### Issue 16 BUILDING GREEN

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# Energy and the Construction Market: **Risk and Opportunity**

Energy policy and regulation are in flux on the national, state and local levels. These changes present both risk and opportunity to the construction industry. To minimize risk and maximize gain, businesses need to know and understand the landscape at the federal, state and local building code level.

#### Federal Regulation of Greenhouse Gases and Oil Exploration

The federal government has a long and somewhat controversial history concerning regulation of emissions of various substances. Today the debate has evolved towards regulation of carbon and other emissions that may contribute to man-made climate changes. This debate has primarily focused on the so-called "cap and trade" proposal as a means of regulating carbon emissions.

The cap and trade structure was proposed as the solution within the American Clean Energy Act and Security Act of 2009 (ACES). While ACES initially passed in the U.S. House of Representatives, it stalled in the U.S. Senate in the face of mounting political opposition. After the bruising fight over health care reform and the later sweeping Republican victory in the November 2010 elections, it appears that federal cap and trade legislation is politically dead for the foreseeable future.

But other alternatives have gained steam. The Environmental Protection Agency has developed regulations for monitoring and regulating carbon dioxide and other greenhouse gasses (GHG) as pollutants. EPA was challenged for failing to adopt GHG regulations under the Clean Air Act. That case, resulted in a 2007 decision, Massachusetts v. EPA, 549 U.S. 497 (2007), in which the Supreme Court ruled that GHGs were air pollutants and that the Clean Air Act required the EPA

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to regulate GHG emissions if the EPA determined that the gas "may reasonably be anticipated to endanger public health or welfare."

The EPA's current proposed regulations include the Greenhouse Gas Reporting Rule (40 CFR part 98) that requires the reporting of GHG emissions from large sources and suppliers. On January 2, 2011, EPA's standards take effect which limit GHG emissions for cars and light trucks and require air permits for new stationary sources, such as coalfired power plants and refineries. These permits require installation of Best Available Control Technology (BACT) at these sources. EPA's regulations allow regulatory authorities to select the best technology to reduce GHG emissions by evaluating them based on environmental and cost-effectiveness.

#### **Energy Production and Resources**

The connection between GHG emissions and energy is obvious. Whether the discussion is cap and trade or EPA regulation, regulation of GHG emissions is certain to be watched closely by those involved in design and construction of power plants for example. Coal-fired electric plants could find their economic model seriously impacted by GHG regulation. Proponents of nuclear and wind power, on the other hand, may applaud such regulations loudly as not only sound environmental policy, but also a regulatory boost to the viability of their own projects.

After a 2008 Presidential election marked by chants of "drill baby drill," it appeared that regulatory impediments to offshore oil and gas exploration and drilling would ease; however, the disastrous oil spill in the Gulf of Mexico in 2010 may have brought that trend to a screeching halt. The Obama administration initially announced a moratorium on all offshore oil drilling. While the administration has lifted that moratorium, it has imposed more stringent rules designed to help maintain well bore integrity, safety certification and blowout prevention. Congress considered allocating more resources toward oversight, inspections and reviews of offshore platforms, as well as extending the statutory time limit for review of offshore permit applications. These changes stalled with the Senate omnibus spending bill last month and their future is uncertain.

#### **State Regulations and Energy Initiatives**

Individual states are imposing their own initiatives. California has implemented its own cap and trade program; and while it does not specifically limit GHG emissions, it distributes allowances that allow certain industries and businesses to produce GHG. Though these allowances may be traded and sold among private companies, the number of available allowances is set to decrease every year. The program is designed to provide economic incentives for investment in clean technology.

In Virginia, the Department of Environmental Quality (DEQ) has streamlined and standardized the permitting process for small wind energy projects by adopting a permit by rule regulation. A permit by rule specifically sets forth what an applicant is required to do in order to obtain a permit. The requirements vary depending on the size of the wind energy project.

A wind energy project of less than 500 kilowatts is not required to submit any notification or certification to the DEQ. Projects with a rated capacity between 500 kilowatts and five megawatts require certification, and in some cases, contribution to a DEQ fund to support scientific research

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of the environmental impacts of wind energy projects on avian resources. A wind energy project with a rated capacity greater than five megawatts requires a complete application including site certification, interconnection studies and environmental impact analysis.

Governor Bob McDonnell has been vocal about his interest in the development of wind farms as a source of not just electrical power, but also job creation. Massachusetts approved a plan to purchase electricity from the Cape Wind Project, an offshore wind farm that is now being planned on Nantucket sound. The Cape Wind Project will involve 130 offshore wind turbines, producing up to 420 megawatts of wind energy. It has met stiff opposition over the last decade from local residents and fishermen who were concerned about its aesthetic and environmental impact, demonstrating that even clean energy projects can be controversial.

## The Built Environment - Sustainability, LEED and Energy

Over the last ten years, sustainability has developed into a core value of the built environment for many owners and users. This has translated to the explosive growth of the United States Green Building Council and the rapid insertion of its Leadership in Energy and Environmental Design (LEED) standards throughout the national marketplace. The deep embedding of the LEED standard is perhaps best typified by GSA's recent requirement that all federally-owned new construction must achieve a LEED gold rating.

Energy efficiency has always been part of the LEED rating system, but it is far from the only axis of sustainability advanced by LEED. To some, energy efficiency is the Achilles' heel of LEED. Many critics have pointed to specific projects and studies that have shown a failure of LEED rated buildings to meet expected energy efficiency performance. To others the disconnect is even more sinister. One alleged energy expert has filed a class action lawsuit against USGBC and many of its founders alleging misrepresentations by USGBC relating to the benefits of LEED certified buildings.

The USGBC has recognized and understood for some time the need to beef up its energy related requirements. In the LEED 2009 standards, USGBC included significant changes that tilted the field far more heavily towards energy efficiency. Use of dense urban sites close to transportation hubs received an additional boost. These alterations reflect an increased focus on both carbon emissions and reduced energy usage.

# Evolution of Building Codes and the Future of LEED?

The world of green construction is rapidly changing with the anticipated adoption of green building codes. The International Code Council (ICC) has previously obtained successful widespread adoption of its International Construction Code, International Residential Code and various specific trade codes; today they are progressing rapidly in the development of the International Green Construction Code (IGCC). Similarly, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) is developing Standard 189.1, Standard for the Design of High Performance, Green Buildings.

On one level, the widespread adoption of sustainable building codes represents a watershed success in the USGBC mission of educating and pushing the marketplace

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towards increased sustainability. On another, this development may represent a threat to the economic viability of USGBC. USGBC has had stunning success at gaining widespread adoption of its LEED standard for green construction. What happens when there are actual code standards that local officials can interpret and enforce as opposed to turning to the vagaries of a voluntary remote third party certification system? What happens to the market when these codes are more particularly directed to energy efficiency and indeed to energy performance rather than design models?

USGBC's plan is to continue to push the envelope beyond the new floor established by the new green codes and to require even higher levels of sustainability. That is a lofty and admirable goal, but one that at some level hits the vanishing point of economic viability. In addition, USGBC's explosive membership

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and certified projects have been fueled by its primacy in sustainability evaluation. If that is taken away, how does USGBC maintain its membership, dues and financial structure? If there was a valid building code process for verifying the bona fides of sustainability measures, why resort to complicated, expensive and external forms presented by a third party rating system? These questions may be presented and answered in the next five years with the advent of sustainabilitybased building codes.

### Conclusion

The current posture of energy policy and regulation is extremely complicated and shifting rapidly; and the construction industry continues to struggle to gain its footing after an historic downturn. Facing a flood of new federal and state environmental regulation could place challenging economic burdens on an already battered segment of the economy.

Nevertheless, such regulations will create potential opportunities. Increasing requirements for energy efficiency, likely increases in future fuel prices and regulation of GHG emissions are certain to open wider vistas to alternative energy production. This will translate to construction opportunities, in particular relating to wind power in Virginia

Closer to home, the next two years will present a tidal change in building codes with the completion and likely widespread adoption of sustainable building codes. These building codes may present more clarity and certainty and thus represent dramatic reductions in risk associated with green buildings. The adoption of these codes will present significant pressure for change on the USGBC and only time will tell exactly how USGBC responds.

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