sustainability? Even if the parties have contracted for the project to meet a certain LEED standard, this standard should be defined under the contract even if the contractual definition is a verbatim recitation of the LEED standard established by the USGBC.

Another item that must be considered during contractual negotiations is the allocation of risk. Any items concerning items of risk, such as delays, unforeseen conditions, weather, changes in assumptions upon which the contract is based, events of force majeure, or other variable factors must be properly reviewed and defined among the parties. For example, who is responsible for achieving green or sustainable standards or goals? Who is responsible for ensuring the project is registered with the appropriate agencies? Who is responsible for procuring the correct insurance policy? Who is responsible for lost tax credits or diminution in value for failing to achieve a certain performance standard? Each of these items should be clearly defined under the contract, and the party assuming the risk or responsibility for these items should be aware of the obligations it is assuming. These items, however, cannot always be defined and risks will exist, as green contracts are largely untested in courts. Accordingly, a party should do its best to assume risk for only what it can control under the contract. When new technology and new laws are involved, unfortunately one party must assume risks it can't control. If necessary, that party should ensure that the additional risks equate to additional compensation.

Another recommendation is to insert one or more provisions in the contract where the parties jointly agree to waive consequential damages vis-à-vis one another. Although consequential damages are interpreted differently depending on the jurisdiction, most general indirect economic losses such as lost revenue, profits, and even lost energy savings or efficiency arising from the failure to meet deadlines or performance standards, are considered consequential damages. Although

some courts occasionally disregard this provision (or limit its applicability), if the consequential damages are not defined, it is beneficial to include a waiver provision in the contract for added protection. While on the subject of damages, liquidated damage provisions may serve as a deterrent to untimely work, but one must ensure that any liquidated damage provisions are not punitive, or the clause may be disregarded by a court as illegal and in violation of law.

At the end of the day, it is much more advantageous to spend more upfront costs and resources to ensure that the parties fully understand the terms and conditions of their contract—including the risks assumed by each party—than to spend considerable costs to enforce or defend the contract. The last thing parties should want is for a court or arbitration panel to determine what is meant under the terms and conditions of their contract. To combat this, it is imperative to properly define intent among the parties and memorialize it in the contract.

Developing Technologies, Intellectual Property, and Product Liability

Legal issues dealing with intellectual property and developing technologies are another common area of concern in sustainable development projects. Many sustainable development projects involve emerging or innovative products, processes, systems, or other proprietary information. It is imperative that parties not only protect their intellectual property but also ensure that they do not infringe on the intellectual property rights of other parties.

One way to address these issues is to ensure that all processes, goods, systems, or other items utilized in one's development projects are patented with the United States Trademark and Patent Office. Similarly, proper checks should be made to confirm that one's new product or process is not infringing on the proprietary rights of another party.

Another method to combat this issue is through appropriate contractual agreements and language. Prior to proposing to provide services or equipment to a third party involving the utilization of patented or emerging technology, it is important to include trademark and copyright protection such as the inclusion of confidentiality and non-disclosure provisions in the offering or initiating documents. Similarly, in the event the project involves consultants, sub-contractors, or vendors, or is a joint venture among two or more entities, non-disclosure and confidentiality agreements should be executed among all parties. It

is also imperative to include defense and indemnification language in these agreements in the event that a party negligently or intentionally violates an existing patent.

Many attorneys also protect their clients by including liquidated damage and attorney fee provisions in contracts. Preliminary injunctions and temporary restraining orders can also be sought to stop a project improperly utilizing proprietary information or technology from proceeding. This can be costly to the party whose rights are violated, as well as to owners and contractors who negligently violated the patented process. Unfortunately, when such disputes arise it is highly probable that license fees or legal fees to defend or prosecute these claims were excluded from the project budget.

It should also be noted that the utilization of new products could potentially expose an unknowing party to a product liability claim. Although this is typically a claim asserted against a manufacturer or supplier, if the facts and circumstances dictate, engineers or contractors may be considered a seller or vendor of a product or piece of equipment, which could expose them to claims for defective products for which they have little knowledge. Engineers and contractors therefore must be very cognizant of the materials and equipment utilized in their projects and ensure that they have adequate knowledge of the equipment and its operational standards. Additionally, due care should be taken to ensure that exposure is limited in any contract where equipment or products are provided to a third party.

Lawsuits in this arena are not limited to new products but can arise from the development of standards or guidelines. In December 2010, the Builders Association of the Twin Cities (BATC) sued Minnesota GreenStar regarding, among other things, ownership of Green Homebuilding Guidelines allegedly developed by BATC.[84] While this case appears to focus on not only the ownership but the legitimacy of a particular certification program, it is interesting to note the many variations and potential of intellectual property litigation when litigation—and not the intellectual property—exists as a means to an end.

Compliance with the Appropriate Standard of Care

Most lawsuits or claims brought against design professionals typically arise from alleged violations of the appropriate standard of care. This shouldn't be shocking, as the performance of professional services is the lifeblood of architects and engineers. On a typical project, there are

innumerable opportunities to make errors that fall below the standard of care. On a green or sustainable development project, the possibility for errors or omissions is multiplied due to heightened expectations and increased services.

A violation of the standard of care is in essence a derivative of a claim for negligence.[85] Although the standard of care varies from jurisdiction to jurisdiction, generally the standard of care for a design professional is to perform with the skill and care of a reasonably prudent design professional performing in the same locale under similar circumstances.[86] To say the standard is ill-defined is an understatement. It becomes even more ill-defined when services are provided on a sustainable development project. Is the baseline for the standard a similarly situated design professional with equivalent experience, or is it a design professional with equivalent experience in sustainable projects? Is the standard measured against professionals in the same locale, the same specialized field, or both? Unfortunately, there is no definitive answer. It is likely that a court, arbitration panel, or other tribunal considering this issue will assess the services to be provided, the representations made by the parties, the terms of the contract between the parties, and other facts and circumstances in determining whether or not the standard of care was breached.

Additional problems with sustainable development projects are the many new possibilities for mistakes, errors, and omissions. As new and untested technologies and systems are being employed, the design professional can become liable, not only for design, but also potentially for construction that utilizes equipment selected by the designer. The engineer or architect can also be found liable for failing to ensure proper certification, to be granted tax credits on a project (as further discussed herein), or for delays on the project arising from the failure to properly account for extended testing procedures required for new equipment and technology. Also, if technical, engineering, or financial data is employed in pro forma modeling of a project, the design professional can also be exposed to a claim of violating the applicable standard of care.

For example, assume that an engineer has been hired as a consultant on a design-build energy efficiency project to perform modeling concerning expected energy savings over the life of the project. Although the contractor was the party that contracted with the engineer, both the contractor and owner rely on the data provided by the engineer in entering into the project. Once the project becomes operational and the performance period starts, savings not only fail to materialize, but

the savings are completely converse to those projected and set forth in the contract. It is soon discovered that not only did the engineer fail to consider all known variables, including changes in historical information and other information concerning the purchase of energy by the owner, he also failed to collect and analyze a large enough sample from which to base his assumptions. In other words, incomplete information was employed in the energy savings calculations and utilized in the contract. In an attempt to reform the contract, the owner not only sues the contractor for the information provided by the engineer but also sues the engineer, having relied on the information.[87] Concurrently, the contractor sues the engineer for a breach of the standard of care. Will the engineer be found liable? Although the result will depend on the facts and circumstances, as well as expert testimony establishing the standard of care, even if the engineer isn't found liable, he will spend several years and considerable funds defending his reputation and work.

While the performance of services is a professional obligation, it does not require perfection. Performance must only be reasonable, unless it is replaced by a guarantee of service or a result, or some other contractual obligation assumed by a design professional.[88] For example, if additional contractual terms are agreed upon—that the architect or engineer will provide greater oversight over a project, will ensure the project achieves a certain level of LEED certification, or provides a guarantee that it will keep the design and construction under a certain budgetary amount—the general standard becomes the contractual obligation assumed by the design professional.

Design professionals must also be concerned about the specifications they provide and whether or not the specifications are considered design or performance specifications. Design specifications are typically applicable to design professionals, while performance standards are applicable to contractors. Design specifications describe how the project is to be built, leaving little discretion to the contractor. There is an implied warranty that if the contractor complies with the design specifications, the contractor is not liable for defects. This is generally known as the Spearin Doctrine.[89]

Conversely, performance specifications describe objectives to be achieved by the contractor but leave the means and methods to the contractor for determining how to construct the project. Occasionally, some projects combine both, and sometimes in these instances design and performance are not copacetic. Obviously, this presents a difficulty

for all parties. Generally, if there is a discrepancy between a design specification and a performance specification where there is a patent ambiguity, it is up to the contractor to clarify the ambiguity.[90] A patent ambiguity is one that blatantly jumps out at the reader of a contract, such as a direct numerical conflict or one where the contract contains an obvious internal inconsistency.[91] Where a patent ambiguity does not exist, then the reasonableness of a contractor's interpretation determines who is responsible.[92]

One place where these questions may arise in the sustainability sphere is on a project that is required (either by contract or statute) to achieve a certain LEED level of certification. Generally, a contractor would not be liable for the failure of a facility to achieve LEED performance standards if it follows the plans provided to it, but the ultimate outcome may depend on the detail of the plans and specifications provided by the design professional, as well as the scope of the agreements the owner has with each party. Even more telling will be the remaining facts and circumstances, which will ultimately determine whether or not the design professional, contractor, or both are liable for a failure to achieve certain standards or specifications.

There have been few cases to address sustainable development projects or standards. One case, Shaw Development v. Southern Builders, is often cited by commentators as exemplifying the potential for problems that may arise in a sustainable development project where expectations are not fulfilled.[93] The facts, circumstances and outcome of this case are fully discussed in the following section.

Another area of potential exposure concerns the failure to follow applicable building codes. In certain situations, if a design professional fails to comply with the building code requirements of the applicable jurisdiction, it may constitute negligence per se. Whether or not this same requirement and potential exposure will apply for failure to follow or comply with LEED standards or the IgCC, which may have been adopted by local jurisdictions, is unknown but likely. If standards have been adopted by the local jurisdiction that a design professional fails to comply with, he or she will more likely than not be found to have acted unreasonably when compared with a similar professional under similar circumstances, as he or she did not comply with what was known or should have been known in preparing his or her design. The burden will be on the party bringing the claim to prove how the failure to comply with the applicable building codes caused it damage.

On a sustainable development project, there are heightened and potentially impractical expectations. Considering the new technology and lack of legal authority in this field, there is ample opportunity for errors and omissions. Whether or not a project is successful depends on the entire project team. If there is a failure to have the project properly certified, all parties may incur damages. Who is ultimately responsible will depend on the obligations assumed by the parties under their respective contracts. Considering the foregoing, what can a design professional do to mitigate some of the potential for exposure to errors and omissions in sustainable development projects?

If not previously undertaken, the design professional should become familiar with all applicable building codes, bid documents, and contractual language. The services should flow from and comply with these documents and standards. This is the first step to complying with the reasonableness standard.

A design professional should be careful not to increase his or her obligations through the assumption of greater responsibilities under a contract for professional services. For instance, the design professional should not warrant that a design will achieve a certain sustainability rating, or that a certain rating will be achieved from construction. The design professional should also specify in the contract documents that any representations or warranties made in the documents are not warranties of promised performance, over which it has no control.

If possible, the design professional should also refrain from guaranteeing any financial models or pro forma data upon which a project is based. If guarantees or warranties are made, the design professional should ensure being compensated appropriately for the increased risk and exposure. It would also be prudent to ensure that the warranty or guaranty is covered under the professional services liability policy. In many instances, a warranty or guaranty alters the potential claim from one of a breach of standard of care to a breach of an express warranty, which is often not covered under the professional liability insurance policy of the design professional. In that regard, the design professional should review his or her insurance policy to determine applicable coverage and, if necessary, explore the inclusion of sustainability riders to the policy, which some companies now offer for an increased premium.[94] It is imperative that if there is a claim, it is covered under your insurance policy, or else you could be stuck footing the entire bill for not only the alleged damages but legal costs and expert fees as well.

Breach of Contract

Many lawsuits originate from standard breach of contract claims, which have been around throughout the history of our legal system.[95] These claims can also arise in sustainable development projects for any failure to perform as promised, including delays, negligence, faulty design or workmanship, failure to properly document changes in the project, failure to receive timely and full payment, or any number of other issues.[96]

Generally, only a party with whom you have contracted, or have privity, can bring a claim for breach of contract. On many occasions, an owner may have a contract with both a contractor and a design professional. The design professional typically doesn't have a contractual arrangement with the contractor. Consequently, while these parties may attempt to bring suit vis-à-vis one another in tort, they will not be able to assert a claim for breach of contract.

A word of warning is perhaps beneficial at this point. It is not up to one of the parties to determine who has breached or potentially breached the contract. It is good practice for a party, if at all possible, to continue to perform under the contract despite the actions of the other party. Otherwise, if the party alleging breach ceases to perform its contractual obligations, it may be ultimately found to be the party in breach of the contract and liable for damages.

There is no surefire method to avoid breaching a contract other than impeccable project management, due diligence, and familiarity with the contractual terms and provisions upon which a party has agreed. Additionally, any changes to the contract should be appropriately documented, and in the event of a perceived breach by the other party, proper notice and the opportunity to cure should be given pursuant to the terms of the contract.

Breach of Warranty

Although previously discussed briefly herein, another potential type of exposure for the design professional is breach of warranty, whether express or implied. Express warranties are specifically embodied in the contract. A common example is a contractor warranting the quality of its work. Implied warranties arise from operation of law or circumstances arising from a transaction. Some common examples of implied warranties are warranties for workmanlike performance, accurate and adequate plans, and a promise by parties that their performance will not impede

the performance of the other party. While only parties in contractual privity can bring a claim for breach of contract, any party that relied on a promise or guarantee can bring a claim for breach of warranty.

For example, what if representations are made or implied that the construction will result in lower energy costs, higher energy efficiency performance standards, increased air quality, or other high performance standards? How long will the construction be subject to these warranties, and how long may a party be able to bring suit for failure of a project to perform as warranted? In large part, answers to these questions will depend on the statutory and judicial laws of the jurisdiction and whether it was proper for a party to rely on the warranties. Generally, the applicable inquiries in a breach of warranty claim are: (a) Was a promise or guarantee made? (b) Did the promise concern time, costs, or other items arising out of professional services? (c) Was the owner or other third party entitled to rely on the promise or guarantee? (d) Did the party rely on the guarantee, warranty or promise? (e) Was the guarantee, warranty, or promise false, or did it not materialize? and (f) Did the party suffer damages as a result of the reliance?

Not only does warranting a design or standard increase the number of those who may recover damages against the design professional, but it moves the design professional from a standard of care analysis to one of failure to achieve what is warranted. It also potentially increases the applicable time period for which a party may bring a claim against the design professional. While it should be noted that some jurisdictions disallow a claim for breach of warranty against a design professional, depending on the obligations assumed or implied in a sustainable development project, the law of these jurisdictions may be modified. Accordingly, all design professionals should be cognizant of the risks in warranting a particular design, specification, or performance.

Risk related to express or implied warranties can be alleviated in two ways under the sustainable development contract. First, as discussed above, due care should be given by a design professional to refraining from providing a specific guarantee or warranty of results arising from the project. Additionally, a disclaimer should be included in the contract (in bold letters) providing that all warranties, express or implied, other than those set forth in the contract, are expressly disclaimed. Although a claim may still be asserted for breach of warranty if a project fails to meet expectations, the foregoing should serve as the proverbial belt and suspenders for additional contractual protection.

LEGAL ISSUES PARTICULAR TO SUSTAINABLE DEVELOPMENT PROJECTS

Although this section is distinguished from the previous section, the distinction is somewhat arbitrary, as there are only minimal legal issues on a sustainable development project that are not encountered elsewhere in the law. Many of these items are simply new perspectives on existing laws or legal standards. Some of these issues may even overlap with issues previously discussed above.

New and Modified Laws

Sustainable development technology is evolving, as is statutory and jurisprudential law pertaining to sustainable development. A new frontier is emerging, and the only way to remain knowledgeable of applicable law and legal standards is to keep updated on changes in the law. Due diligence should be paid to researching applicable legal and regulatory standards, as well as reviewing bid documents prior to undertaking a project. Another method for keeping updated is to become engaged in trade organizations and review their periodic publications concerning changes in the law.

Occasionally, however, the applicable legal requirements may be modified, revised, or amended after execution of the contract. For instance, suppose building standards are modified after the permitting of the contract, or certain sustainable development standards are adopted after execution of a contract. What happens then, and which law applies—the old or the new? Generally, the law in place at the time of contract execution would apply to the contract, but this may not always be the case.

Consider the following hypothetical. Assume an ESCO enters into a legal and binding energy efficiency performance contract with a governmental agency under an existing law. Upon commencement of the performance period, the law is amended, but not specifically as a result of the contract at issue. Although the new law shouldn't apply to the contract, if it is deemed to be a merely a clarification of the old law, it might be found applicable through no fault of the ESCO. As with most legal issues, it is left for a court to use its judgment in determining whether the new law substantially changed or merely clarified existing law. If it is deemed to have merely clarified the existing law, the ESCO may find itself subject to laws that govern its contract, which, had they been present, would have prevented it from entering into the contract.

Standardized Contracts

Over the last several years, several trade organizations have addressed green or sustainable building standards in their standardized contracts. Although these provisions are only applicable to certain contracts, it is not uncommon to see the same or similar language adopted in contracts where a governmental entity is a party, or even in contracts between private parties. Additionally, if one is engaged as a consultant or sub-contractor on a project, he or she may be required to comply with standards set forth in these standardized contracts if these contracts control the relationship between the prime parties.

The most widely utilized construction contracts are developed by the American Institute of Architects (AIA). The AIA is at the forefront of the sustainability movement, and as might be expected, some of their standardized documents have been modified accordingly.

For example, the AIA B101-2007 agreement, which may govern the relationship between an architect and owner, provides two examples symbolizing this shift to sustainable design principles. Section 3.2.5.1, provides, in pertinent part, that the "architect shall consider environmentally responsible design alternatives, such as material choices and building orientation…" and Section 3.2.3 provides that "[t]he architect shall present its preliminary evaluation to the owner and shall discuss with the owner alternative approaches to design and construction of the project, including the feasibility of incorporating environmentally responsible design approaches." It remains to be seen what effect, if any, these provisions may ultimately have on architectural design or improved building efficiency.

The AIA B214-2007 further addresses sustainable design principles, as it specifically discusses LEED Certification in Articles 4.1.23 and 4.1.24.[97] Although the responsibility to obtain LEED certification doesn't create a separate standard of care, it does potentially create additional services for the design professional. None of the foregoing provisions have yet been litigated, but as with any contractual provision, it is not a question of *if* but *when* the litigation will occur.

In recent years, a competing version of standardized contract has been developed known as ConsensusDOCs. Not wanting to be outdone by the AIA, ConsensusDOCs have also addressed the sustainability movement in their standardized contracts. ConsensusDOCs 310 is a green building addendum developed in 2007. The guidebook accompanying CD310 provides, in pertinent part, that it is intended for "…the

implementation and coordination efforts critical to achieving a successful project using green building elements, particularly those seeking a third-party green building rating recognition."[98] While ConsensusDOCs 310 is not a standalone contract, it may be added to any other ConsensusDOC agreement.

As with the AIA documents, the addendum doesn't create or expand the standard of care for the design professional. An interesting aspect of the ConsensusDOC green addendum is the designation of a green building facilitator, who is the party responsible for coordinating and facilitating the process for obtaining high performance or green certification for a project.

By being designated the green building facilitator (GBF), the applicable individual designates that he or she has the skill and experience necessary to perform under the project. The GBF may be the contractor, architect, engineer, or a third-party consultant. Generally, the GBF does not assume the role or responsibilities of an architect or engineer. His or her role is to identify, explain, and educate the owner on the options, time, and cost for obtaining high performance or green status. If status is not achieved, the GBF may be liable for failed status.

All design professionals should not only be familiar with these contracts but also be aware of whether or not a particular contract, by which they are or may be bound, either adopts the language contained in any of these agreements or mandates compliance with one of these agreements.

LEEDigation and Other Sustainability Litigation

"LEEDigation" is a term involving the green building certification process, which was coined by Chris Cheatham, a construction law attorney specializing in green building.[99] Although certain commentators, including Cheatham, believe there will eventually be an increase in LEEDigation, to date there has only been one true example of a case involving green building certification—Shaw Development v. Southern Builders—which was filed in a district court in Maryland.[100] In Shaw Development, the contractor filed suit against the owner, Shaw Development, for non-payment on the construction of a condominium project. Shaw Development countered that the contractor failed to ensure that the project earned LEED Silver certification, causing the owner to lose $635,000 in green building tax credits. The owner sought to hold the contractor liable because the construction contract between the parties

incorporated the architect's project manual, which provided the project was required to achieve LEED Silver Certification level. Ultimately the case was settled out of court. It did, however, raise the question as to whether a contractor may be found liable for failing to achieve a certain standard when it was not responsible for the design. Not surprisingly, this case and its issues have caused great concern for contractors, and even for design professionals. The outcome of this case and other similar cases will likely turn on whether or not the requirement to achieve a LEED certification level is a design standard or a performance standard. In all likelihood, it may be classified as both, and both the engineer and contractor may be liable, unless the contract specifies who is responsible for achieving certification, such as in ConsensusDOCs 310.

Although not LEED specific, an offshoot of this issue concerns the failure to receive renewable energy or energy efficiency tax credits as a result of failed performance. Suppose an owner contracts with a design professional for services related to the design of a facility that will be eligible for renewable energy or energy efficiency tax credits. For all practical purposes, the financing of the facility is based on receiving tax credits related to the project. Under the applicable law, tax credit certification is not awarded until the project is placed in service or occupancy occurs. As an added obstacle, the tax credit sunsets on December 31, 2010. Although construction commences with ample time in the construction schedule, weather delays and zoning issues delay the project past the December 31, 2010 deadline. Is the design professional liable? If the design professional made a guarantee or warranty that the project would be completed by the deadline, it is highly probable he or she will be found liable. The only potential defense is that occupancy wasn't achieved due to an Act of God, or force majeure. Inclement weather should be anticipated on any project; thus, this defense will likely provide little relief for the design professional. Even assuming the design professional did not warrant completion, it may be deemed that there was an implied warranty, and ultimately, the design professional would likely be apportioned some liability, or would expend countless sums and resources attempting to be exonerated.

Returning to the LEED requirement for an ongoing performance audit for five years (or risk decertification), what happens if certification is pulled and tied to tax credits, as in Shaw Development? Will it lead to recapture of the tax credits by the governing body? Recapture is possible, but many other factors must be considered, such as the reli-

ance on NGOs to certify or decertify credits and how this information would be relayed to the taxing authority.

Another matter frequently referenced in this area of law concerns the certification challenge of Northland Pines High School by private citizens.[101] This matter was decided by LEED—as opposed to a trial court—but it did raise several interesting questions. Northland Pines High School was the first gold certified school in the United States. Trouble arose, however, after a group of citizens challenged the LEED gold certification of Northland Pines High School. The USGBC ultimately confirmed certification, but the issue did raise the question as to what happens if the GBCI or USGBC decertifies the project. Would the design professional and/or contractor have liability? Resolution of this issue would depend on many facts and circumstances, including the guarantees or warranties provided by these parties to the owner and the reasons for decertification.

According to Cheatham, one reason LEEDigation hasn't exploded more is because LEED allows a designer to submit revised data, models, and other information through an appeal process to prevent decertification. As opposed to decertification and subsequent litigation, the right to address deficiencies is the logical solution, as it serves to benefit all parties by ensuring that they get what they bargained for instead of utilizing countless time, resources, and expenses fighting over who is responsible for decertification. Under that scenario, regardless of the end result, no one wins.

In the event that the USGBC changes it policies, litigation may expand in this area. Considering LEED standards are being adopted by numerous governmental agencies, this is unlikely. It is more probable that the appeal process will become more prevalent, as a result of due process concerns, or that the litigation will not be associated with LEED per se but with the constitutionality of governmental codes. Or perhaps the lawsuit may be against the USGBC itself.

In October 2010, Henry Gifford and Gifford Fuel Saving, Inc., filed a class action suit against the USGBC and its founders, alleging that the USGBC (i) fraudulently monopolized the sustainable building market; (ii) unfairly misleads the public through its marketing; (iii) deceived customers and users of the LEED system; and (iv) falsely advertised its products.[102] Gifford basically alleged that the LEED standards were a fraud perpetuated on the public and that the standards rarely achieved their objectives. While most commentators have focused on procedural

problems with the lawsuit, many have ignored the substance of the suit, which may have some merit. Some of the more interesting issues concern the guidelines for achieving and maintaining certification, problems with the lack of scientific and objective standards incorporated into the standards, and whether the USGBC is unknowingly guilty of *greenwashing* (overselling one's experience, expertise, or knowledge of green, high performance, or energy efficiency systems). The litigation is in the early stages and the outcome remains unknown.

It is not surprising that litigation related to sustainable development will increase, but the increase will not be solely related to or arising from LEED certification. Sustainable or high performance development encompasses many areas of law, including: (i) environmental law; (ii) construction law; (iii) real estate law; (iv) taxation; (v) regulatory law; (vi) corporate finance and financial litigation; (vii) utilities law; (viii) procurement law; and (ix) land use and zoning law. Accordingly, sustainable development litigation will arise from combinations of these areas of law.

The best solution still remains to avoid litigation. Hopefully, the number of LEED certified buildings will continue to grow, which may bring more litigation, but the best interests and common good will be served if the USGBC continues to work with owners, design professionals, and contractors to ensure that certification is achieved.

Financial Modeling and Financing Issues

It should be noted that this section provides a general overview of multiple financial, promotional, and advertising issues that may arise out of a sustainable development project. On many occasions, these issues may overlap or be interrelated. Accordingly, an integrated discussion is provided to address these issues.

Many sustainable development projects involve the design professionals, developers, or contractors assisting the owner with financing or providing their own financing for the project. Although often required by the owner or dictated by the project, coupling or integrating modeling upon which a third party relies into a sustainable development project further increases the chance for liability for the engineering professional.

A fact that may heighten the risk is if the design professional, developer, or contractor brings the bank to the table.[103] In the event that lending documents are executed between the owner and the financial

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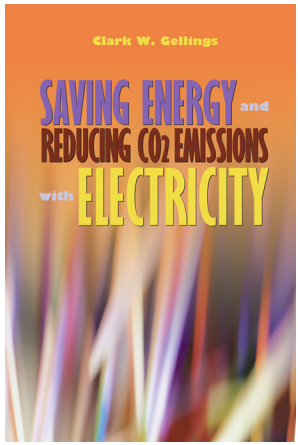

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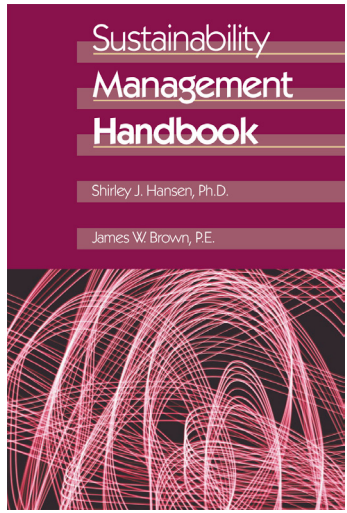

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institution, it will be very difficult to maintain a cause of action that arises out of the financing of the project against the design professional, developer, or contractor. It would, nonetheless, be prudent to ensure that lenders have a basic understanding of sustainable development incentives and certification standards before financing a project. The lender should be made aware of the contractual obligations and requirements and have a full understanding of these requirements prior to providing a loan. The lender should also be aware of how efficiency standards or energy savings are calculated under the project and how this quantification is quantified in monetary terms. If these terms are tied to a payment obligation of one or more parties, the lender will require a detailed explanation and analysis. This will not only protect the design professional or contractor against claims by the owner, but it will also serve as protection against potential claims by the lending institution should the owner fail to make the required payment under the lending documents.

A bigger risk for the design professional arises from modeling risks associated with overly aggressive assumptions provided in financial pro forma statements and other modeling data. It is not uncommon for a party to make certain financial representations to an owner or other party regarding energy savings or performance standards that may result from a sustainable development project. On many occasions, the owner (and potentially the lender) relies on this information in determining whether or not to commit to a project.

Assuming the actual savings or performance does not equal what was provided in the pro forma, the owner or other parties that relied upon the information may have a cause of action against the engineer or modeler for fraud, negligent misrepresentation, unfair trade practices, or other violations of federal or state law. Although overzealous representations may have induced a party to enter into a contract, for actual fraud to exist the party making the representation must have known it was false, as opposed to a claim for negligent misrepresentation, where the party was merely negligent in providing information on which a party relied and suffered damage.[104]

The following example illustrates the potential pitfalls associated with providing unverified or unsubstantiated pro forma data to a potential customer. Imagine an ESCO is promoting and attempting to sell a project to an owner who is contemplating the installation of ECMs at the owner's facilities. In association with the energy audit,

the developer provides various pro forma data, which represents that substantial savings are probable as a result of the project. The owner is still not convinced and is concerned that the margin is not enough to justify the project. The developer returns to the pro forma statement and modeling data, and through the manipulation of several variables and inclusion of a larger or smaller subset of historical data, substantially increases the projected energy cost savings. Although the developer advises the owner that these numbers are subject to change and that projected savings have increased due to different variables, which may or may not materialize, the owner agrees to the project. During contractual negotiations, the guaranteed cost savings are finalized and set forth in the contract between the parties. Although the owner agrees to the project under the most aggressive modeling assumptions, which show the largest cost savings, the most conservative energy savings are memorialized in the contract and are what is guaranteed by the ESCO thereunder. Once the performance period commences, although the savings are much less than the pro forma statements that allegedly induced the owner to undertake the project, the ESCO satisfies the guarantee under the contract. Does the owner have a cause of action against the ESCO? What if the contract shows the guarantee had been met, but due to errors or omissions in the pro forma statements, the actual cost savings are much less than the savings under the contract? What if the discrepancies are due to things outside the control of the ESCO that were an unprecedented anomaly from available historical data, such as changes in wind, weather, or commodity indexes on which key variables in the contract were based?

The foregoing scenarios give rise to several interesting problems. In almost all cases, the parties will only be required to meet their contractual obligations. Consequently, the ESCO should only be held to comply with its guarantee under the contract. Similarly, if the actual cost savings differed due to changes in things beyond the control of the ESCO, the party that assumed the risk under the contract should be the party held responsible.[105]

If false or inaccurate information was provided to the owner, however, and the owner was damaged as a result of the information, the owner may have a claim against the ESCO or developer. Although the burden will be on the owner, if it can prove that the information was false, or should have been known to be false, or that the ESCO or developer was negligent in the performance of services, a claim will

be viable. It should be noted that the sophistication, education, and experience of both parties will be considered in analyzing whether the ESCO or the developer is liable on any of the foregoing grounds.

One of the easiest ways to mitigate risk is to provide information that is accurate and can be supported by data and best engineering practices. Additionally, it is advisable not to deceive, conceal, or attempt to hide information from parties with whom you are contracting, but instead to disclose all information during contractual negotiations. Also, it should be noted that if you defraud or misrepresent information to a governmental entity, you may not only be liable for fraud but potentially guilty of a felony in some states. Not only can this lead to a lawsuit but also to a potential prison sentence.

Other suggestions to mitigate risk include clearly defining, allocating, and explaining the allocation of risk under the contract and providing standard disclaimers on pro forma data that the data provided is only for informational purposes, is only good for a limited period of time, is based on the information provided in the pro forma, may change at any time, and cannot be relied upon by any party as indicative of future results or performance. Although these warnings do not provide definitive protection, they may mean the difference between simply a bad project and a project that is accompanied by over five years of litigation.

As addressed in previous sections, insurance coverage is another item of concern. Often modeling consultants will not have professional liability insurance, or their performance may not be covered. If an error or omission is made, the owner will seek remuneration from the design professional. It is highly suggested that this issue either be addressed in the contract with the consultant or by efforts to ensure that the modeler has professional liability insurance, or both.

It appears that even the federal government is concerned about the potential for fraud on green projects, as the FTC has developed Green Guides, which are used for environmental marketing claims.[106] Generally, the Green Guides concern standards for advertising to assist marketers or promoters from making verbal or written unfair or deceptive claims concerning green services or products. If the claims of sustainable development or green promoters are not verifiable, specific, and clear, they can be deemed to constitute fraud or deceptive marketing and thereby expose the promoter to a potential FTC unfair or deceptive trade practices claim.[107] In large part, the Green

Guides are largely untested, but as evangelical promoters of green products increase, it is probable that they will play a larger role in regulation.

Traps for the Unwary

One can see that there are many traps for the unwary in a green development project and ample ways to find trouble if one is not careful. Depending on the project, a party may assume multiple roles, such as design, construction, and project management, all of which could result in a variety of claims by parties dissatisfied with the results of the contract. For example, in a performance contract, claims could be asserted against an ESCO arising from an energy audit, funding, equipment selection, design or performance specifications, construction management, deficient construction, deficient commission, inadequate training, failure to achieve energy savings, and failure to properly monitor and verify savings, along with many more areas. Simply put, there are many chances to wreck a project.

Another trap could occur if the sustainable development goals do not meet other goals of the owner, such as compliance with a specified budget, achieving green and historical objectives (which may conflict), or other functional purposes that conflict with sustainable development objectives, such as a conflict between security concerns and the utilization of natural lighting.[108] If the objectives conflict, it is up to the design professional to advise the owner accordingly.

Perhaps the biggest trap is greenwashing. Although companies want their sales professionals and other employees to be enthusiastic experts, they need to ensure that they don't oversell or bite off more than they can chew. As discussed in the previous section, not only can embellished representations expose one to professional liability claims, it may also expose one to claims of fraud or FTC and unfair trade practices violations.

On more than one occasion, an overzealous salesman has oversold what could be delivered or has embellished his own qualifications or those of the company which he represents. The only way to address this is through good management and training to ensure that one's employees are not exceeding their authority or knowledge in selling or promoting a project. These are only representative samples of traps for the unwary. Many more traps, landmines, and pitfalls exist along the sustainable development highway.

SUMMARY AND CONCLUSIONS: SOLUTIONS

Throughout this article, several solutions have been offered to address particular legal issues that may arise on a sustainable development project. The following offers additional and supplemental solutions to some of these issues and ways in which one may limit or mitigate the likelihood that a particular project will end up the subject of a legal dispute.

Self-education and Awareness

The easiest and most proactive measure one can undertake to steer clear of trouble is education of one's self and one's company. It is imperative that one be aware of the laws and regulations that govern the jurisdiction in which he or she practices, as well as the laws that govern a project. Anytime pursuing work in a new jurisdiction, the laws, regulations and other legal standards should be reviewed. It is also a good practice to review the standards in one's home jurisdiction on a periodic basis, as well as prior to bidding on or entering into a contract. In the event the laws are not contained in bid documents, with which one should be intimately familiar, it is advisable to consult an attorney.

Additionally, it is imperative to be aware of the contractual obligations assumed under a contract and to maintain an active role in contract negotiations. It is also recommended that form contracts not be treated as the "Bible" of construction contracts, as these contracts fail to address many key issues and are not always appropriate for every project. Some of the most important provisions associated with a contract that one should examine and be aware of include the following:

- Contractual obligations and duties assumed under the contract
- Scope of work, and whether there is adequate time to complete the scope of work
- Allocation of risk and who bears the risk for unanticipated or unforeseen circumstances
- Who is responsible for administration of the project and what this responsibility entails
- Goals and expectations of the project, and who is responsible for achieving the goals or expectations
- Proper scheduling of the project, including ensuring that the

schedule accounts for extended commissioning or testing procedures which may occur in sustainable projects

- Whether any warranties, guarantees, and/or representations are being made under the contract, and whether a disclaimer of any implied warranties is included
- Existence and extent of defense and indemnification provisions
- Required builder's risk, general liability, professional liability, and worker's compensation insurance coverage
- Forum for resolving disputes[109]
- Extent of liability for consequential damages
- How damages (including liquidated damages) are defined under the contract, if at all, and what damages are available under the contract
- How the contract may be terminated, and what happens upon termination
- What procedures and notice are required to either put, or be put in default, as well as the remedies for default
- Buy-out rights and other exit strategies

Other specific suggestions for artful contract drafting include ensuring that one has warranties on all products and materials from suppliers providing equipment. It is also helpful to anticipate all issues under a force majeure clause, such as the change of a rating system or building code by a governmental organization or non-governmental actor. If a certification standard has been guaranteed, it is advisable to have a contingency built into the project.

This list is not all inclusive, and as stated below, it is recommended that experienced legal counsel be engaged during the negotiation and execution of the contract, as well as to be on standby during the construction and performance phase of the contract.

Good project management can also prevent many problems on a contract before they occur. Standardized project management policies should be implemented and adhered to on all projects. Two of the most important aspects of these standards are organization and documentation. To the extent possible, schedules should be drafted and religiously maintained. All aspects of a project should be properly documented. It is also imperative that experienced and knowledgeable subcontractors and consultants be engaged who fully understand the idiosyncrasies

and requirements of sustainable development projects. Strategy, goals, and objectives should be discussed with the entire pre-design and pre-construction team. Similar standards should be employed if working with design professionals in different disciplines.

When possible, it is also advised to stay engaged with governmental leaders to ensure that legislators are aware of the consequences of the laws being passed concerning sustainable development. Often these laws are passed without a full understanding of the parties affected, how they are affected, and whether or not the particular standard serves the benefit of the public. If given the opportunity, provide legislative testimony or assistance to governmental agencies and their aides to inform them as to what needs to be done to not only encourage but also allow sustainable development projects. For example, few legislators know the opportunities that exist concerning recycled energy or energy conservation, instead focusing on renewable energy incentives, which are further down the solution food chain.

One is also encouraged to stay updated concerning the activities, promotion, and dissemination of information by trade associations. It is also advisable to attend conferences that actually benefit one's practice, not merely provide a break from business as usual. A combination of the foregoing may provide substantial benefit to not only the particular design professional but also to the professional's clients.

Education of Customers

While self-education is the preeminent means to alleviate risks, education of customers is a close second. It is advisable to ensure that your customers have knowledge equivalent to what you possess and to ensure that their expectations are reasonable. One way to accomplish this is to provide technical data and promotional materials that can be verified and substantiated. Utilize ample communication and comprehensive documentation to ensure a mutual understanding of the scope, goals, and limitations of the project. For example, when bidding on and assessing a project, explain to the customer the difference between life cycle costs and upfront costs—and ensure a thorough understanding of the difference prior to undertaking a project. Social responsibility must be not only to one's environment but also to one's self, the profession, and the clients.

A goal of each project should be for one's employees to display the same communication standards throughout the project as they did

in selling the project to the customer. Sustainable development projects are not hook, line, and sinker projects. Instead, they are more analogous to raising a child, where care and attention are necessary for a proper upbringing. Customers do not usually understand the mechanics of engineering or design, and to assume they do is a mistake that will ultimately damage the design professional more than the customer. Provided the expectations of a customer are reasonable, and they are achieved, all parties will be pleased with the contract, which should not only keep one out of court but also lead to increased business.

Hire Experienced Legal Counsel

A final recommendation that goes hand and hand with good project management is to engage legal counsel during all aspects of negotiation, contract drafting, and execution; ensure as well that counsel is available for consultation during the construction and performance of the project, especially if certain guarantees, warranties, or representations or made under the contract. Experienced counsel may be able to assist you in mitigating damages that may occur for failure to perform under the contract. Ultimately, it is your decision whether you want to hire counsel on the front end or back end of the contract. On most projects, it will be one or the other, or both.

Despite the contractual recommendations set forth above, there is no magic green or sustainable development language to address all contracts. Good and precise contract drafting that properly defines and minimizes the risk is priceless, considering the time and resources that may be spent in litigating duties or obligations under a contract. It is unquestionable that a little extra time and money on the front end is money well spent, as upfront costs pale in comparison to the costs of litigation, which can exceed $50,000 or more a month, depending on the claim. When expert fees and costs, as well as the lost time, resources, and personal stress are added to litigation, the costs can easily exceed $100,000 a month or more. Consequently, even if one is successful in the litigation, one doesn't ultimately win—no one wins…some just lose less than others.

Ultimately, a winning project is one in which all goals and expectations have been met and fulfilled, with all parties being satisfied because they have received that for which they contracted. Assuming this is the intent under each contract, the probability is that the subject project will be the first of many which the parties will undertake together.

References

1 Michael Durham is a partner at the Baton Rouge office of Crawford Lewis, PLLC. Crawford Lewis also maintains an office in New Orleans, Louisiana.
2 Frequently throughout this work, the terms "sustainability" and "sustainable development" are utilized interchangeably due to the frequency of this occurrence in much of the literature on this subject.
3 Black's Law Dictionary defines "law" as "[t]hat which is laid down, ordained, or established. A rule or method according to which phenomena or actions co-exist or follow each other." Black's Law Dictionary, 6th Edition, 1991.
4 As one of our great innovators, Albert Einstein, imparted many years ago, "The world will not evolve past its current state of crisis by using the same thinking that created the situation."
5 Anderson, Paul Thomas. *There Will Be Blood*. Daniel Day Lewis (1987).
6 These proposed solutions, however, are provided for educational and informational purposes only and do not constitute legal advice. For a full analysis of the issues discussed herein, and how they may apply to individual circumstances in a specific jurisdiction, counsel should be engaged by the reader.
7 Not surprisingly, a commonly used offshoot of the term sustainability, "green," topped the 2009 list published by Lake Superior State University of words to be banished from our vocabulary due to overuse.
8 A term—"greenwashing"—has actually been coined for the "fools green" espoused by these charlatans.
9 Even Wal-Mart has boarded the green train by announcing it plans to implement a sustainability index within the next five years, which will require all products sold in its stores to have a green rating on the their label. See, e.g., http://www.nytimes.com/2009/07/16/business/energy-environment/16walmart.html. Last visited October 14, 2010.
10 USGBC stands for U.S. Green Building Council; LEED stands for Leadership in Energy and Environmental Design, which is discussed in great detail herein.
11 "Cradle to cradle" is a design philosophy that considers the entire lifecycle of a product, including the recycling of the product or material at the end of its useful life. See William McDonough & Michael Braungart, Cradle to Cradle, New York (2002).
12 While there is no standardized definition of "green building," the EPA provides that "green building is the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life cycle from siting to design, construction, operation, maintenance, renovation, and deconstruction. This practice expands and complements the classical building design concerns of economy, utility, durability, and comfort. Green building is also known as a sustainable or high performance building." Environmental Protection Agency, Green Building Basic Information, http://www.epa.gov/greenbuilding/pubs/about.htm (last visited October 11, 2010).
13 Arguably, the first sustainability pioneers were Native Americans and other indigenous people who lived in a manner similar to the definitions provided in the previous section.
14 See 42 USC §7401, et seq. The Clean Air Act was subsequently amended in 1970 and 1990.
15 42 USC 4321, et seq.
16 42 USC §6201, et seq.
17 See 16 USC § 2601, et seq.
18 Robert U. Ayres & Ed Ayres, Crossing the Energy Divide, Wharton Publishing (2009).
19 The Ayres inform how a proposed "win-win" transaction for Cabot Corporation, Columbian Chemicals, Primary Energy, and one of the local utilities in Louisiana was blocked by the utility service provider because it would not only lose a portion of its load but would also be unable to build more capital infrastructure, which costs it could pass on to its ratepayers. See Robert U. Ayres & Ed Ayres, A Bridge to the Renewable Energy Future, World Watch (2009).
20 Id.
21 See 33 USC § 1251, et seq.
22 Many of these laws or regulations are discussed in greater detail herein.
23 A copy of the Executive Order is available at http://www.hss.energy.gov/nuclearsafety/env/rules/74/74fr52117.pdf. Last visited October 14, 2010.
24 A copy of the guidance is available at http://www.sec.gov/rules/interp/2010/33-9106.pdf. Last visited October 14, 2010.
25 The Green Guides can be found at http://www.ftc.gov/bcp/grnrule/guides980427.htm. Last visited October 13, 2010.
26 See EPA to Set Modest Pace for Greenhouse Gas Standards / Agency stresses flexibility and public input in developing cost-effective and protective GHG standards for largest emitters located at http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/d2f038e9daed78de8525780200568bec!OpenDocument. Last visited January 18, 2011.
27 There is, however, an Office of Federal Environmental Executive, which provides that it protects sustainability and environmental stewardship through federal government operations. This office was formed by Executive Order in 1993.
28 It should be noted that during this same time period, automobiles accounted for approximately 20.5% of carbon dioxide emissions. See, generally, 2000-2009 statistics on energy usage and consumption published by the U.S. Energy Information Association located at http://www.eia.doe.gov.
29 Id.
30 Zero sum buildings are energy neutral or utilize no more energy than they produce. Energy surplus buildings produce more energy than they utilize.
31 Other rating systems or standards not discussed herein include the Energy Star Program developed by the EPA, the Green Globes developed by Green Building Initiative, ASHRAE Green Building Standard 189.1, and the BRE Environmental Assessment Method (BREEAM), which is utilized predominantly in Europe.
32 The rating system subdivision does not apply to single family homes.
33 GBCI stands for Green Building Certification Institute. Previously, GBCI hired third parties to certify projects,

but as of July 2010, it announced it is taking over all aspects of the review and certification process.

34 One of the criticisms of LEED is the fact that the standards are implemented and certification performed by non-governmental actors. When mandated by city code or state law, this effectively allows a non-governmental actor to perform ministerial duties typically performed by a governmental actor, which potentially infringes on due process rights.

35 A private citizen has the right to challenge certification under Section 9.3 of the LEED standards. This issue is addressed in further detail herein with regard to the certification challenge concerning Northland Pines High School.

36 Baltimore is actually in the minority of jurisdictions, as its sustainable building ordinances provide that, subsequent to July 1, 2009, all new construction and renovation of buildings over 10,000 square feet must achieve a silver rating under the LEED standards, as certified by USGBC. See generally Baltimore Sustainability Program powerpoint, prepared by Baltimore Office of Sustainability located at http://www.mdp.state.md.us/PDF/OurWork/RoundTable/20080731/BACI_Sustainability_Office_Roundtable_20080731.pdf. Last visited October 12, 2010.

37 While many are aware of rebuilding in New Orleans, few are aware of the disaster sustained by Greensburg, Kansas and the steps it has undertaken to rebuild through sustainable development principles. More information can be found at greensburgks.org.

38 See selected section of Boston Zoning Code located at http://140.241.251.212/pdf/ZoningCode/Article37.pdf. Last visited October 11, 2010.

39 See District of Columbia Code, D.C. Code §6-1451.01, et seq.

40 Despite this requirement the Mayor of the District of Columbia may grant a waiver if there exists (1) substantial evidence of practical infeasibility or hardship of meeting the green building standard; (2) a determination that the public interest would not be served by complying with the ordinance's requirements; or (3) other compelling circumstances.

41 Id.

42 A guide to the legislation can be found at http://www.documents.dgs.ca.gov/bsc/CALGreen/CALGreenGuideFirstEdition8-2010.pdf. Last visited October 14, 2010.

43 Many surveys on green building note that one of the major impediments to the sustainable development movement is the belief that up-front costs for green projects are astronomical as compared to conventional construction. While the up-front may be slightly higher, the life cycle costs are much less. Some governmental bodies believe that if they can reduce the up-front costs, green construction will soar.

44 The full IGCC and synopsis may be downloaded from the ICC website at http://www.iccsafe.org/cs/igcc/pages/default.aspx. Last visited October 11, 2010.

45 The legal analysis contained herein is a high-level overview and summary of many fundamental legal principles. It is offered for educational and informational purposes and should not be relied upon by any party. To fully address the issues contained herein and how they may apply to your specific circumstances, it is recommended that you consult an attorney.

46 An overview of LEED related codes can be found at www.usgbc.org/publicpolicy/search/publicpolicies.aspx?pageid=1776. It should be noted that these codes only apply to LEED and are not always 100% correct. Although one should not rely on the search engine fully, it is a good starting point.

47 Interestingly enough, while this article was being written a suit was filed against the USGBC by Henry Gifford and Gifford Fuel Savings, Inc., although on different grounds. See Gifford, et al., v. USGBC, et al., No. 1:10 CV-7747, S. Dist. NY 2010. A copy of the case can be found at http://www.greenbuildinglawupdate.com/uploads/file/Class-Action-Suit-v-USGBC-SDNY-10_12_10.pdf. Last visited January 18, 2011.

48 AHRI v. City of Albuquerque, 2008 U.S. Dist. LEXIS 42135 (D.N.M. 10/3/2008).

49 See Green Building Law Blog at http://www.greenbuildinglawblog.com/2010/06/articles/litigation/bia-v-washington-state-building-council/. Last visited October 10, 2010.

50 Id.

51 It should be noted that the Okeson decision was overruled by the Washington State Legislature in 2008 with the passage of Wash. Rev. Code § 54.16.390.

52 See Carl J. Circo, Does Sustainability Require a New Theory of Property Rights, 58 Kan L Rev 91, 146 (Oct. 2009).

53 The City Council provided that "global warming represents a clear and increasingly imminent danger to the economic and environmental health of the world, and to specific qualities of life for the Seattle area including water supply, hydroelectric energy production, air quality, forest health, species protection and recreational activities." See Okeson, at 440.

54 Euclid v. Amber Realty Co., 272 U.S. 365, 395(1926)

55 Id. See Footnote 31, at page 145.

56 A full analysis of federal and state energy and renewable energy tax credits is beyond the scope of this article.

57 Under certain circumstances, appropriate structuring of the transaction and ownership of the equipment may maximize the benefits to the municipality and developer.

58 See 26 USC §45. The credit applies to the following types of energy projects: landfill gas, wind, biomass, hydroelectric, geothermal electric, municipal solid waste, hydrokinetic power (i.e., flowing water), small hydroelectric, tidal energy, wave energy and ocean thermal.

59 See Public Law 111-5, American Recovery and Reinvestment Act of 2009.

60 See Database of State Incentives for Renewable Energy at http://www.dsireusa.org/summarytables/finee.cfm. Last visited October 12, 2010.

61 For illustrative purposes, this issue is discussed in much greater detail herein.

62 Although there currently exists stringent laws and regulations that are enforced by the U.S. Nuclear Regulatory Commission, as with any product or service that becomes more widely used, increased regulation is sure to follow.

63 See DOE Publication, The Smart Grid: An Introduction, located at http://www.oe.energy.gov/SmartGridIntro-

duction.htm. Last visited October 8, 2010.

64 An entire section of this work is devoted to energy efficiency performance contracting, as perhaps no other offshoot of sustainable development has spawned an industry to rival performance contracting. While LEED initiatives are found throughout the world, these have previously focused on design standards, while energy efficient performance contracting focuses on contractual and statutory principles. Additionally, enabling energy efficiency performance contracting legislation has been introduced in every state, while LEED standards have never been enacted by a state legislative body.

65 Historically, energy efficiency performance contracting has emphasized lighting retrofit and HVAC efficiency. Over the last several years, this industry has expanded to include municipal wastewater and water treatment facilities, as well as renewable energy projects utilizing wind or solar power.

66 See, generally, Dr. Shirley Hansen, PHD., Performance Contracting: Expanding Horizons (2nd Ed. 2006).

67 ESCOs develop, design, and finance energy efficiency projects, install and maintain the energy efficient equipment involved, measure, monitor, and verify the project's energy savings.

68 The IPMVP provides an "an overview of current best practice techniques available for verifying results of energy efficiency, water efficiency, and renewable energy projects." See, generally, International Performance Measurement and Verification Protocol, 4th edition (2009), available for download at www.evo-world.org.

69 Id.

70 A word of caution—although the IPMVP may be the standard by which energy savings and measurement is defined, if it is not incorporated in the applicable contract or adopted by the jurisdiction in which the services are provided, savings measurement may be interpreted under a less reliable method, or even a standard developed by legislative and administrative officials that has no roots in best engineering practices.

71 It should be noted that performance-based energy efficiency contracts are not a method for bypassing state bid laws to obtain new equipment, but are services contracts, where the equipment installed is merely a vehicle to provide the services.

72 For illustrative purposes, as to the many issues that can occur over a short period of time, concerning not only energy efficiency performance contracting legislation but also sustainable development legislation, a detailed analysis of recent issues concerning performance contracting legislation in Louisiana is provided.

73 Maintenance savings are defined in Louisiana as operating expenses eliminated and future capital replacement expenditures avoided. See La. R.S. 39:1496.1(D).

74 In June 2010, a performance contract was executed with a local school board, which was the first performance contract executed in Louisiana between an ESCO and a local agency since 2006.

75 See La. Atty. Gen. Op. 07-0002.

76 Under Louisiana law, the Attorney General can only provide advisory opinions, and the opinions are of no precedential value. They can be withdrawn, modified, or overruled subject to decisions of a court of law.

77 Siemens Building Technologies, Inc., v. Iberville Parish School Board, 978 So. 2d 328 (La. 2008).

78 Many clients ask how a contract can be determined illegal after negotiation and execution in the United States of America. Generally, the contracts cannot, as financing with third parties and other issues are integrated into the contracts. If the contract violates the public order, however, it can be declared illegal as a matter of law.

79 In part as a result of Hurricanes Katrina and Rita, as well as the Deepwater Horizon Oil Spill, Louisiana has recently become more progressive with regard to sustainable development legislation. It is anticipated that through the challenge of these tragedies, the state will become more resilient and sustainable, as well as undertake a leadership role with regard to sustainable development legislation.

80 See, e.g., Caldwell v. Dept. of Local Govt. Fin., 2007 Ind. Tax LEXIS 15 (Ind. Tax Ct. Mar. 12, 2007) and People ex rel. Board of Trustees of Chicago State University v. Siemens Building Technologies, 900 N.E. 2d 414 (Ill. App. 3d 2008). In addition to these cases, there have been several other cases throughout the U.S. that have been resolved at the trial court level, arbitrated, or settled prior to a decision.

81 At least one court case disagrees with this point. In Destiny USA Holdings, LLC v. Citigroup Global Markets Realty Corp., 889 NY S. 2d 793 (NY 4th Dept. 2009), the Court found that green building specifications were unique and "greenness" makes it difficult to calculate damages. The dissent in this matter disagreed.

82 Throughout the last two sections, the term "design professional" is utilized as a generic term covering engineers, architects, surveyors, and other designers.

83 A typical construction defect/breach of contract case that incorporates many of the legal issues discussed in this section is Gidumal v. Site 16/17 Development, LLC, N.Y. County Index No. 105958/10 (New York County Supreme Court, May 5, 2010), which generally concerns the failure of a developer to deliver as promised, but more specifically concerns the failure of a building system to deliver as promised. Further information concerning this suit can be found at http://www.greenrealestatelaw.com/2010/05/unit-owners-file-suit-against-leed-gold-hopeful-riverhouse-in-battery-park-city/. Last visited January 22, 2011.

84 Further information on this suit can be found at the blog Construction Law Musings. See http://construction-lawva.com/builders-association-seeks-cut-down-grassroots-green-building-program-guest-post/. Last visited January 22, 2011.

85 The elements to establish a claim for negligence vary from jurisdiction to jurisdiction, and a full legal analysis is generally beyond the scope of this article. However, generally, to establish a claim for negligence, a plaintiff must prove (i) a duty; (ii) a breach of the duty; (iii) the breach caused damages; and (iv) actual damages. See Carr v. City of New Orleans, 626 So.2d 374, 380 (La.App. 4 Cir.1993); writ denied, 94-0062 (La.3/11/94), 634 So.2d 398. Due to variations in law among jurisdictions, the legal issues and analysis addressed herein follow Louisiana law. This analysis is far from comprehensive and is only provided for educational and informational purposes; it is not to be relied on by any party. For an analysis of how these issues may pertain to your facts and circumstances, the engagement of counsel is recommended.

86 See, generally, Dumas & Associates, Inc. v. Lewis Enterprises, Inc. CA No. 29,900 (La. App. 2 Cir. 12/22/97), 704 So. 2d 433.

87 It should be noted that while the owner does not have a contract with the engineer, it may have a claim for negligent misrepresentation or even breach of the standard of care, depending on the jurisdiction.

88 See, generally, Sams v. Kendall Construction Co., 499 So. 2d 370 (La. App. 4 Cir. 1986).
89 The Spearin Doctrine is almost 100 years old and arises from United States v. Spearin, 248 U.S. 132 (1918).
90 See, generally, KiSKA Construction Corp., v. Washington Metro Area Transit Authority, 321 F. 3d 1151 (D.C. Cir. 2003) and bg., 923 F. 2d 871 (Fed. Cir. 1990). Full opinion at 1990 U.S. App. LEXIS 21618.
91 Crowley at *5.
92 Id.
93 Shaw Development v. Southern Builders, Case No: 19-C-07-011405, Circuit Court for Somerset County, Maryland. (2007).
94 Although inapplicable to professional liability policies, some builder's risk and general liability coverage is being provided in the form of green endorsements to cover such things as vegetated or solar roofs and alternative power systems. This coverage may include the cost of hiring a third party professional to ensure peak performance of the systems, as well as compliance with applicable certification standards involving Energy Star rated electrical equipment, roof and insulation materials, energy-efficient lighting systems, and water-efficient interior plumbing. In all likelihood, both endorsements and riders will soon be available that will significantly affect professional liability coverage on sustainable development.
95 As with many other legal theories addressed herein, a full analysis of breach of contract claims is not provided, due to variations among jurisdictions. This cause of action is only mentioned for educational and informational purposes and to provide awareness of potential pitfalls in sustainable development contracts.
96 While some jurisdictions allow recovery for undocumented work on a theory of betterment or equitable adjustment, efficiency and good project management mandate that all changes be documented by the contractor.
97 The B214 may be incorporated into the owner-architect agreement or used as a standalone document.
98 See Guidebook for ConsensusDOCs 310.
99 Another similarly cited term in the industry is performance slippage, which means the project does not perform as planned or anticipated, which is usually only discovered after construction is complete and performance commences.
100 Id.
101 To reiterate a previous point, a private citizen has the right to challenge certification under Section 9.3 of the LEED standards.
102 See FN 47, Id.
103 A quandary may be created if the developer frequently works with the same lending institution, due to the specialized knowledge and training possessed by the lending institution. Although the developer may wish to utilize an experienced and knowledgeable financial institution to ensure that funding is provided and that the project moves forward, this relationship could create greater risks for the developer.
104 Again, the information provided herein is purely for educational and informational purposes and is not a full legal analysis of a claim for fraud or the likelihood that a party would prevail on the prosecution or defense of said claim, all of which depend on the facts and circumstances as well as the governing jurisdiction.
105 In reality, a good performance contract should have an adjustment provision that addresses these unintended and unforeseen consequences, should they substantially differ from the historical information on which the contract was based.
106 See 16 CFR §260, et seq.
107 In addition to being investigated and potentially prosecuted by the FTC, a party may also face a private civil suit for false or misleading descriptions in commerce pursuant to Section 43(A) of the Lanham Act.
108 A version of this scenario and multiple other scenarios are discussed in a presentation provided by Frank Musica in May 2007 entitled "Don't Let Green Design Cause Red Ink." A copy of the presentation can be found at http://www.greenbuildinglawupdate.com/uploads/file/Musica%20AIA%20Slideshow.pdf. Last visited October 12, 2010.
109 Although arbitration procedures are costly, through a well-drafted arbitration clause, one can ensure having a knowledgeable and experienced professional resolving a dispute, as opposed to someone who has little to no construction, much less sustainability, experience. It is also advisable, when possible, to refrain from agreeing to dispute resolution in the other parties local state or city court, and instead opt for the resolution of disputes in federal court.