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SIEMENS

2009 Greening of Corporate America

The pathway to sustainability
— from strategy to action



**McGraw Hill
CONSTRUCTION**

Introduction



Daryl Dulaney
President & CEO
Siemens Industry, Inc.

When we worked with McGraw-Hill Construction to publish *The Greening of Corporate America SmartMarket™ Report* in 2007, we were able to demonstrate that a fundamental shift was occurring in the attitudes and practices of our nation's leading corporations when it came to the greening of their operations and their role as active stewards of the environment. Our groundbreaking study indicated that corporate America was approaching a tipping point, one in which our nation's most prominent business leaders were beginning to embrace sustainability and energy efficiency and make it an integral part of their corporate strategy—more the rule, rather than the exception.

The results are revealing, and the study's findings confirm our belief that the leaders of our country's largest and most influential organizations are firmly committed to sustainability as a strategic imperative. Their commitment – to use resources more efficiently, to reduce the impact of their facilities and operations on the environment, and to attract and retain the best employees – is clear.

Now, amidst the most challenging economic times we have experienced in recent memory, we felt that it was time to refresh the study, and armed with new data, revisit our conclusions. With this in mind, we again collaborated with McGraw-Hill Construction to investigate how far corporate America has come in the adoption of sustainability across the enterprise and to assess the impact of today's economic conditions on their progress. Impressive to us is the willingness of corporations to communicate, with transparency and honesty, their progress as they work toward achieving a more sustainable future for their operations.

In today's marketplace, Siemens is in a unique position, ready to help make the nation's buildings, plants and infrastructure more efficient and as a result, more environmentally responsible. After decades of providing energy solutions to our customers, one thing we know for sure—energy efficiency and clean energy technology remain the cornerstones of the Green building movement. Some key highlights include:

- In both the 2006 and 2009 findings, increased energy costs were cited as the primary driver for green building initiatives by two-thirds of corporate leaders
- Corporate America demonstrates strong agreement over the importance of prioritizing renewable energy, and equate this investment with increased national security and a key national priority for our nation's leadership

It is clear to us that although our customers are facing tough economic times, their focus on reducing energy consumption and cutting CO₂ emissions has not diminished, and that the desire to incorporate sustainable practices into their facilities and operations is stronger than ever.

Fortunately, our research finds that we are well on the way of achieving these objectives, and that sustainability is now, more than ever, part of this nation's corporate culture. Much like our own journey down the path toward sustainability, we hope you use this research to spark debate and challenge the status quo at your own organization, so that no matter what you're doing today, you are ready to do more tomorrow.

As President and CEO, Daryl Dulaney is responsible for all business activity and the executive management of Siemens Industry, Inc. Siemens Industry provides its U.S. customers in the fields of industry and infrastructure with integrated automation technologies as well as comprehensive industry-specific solutions. With more than 30,000 employees in 480 locations across the country, Siemens Industry consists of six divisions including Industry Solutions, Industry Automation, Drive Technologies, Building Technologies, Mobility and OSRAM SYLVANIA. Since 2005, Dulaney has been CEO of Building Technologies, a leading provider of energy and environmental solutions, building controls and fire safety and security systems.



Harvey M. Bernstein
F.ASCE, LEED AP
 Vice President
 Industry Analytics, Alliances &
 Strategic Initiatives
 McGraw-Hill Construction

We are very pleased to have the opportunity to collaborate with Siemens again on this report—a follow-up to our *Greening of Corporate America SmartMarket Report™* issued in 2007. By going back to this same population of senior executives in the largest corporations in America, we were curious as to how the market had shifted between 2006 (when the original data were collected) and today.

Over the past year, there has been a great deal of discourse on how involved corporations truly were getting with regard to sustainability. There are some obvious indicators that it has been on the rise—more and more firms are issuing regular sustainability reports with tangible metrics and goals, product marketing messages are full of environmental and socially conscious messages, and with growth of industries like green building, consumers are demanding products to achieve their own performance goals.

The results confirm that corporations are increasing engagement in sustainability initiatives. The data back up assertions that have been prolific in business journals and magazines over the past couple of years—including a recent piece in the *Harvard Business Review* titled “Why Sustainability is Now the Key Driver of Innovation.”

Some of the most exciting results include:

- Corporations are steadily progressing in their commitments to sustainability—the percentage of firms at the highest levels of engagement doubled over these three years, growing from 18% of firms to 37%.
- There has been a significant shift in looking at sustainability in terms of how it could save a firm money. Now, firms are driven by revenue generation—more than half (56%) are providing green products and services to the market as well as requesting sustainability information from their vendors and service providers. This demand will have a profound influence on helping transform smaller firms.
- Corporate leaders understand the market differentiation sustainability commitments can bring their firms. Over just three years, the number of C-Suite executives that perceive this advantage has grown from 31% to 57%.

We are encouraged that all this activity and leadership has occurred during such difficult economic times. The increase suggests that sustainability truly is becoming embedded in corporations. As a result, firms that lag in adoption will miss out on the opportunity to reap the greatest benefits that the market now offers.

We appreciate Siemens allowing us to bring this research to the public arena as it provides valuable data and analysis that industry players can use in their own paths to sustainability. We also thank Frank O'Brien-Bernini from Owens Corning and Charlene Lake from AT&T, both Chief Sustainability Officers for their firms, as well as the sustainability team at Microsoft for offering their perspectives on where corporate sustainability is heading.

We look forward to continuing to track this trend over time. As always, McGraw-Hill Construction is committed to offering cutting-edge research and analysis of the latest thought leadership trends affecting corporations today.

Harvey M. Bernstein, F.ASCE, LEED AP has been a leader in the engineering and construction industry for over 30 years. He serves as Vice President, Industry Analytics, Alliances & Strategic Initiatives for MHC, where he has lead responsibility for MHC's thought leadership initiatives, including the first-ever landmark studies on green construction and key market trends in the U.S. and globally. Bernstein was also one of the team members involved in launching MHC's *GreenSource* magazine. Previously, Bernstein served as the President and CEO of the Civil Engineering Research Foundation. He has written numerous papers covering innovation and sustainability in the built environment, and currently serves as a member of the Princeton University Civil and Environmental Engineering Advisory Council, the Harvard Joint Center for Housing Studies Policy Advisory Board, and as a visiting professor with the University of Reading's School of Construction Management and Engineering in England where he also serves on their Innovative Construction Research Centre Advisory Board. Bernstein has a M.B.A. from Loyola College, a M.S. in engineering from Princeton University and a B.S. in civil engineering from the New Jersey Institute of Technology.

This report is based on 2009 research conducted by McGraw-Hill Construction for Siemens Industry, Inc. The analysis and the editorial content contained in this report do not reflect editorial changes from Siemens in order to maintain editorial integrity.

For comparative purposes, key findings and data from the *2007 Greening of Corporate America SmartMarket Report (SMR)* are included in this study. The research in the SMR was based on research conducted by McGraw-Hill Construction on a proprietary basis for Siemens and made available to MHC for use in the SMR. Many of the same questions were asked in both studies to allow for longitudinal analysis to show shifts in the market over time.

For the full research methodology, see page 31.

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Executive Summary

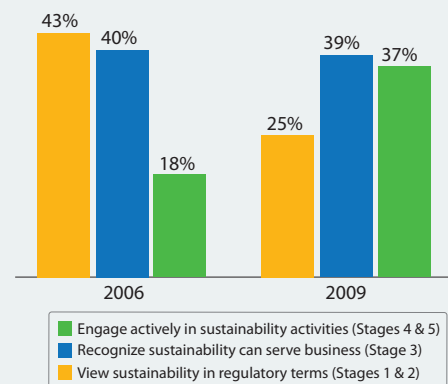
Sustainability is no longer seen as a niche activity in corporate America. This study, surveying the largest corporations in America, demonstrates a substantial growth in sustainability activity over the last three years with a shift in focus from internal operations and public relations to a core part of business performance.

In total, the firms interviewed represent over 75% of the \$36 trillion U.S. equities market with no firm below \$250 million dollars in revenue. (For more detail on the study methodology, please see page 31.)

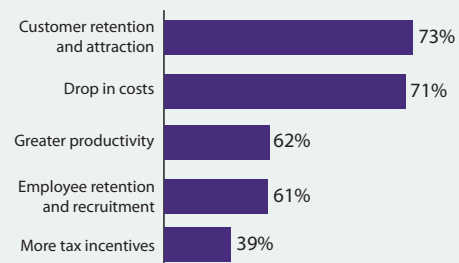
KEY FINDINGS

- ▶ Three-quarters (75%) of firms view **sustainability as consistent with their profit mission** and are engaging in activities. **This is a doubling of activity over the past three years.**
- ▶ **Strong business benefits are expected.**
 - Over three-quarters (76%) of corporate executives expect **sustainability efforts to retain and attract customers and to drop costs of doing business.** See chart at middle right.
 - Over sixty percent (61%) believe **sustainability will serve the financial performance of the company**, up from 31% in 2006 (see chart on page 3). CEOs and larger firms in particular see this market advantage.
- ▶ The **economic crisis has supported**, rather than deterred, sustainability activity.
 - 58% believe sustainability practices are either unaffected or aided by the down economy. See chart below right
 - **Activity in green building has dramatically increased over time**, with over a fifth (21%) expecting to green over 60% of their building portfolio in 2009, up from less than 10% in 2006.
- ▶ **Energy savings remains the most important driver toward sustainability**—with a difference of only 2% between 2006 and 2009..
 - **Global influences have increased** as a driver, moving from 26% in 2006 to 38% in 2009.
 - **Government regulations have decreased as a motivation** from 40% in 2006 to 29% in 2009. Yet, regulation by government is an expectation (72% expect it to become a requirement). See chart on page 3.
- ▶ **The more dedicated a firm gets, the more they are reaping the benefits.** Findings point to significant differences in the paybacks reported by firms in the upper stages of involvement in sustainability.

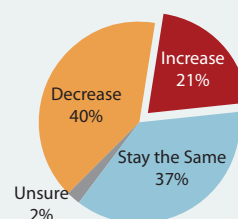
Company Involvement in Sustainability Over Time (2006-2009)



Expected Business Benefits from Sustainability Adoption (according to all respondents)



Impact of Economic Crisis on Growth of Corporate Sustainability



OTHER INDICATORS OF SUSTAINABILITY GROWTH

Emergence of the Corporate Sustainability Officer (CSO)

- ▶ A major indicator that sustainability is increasing has been the emergence of the CSO position in corporate C-suites. Further, these offices are gaining influence in business decisions.
- ▶ The existence of this role is pushing firms along the sustainability spectrum—existence of a dedicated CSO or sustainability team correlates with more corporate sustainability activities and higher levels of performance measures.

Dedicated Budgets

- ▶ Nearly a third report dedicated funding for sustainability.

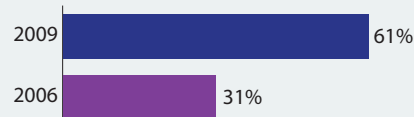
Number of Sustainability Practices

- ▶ Corporations are engaging in multiple activities with 70% reporting that their firms employ three or more sustainable practices.
- ▶ Most common practices:
 - Recycling
 - Employee engagement/activities
 - Green building
 - Initiatives with NGOs/voluntary government programs

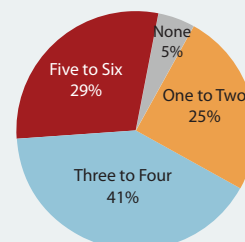
Government Will Require Sustainability (according to all respondents)



Sustainability Leads to Market Differentiation (change in opinion from 2006 to 2009)



Number of Sustainable Practices Used at Firm



Conclusions & Recommendations

Corporate leaders should learn from their peers in order to maximize the benefits from the incorporation of sustainability into their business practices.

Sustainability will continue to become part of standard corporate practice. As such, firms have a short window of engagement before they will lose first-mover advantage.

At some level, sustainability is insulated from economic downturns—most likely due to the innovation it can spur. Firms should capitalize on the advantages of sustainability in order to position themselves to reap the benefits when the economy rebounds.

Increased regulation is likely to occur. Firms should look for opportunities to position themselves ahead of regulation. Those that do will be able to compete in more markets and may also gain incentives offered to early adopters.

Public reporting and transparency is becoming routine. Firms should take stock of their current baselines in order to be able to report accurately their performance and set goals and metrics for improvement. Customers will start to expect sustainability reports.

Larger corporations are embracing sustainability more enthusiastically and engaging in more benchmarking activities. As a result, these large firms will influence the supply chain by requiring their vendors to provide them with sustainability and environmental reporting information. Smaller firms and service providers should establish their energy use, carbon emissions and other environmental and sustainability metrics in expectation of these requirements.

Corporate Involvement in Sustainability

Levels of Corporate Sustainability Commitment

There has been a significant shift in commitment to sustainability in the practices of corporate America over the last three years. In 2009, over three-quarters (76%) of the largest firms in America report corporate commitments to sustainable practices that extend beyond regulation. This is compared to 2006, when sustainability was more of an emerging trend with 58% reporting the same level of involvement.

The most notable shifts have occurred in the upper (4-5) and lower (1-2) stages:

- **Twice as many companies have strong commitments to sustainability** (stages 4 and 5) in 2009 than in 2006.
- **Conversely, those with limited engagement have almost halved in size:** Only 25% of companies in 2009 are in the early stages of 1 and 2, compared with 43% in 2006.

This shift reveals that sustainability is becoming common corporate practice. Concerns about corporate impact on the environment and local and global communities have become central to strategic business decisions. Sustainability has continued to become a critical part of how companies do business in the U.S. rather than being viewed as a cost.

The high level of steady improvement is particularly notable given the dramatic shift that occurred in economic conditions over this same time span. The fact that this embrace has continued despite the downturn may suggest two things: sustainability is becoming entrenched in business practice and, therefore, is not as influenced by the downturn; and the advantages offered by some sustainability measures may align with cost-cutting initiatives occurring across corporate America. The latter may be particularly attractive. Many firms are looking for ways to save costs, particularly those increasing productivity at the same time (e.g., lower operating costs, reduced water and energy bills), so as to minimize layoffs.

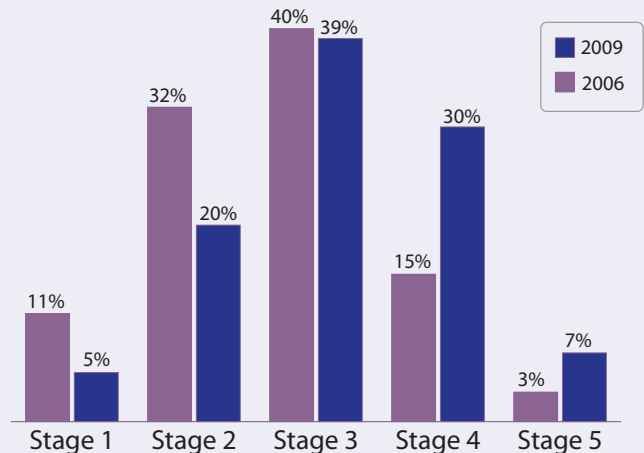
Types of Shift between Stages Over Time

Movement from one stage to the next is most commonly due to steady, continual growth.

Over half of respondents (59%) report that their company advancement from one stage to the next has been the result of continual growth in commitment. Additionally:

- A third (33%) report that their growth has occurred in steps rather than continuously.
- Only 8% of firms have not changed status.

Company Involvement in Sustainability Over Time (2006-2009)



Stage	Description
Stage 1	Sustainability is not part of the company mission and at times weakens the effectiveness of the company to accomplish its mission. The company views sustainability as complying with government regulations.
Stage 2	Company meets all legal standards for sustainability and does so well—following all labor, environmental, health and safety regulations. Sustainability enters into the company mission based on legal requirements. Sustainability is viewed as a cost, but it enters into company mission.
Stage 3	Proactive application of sustainability is considered consistent with the company's profit mission. The firm benefits from lower costs through ad-hoc operation eco-efficiencies, cleaner processes and better waste management. However, the company has not built sustainability into its technologies, policies and operations on an institution-wide basis.
Stage 4	Company is transforming into an organization oriented around sustainability. The company re-brands as a business committed to sustainability and integrates sustainability with key strategies. Green is viewed more as an opportunity than as a cost. The company makes cleaner products or services, applies eco-effectiveness and life-cycle stewardship, and enjoys competitive advantages from sustainability initiatives.
Stage 5	Company is driven by a passionate, values-based commitment to improving the well-being of the company, society and the environment. The company approaches its business as holistic and restorative.

Investment in Dedicated Sustainability Staff

The majority of companies are investing in a person or team dedicated to sustainability efforts.

Sixty-one percent of the companies interviewed have a person or team dedicated to sustainability.

Firms with no dedicated sustainability team

Without a corporate sustainability officer (CSO) or dedicated resources/staff, sustainable issues tend to be CEO-level initiatives or oriented toward the real estate group within a company, with the latter's focus on greening the company's building portfolio and reducing operating costs.

Impact of Economic Crisis on Corporate Sustainability

Over half (58%) believe corporate sustainability practices are either unaffected or aided by the economic crisis.

This result is consistent with a number of studies that suggest the downturn is a time to innovate. During such times of less activity, firms have an opportunity to align resources and create new strategy in order to reposition themselves to gain advantage when the economy recovers.

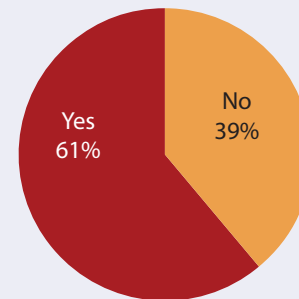
Further, as sustainability becomes entrenched in common corporate practices, those efforts that lead to cost-savings will be of particular importance during downturns.

Variation by Levels of Involvement in Sustainability

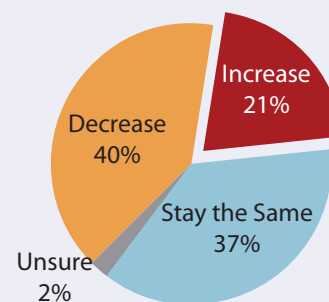
- **Stage 5 firms:** Have stronger opinions about the effect of the economy—with only 13% believing their sustainability activities will stay the same. The remaining 87% have a split opinion on economic impact.
- **Stage 1 firms:** A third (33%) think the down economy will help sustainability, while only 22% believe it will decrease efforts. Interestingly, this is the only group that sees the economy as increasing sustainability at significantly higher rates compared to any negative effect.

The lack of differential between firms in stages 2-4 again confirms that sustainable practices are now a regular part of doing business for a majority of firms. For firms lower on the spectrum, incremental sustainability practices that involve operation cost reductions are no doubt particularly compelling during a deep recession, thus drawing attention to areas that may be ignored in more prosperous times. This is in direct opposition to transformational activities, which involve more risk and investment.

Companies with Dedicated Sustainability Staff



Impact of Economic Crisis on Growth of Corporate Sustainability



Variation by Executive Position

CSOs are significantly more optimistic than other executive positions. Seventy-one percent believe they will either sustain or increase their company's movement toward sustainability during the economic crisis, as compared with 57% of CEOs/COOs/CFOs. This is to be expected as these CSOs are the experts brought in to create sustainability opportunities at their firms.

Variation by Region

The Midwest is the most pessimistic about the impact of the crisis, with only 11% expecting an increase. This is less than half the 24% average for the other three regions.

Corporate Involvement in Sustainability

Levels of Involvement in Green Building

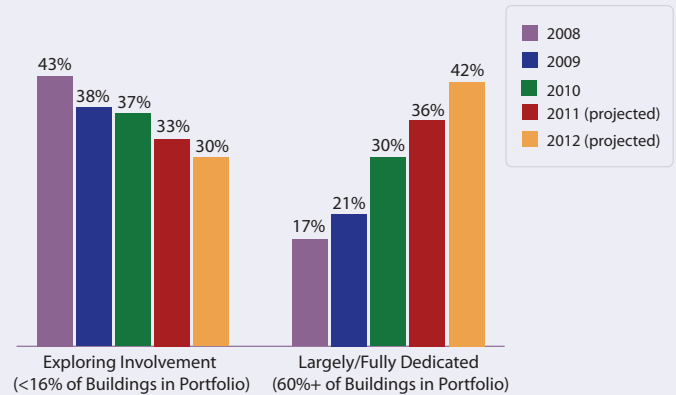
An indication of the market's embrace of sustainability has been firms' increasing commitments to and involvement in the greening of their building portfolio.

Over the past three years, the level of involvement has increased steadily, with the market shifting toward fuller green building adoption. **By 2011, more firms will be dedicated to green than will be moderately involved or less.**

This tipping point marks a more complete entrenchment of green building into standard corporate practice and as a core component of the sustainability plans of large firms.

- The number of firms with at least 60% of their buildings green had the most dramatic growth—increasing from 17% in 2005 to 21% in 2009, with growth expected to increase to 42% by 2012 (see chart at right). This strong, steady growth reveals the maturation of green building as standard practice.
- By 2011, the number of firms that expect to be exploring or moderately engaged in green building (less than 16% of activity) is projected to be just one third—down from 38% in 2009.

Company Involvement in Green Building Over Time (2008-2012)



In 2007 McGraw-Hill Construction estimated the tipping point to take place in 2009. This study reveals that this tipping point occurred sooner, with ongoing steady, significant growth taking place between 2006 and 2009.

This suggests that sustainability is becoming a standard practice in larger corporations, and it is likely to start overflowing to the rest of the market.

Green Building Market Opportunity

One of the major indicators of the shift toward mandating sustainability is the growth and legislation of the green building marketplace. As of June 2009, green building legislation and initiatives were present in 44 states and 12 federal agencies. This activity has helped bring the issues of climate change, energy conservation and carbon emissions to the forefront of policy debate and has also impacted the construction practices of private sector buildings.

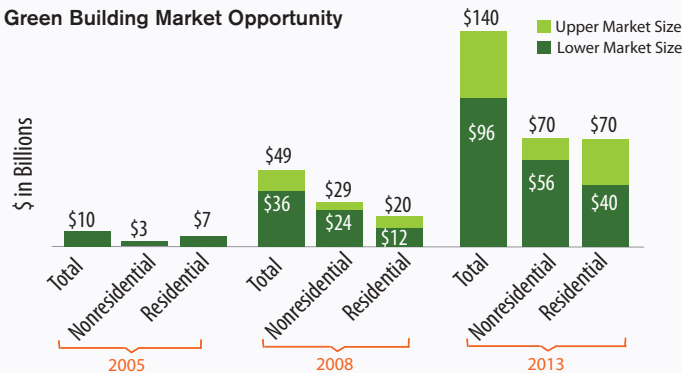
As seen in the chart at right, the green building market has grown dramatically. In 2005, it represented only 2% of the overall construction—a \$10 billion value. Since then, according to MHC Dodge Project data and construction forecasts, the 2008 green building market size grew to 15%–20% of new construction starts by value. This equates to a \$36–\$49 billion marketplace.

This growth is despite the overall downturn in construction—after falling 7% in 2007 and an additional 14% in 2008, total construction starts are expected to fall another 17% in 2009.

Driven further by expanded government requirements and increased awareness of climate change among businesses

and consumers, the green building market is expected to grow to represent between \$96–\$140 billion by 2013. The green commercial and institutional market share of the overall growth is predicted to increase from a \$24–\$29 billion marketplace in 2008 to \$56–\$70 billion, based on new starts by value.

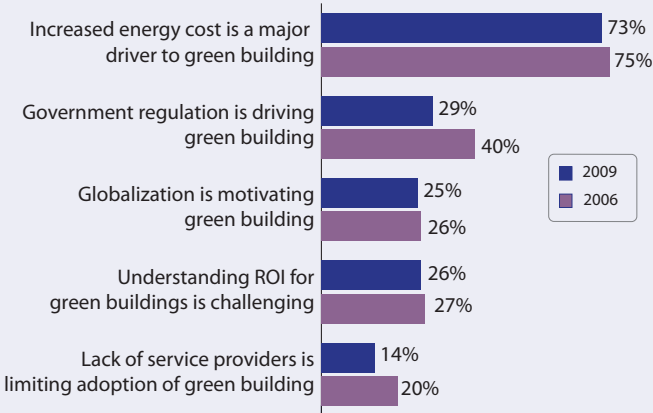
Nonresidential and Residential Green Building Market Opportunity



Based on MHC market forecast, MHC Dodge project data and substantiated by surveys conducted by MHC between 2005 and 2009. Building codes, legislation and policies were also used in estimating the market. Green building is defined as one built to LEED standards, an equivalent green building program or one that incorporates numerous elements across five category areas: energy, water and resource efficiency, responsible site management and indoor air quality.

Source: Green Outlook 2009: Trends Driving Change, McGraw-Hill Construction

Motivations behind Green Building Over Time (2006-2009)



Motivations behind Green Building

Over the last three years, there has been remarkable consistency in the various motivations behind the adoption of green building. **Corporations continue to be driven by financial incentives and discouraged by measurement difficulties.**

The only significant change over the past three years has been regarding the influence of government incentives.

In 2006, 40% of executives from corporate America reported government incentives as a major driver in green building. Only 29% believe the same in 2009—a decrease of over 72%.

Less emphasis on government regulation indicates the maturity of the industry as outside incentives become less important than the inherent business benefits these initiatives can yield. (See page 8 for information on the business benefits of sustainability.)



Business Benefits of Sustainability

Business Benefits

Corporate America expects to see returns on their investment in sustainability.

Four out of five types of business benefits are expected by over 60% of corporate leaders—revealing strong, positive expectations regarding sustainability.

- 73% expect to retain and attract customers
- 71% expect a drop in costs
- 62% expect greater productivity
- 61% expect to retain and attract employees

These expectations are notable given the fact that only 14% of respondents are actually tracking soft measures like productivity and employee retention (see page 15).

It suggests that tracking of these benefits will increase in the short-run as C-suite executives seek to quantify those paybacks.

The lower importance placed on tax incentives compared to the other factors suggests that sustainability is now perceived as having intrinsic value—contributing directly to a company's bottom line through cost-savings and revenue gains. As a result, additional incentives are less necessary.

This result clarifies the increasing commitment of the largest firms in America to sustainable practices despite the uncertain economic conditions. Even in a time when investment in businesses is strictly limited, the compelling return on investment expected by executives is still inspiring the integration of sustainability.

Variation by Firm Size (based on annual revenue)

Firms with annual revenue of \$5 billion or more have greater expectations of improved productivity and employee attraction/retention as a result of their sustainability efforts.

- 86% cite productivity gains as an expected result
- 79% cite employee retention/attraction as an expected result

In today's economy, bigger firms in some sectors were most dramatically impacted by the downturn. As a result, the expectation of benefits helps explain the impetus behind the increase in corporate sustainability.

Variation by Region

In the Northeast, 76% of respondents anticipate greater productivity, while other regions average 58%.

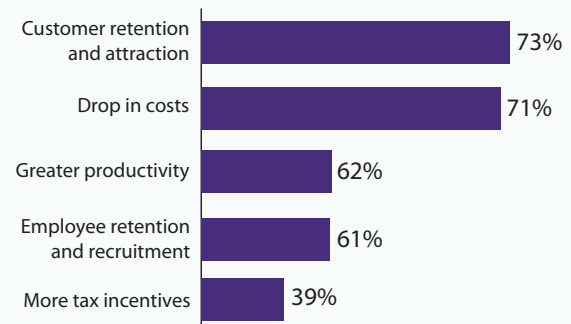
Variation by Executive Position

- **CSOs:** In general, they are more optimistic than other positions about sustainability results. Across nearly all business benefits, 10-15% more CSOs expect paybacks—compared to other executive positions.

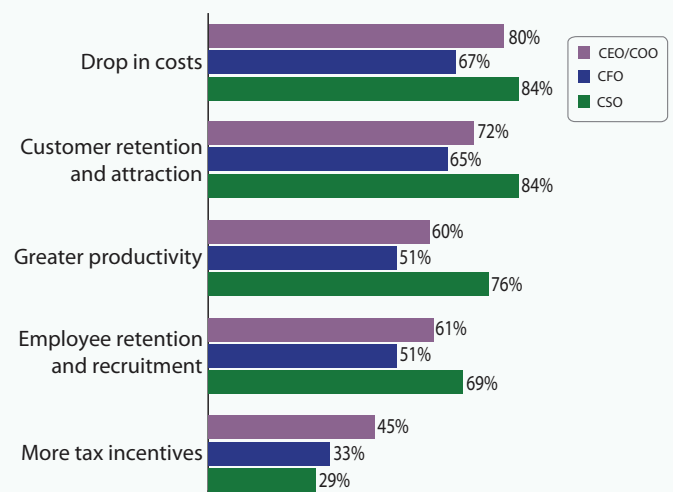
The exception is the expected return from tax incentives. Incentives are familiar factors that have been aiding corporations for years; In fact, CEOs and COOs have significantly higher expectations at the benefits tax incentives will offer from sustainability activities. This may also be due to the fact that CSOs may be more focused on integrating sustainability into internal practices (such as employee activities), which may be less likely to benefit from incentives.

- **CEOs/COOs:** Compared to CFOs, CEOs & COOs tend to align with the CSO with regard to high expectation that sustainability will lead to drop in costs and customer retention.

Expected Business Benefits from Sustainability Adoption
(according to all respondents)



Expected Business Benefits from Sustainability Adoption
(by position of respondent)



Expected Paybacks

Expectations for individual gains are relatively conservative. Only 12% of the executives interviewed expect productivity gains or cost savings to be greater than 10%.

This is likely due to the limited number of firms who are currently measuring performance. As a result, executives are likely to be conservative in their estimates.

Variation by Executive Position

• CEO/COO/CFO

- **Cost savings**—The C-suite (CEOs, COOs and CFOs) are all more optimistic than CSOs about larger expected drops in cost, with an overall average 38% expecting 5% or more in cost drops.
- **Productivity gains**—Interestingly, COOs have dramatically higher expectation of productivity gains from sustainability, with an over half (53%) expecting gains over 5%. The unexpected result may be due to an improvement in corporate America's connecting sustainability into operational activities.

• CSO

CSOs are much more conservative than their counterparts with regard to expected paybacks.

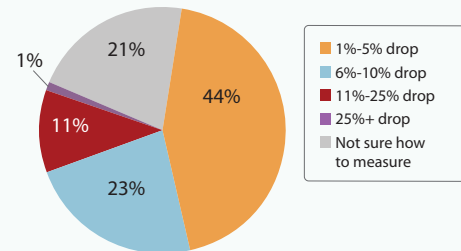
- 30% expect productivity gains over 5%
- 29% expect costs to drop over 5%

Significantly more CSOs do not know how to measure either cost savings or productivity gains:

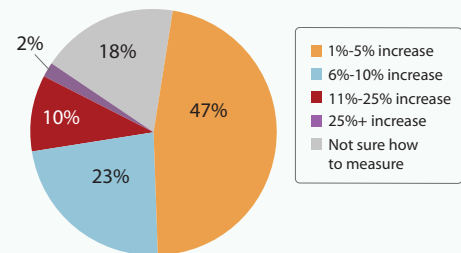
- **Cost savings**—32% do not know how to measure versus 18% for their corporate counterparts
- **Productivity gains**—28% do not know versus 16% for others

This helps explain the reduced expectations of this group. They may also be more conservative in order to not overestimate benefits to the corporate leaders they are trying to influence.

Expected Percentage Drop in Costs
(according to all respondents)



Expected Percentage Increase in Productivity
(according to all respondents)



The Emergence of the Chief Sustainability Officer (CSO): Outcome of the Siemens/MHC CSO Roundtable

The rapid adoption of corporate sustainability has altered the nature and structure of today's businesses. One of the major indicators of change is the emergence of a new position within the top ranks of leading firms—the Chief Sustainability Officer (CSO). As the research in this report indicates, firms are increasingly seeing a need to dedicate staff to the development and management of their sustainability programs.

In an effort to establish a deeper understanding of this trend, Siemens and McGraw-Hill Construction partnered in Spring 2008 to examine the nature and impact of CSOs and equivalent positions on the growth and impact of corporate sustainability.

The qualitative research was conducted through a structured roundtable discussion of a select group of CSOs representing construction, property management and building product manufacturing firms. These companies included Cushman & Wakefield, DuPont, Owens Corning, Skanska, Siemens, Transwestern and Turner Construction.

LEVELS OF INFLUENCE

The key outcome of the session was the creation of a spectrum to rank different levels of influence and integration that a CSO has in his/her firm.

With the emergence of a dedicated CSO (or equivalent) position within a company, having a framework for determining that individual's impact could pose a powerful analysis tool.

DETERMINING CSO INFLUENCE

Influence is one of the key aspects of determining how CSOs today are able to persuade other decision-makers to drive initiatives and institutionalize sustainable behavior among key constituencies—including staff, customers and shareholders.

As part of the discussion of CSO influence and authority, roundtable participants helped to chart these factors and created a "CSO Influence and Integration Continuum" (see figure at right).

Key elements from the discussions:

- Some CSOs only establish corporate policies and make recommendations, while authority often rests with the CEO. As a result, influence and authority should be viewed as separate and distinct roles.
- The level of integration of the CSO into corporate activities is as important as the level of influence since these levels reflect the process a firm goes through to incorporate sustainability throughout all company decisions and procedures.
- Sustainability is a continual process, which suggests that the highest levels of integration and influence will occur at the transformational level. As one attendee stated, "Sustainability is going to be a continual process of the next things to be done."

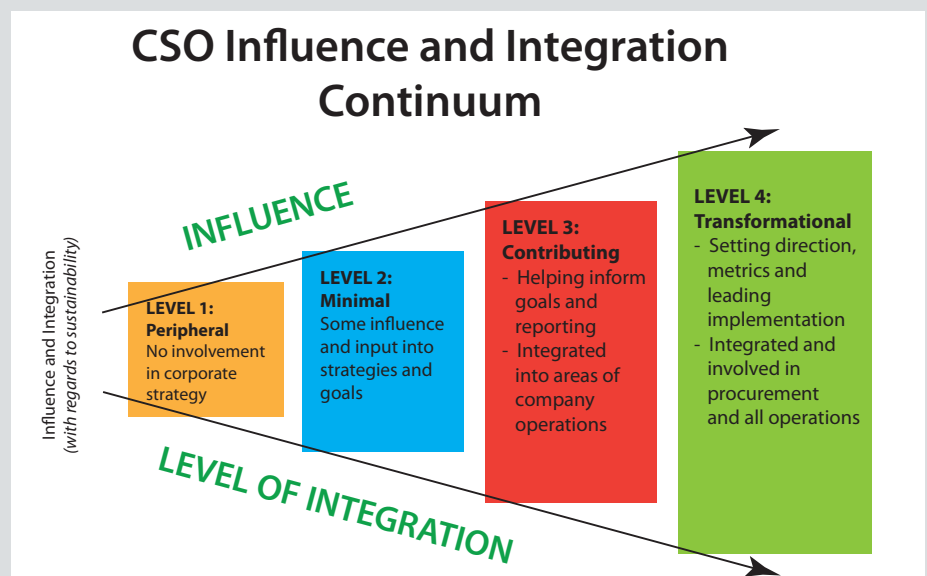
KEY FUTURE FOCUS AREAS

As the Roundtable participants look to the future, key focus areas included:

- Incentives for cooperation: CSOs are exploring various ways to encourage buy-in across all levels and units of the company. Best practices and examples of how firms have used incentives—both internal and external—

successfully will bring value to today's corporate leader in expanding sustainability efforts.

- Messaging and education: Since sustainability is still a relatively new concept for some employees and customers, CSOs have the dual responsibility of internal and external messaging about the importance and benefits of corporate sustainability—not just cost savings but also revenue gains through new products/services.
- Impact of the global recession: Most participants view the recession as a driving force in encouraging conservation and efficiency. Many business articles—such as the recent feature in the July issue of Harvard Business Review ("Why Sustainability is Now the Key Driver of Innovation")—confirm the positive impact sustainability and innovation can have during economic downturns.
- Measuring sustainability achievements and carbon footprints: Nearly all expect to see emissions reporting become regulated in the near future. This suggests a market opportunity for technologies and strategies that can help CSOs and other corporate leaders benchmark and measure in order to achieve sustainability goals.



Influence of the Corporate Sustainability Officer

The corporate sustainability officer (CSO) position has emerged in corporations over the last few years. Placing responsibility for sustainability at this senior executive position indicates the shift in corporate sustainability from a public and/or internal relations focus toward one more intrinsic to business operations and development.

CSO/Sustainability Staff Perceived as Contributing to Company Goals & Operations

One measure of sustainability adoption is the level of influence wielded by CSOs or other staff dedicated to sustainability. In this study, a scale of CSO influence was created that ranged from peripheral to transformational. (See right for description of the four levels of influence.)

The level of influence wielded by the sustainability staff again demonstrates the increasing maturity of sustainability.

The curve of CSO influence mimics the levels of corporate involvement in sustainability (see page 4). This consistency is a further indication that corporate America is shifting toward sustainability as a standard business practice.

Nearly 50% of all types of corporate officers credit the CSO with helping to inform corporate goals and as being integrated into operations.

- CSOs are identified as at the contributing level by 46% of respondents—nearly twice those who view the CSO’s influence as minimal (27%).
- Only 8% consider their CSO peripheral, while more than double that amount (19%) consider the CSO to be transformational.

With the economy focusing more attention on seeking efficiencies, the CSO has a greater opportunity to be recognized as contributing directly to corporate goals and operations.

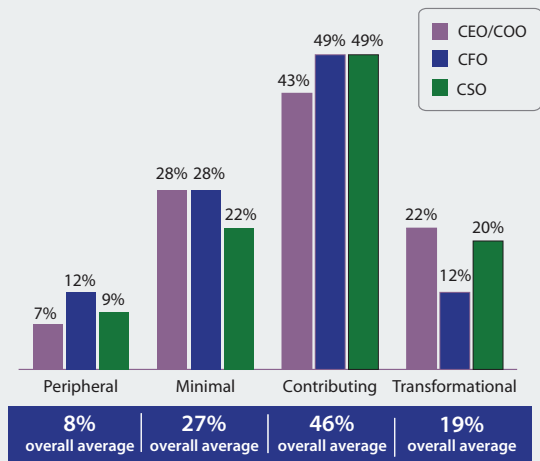
Staff dedicated to sustainability is important for achieving meaningful change in the corporation.

Influence of sustainability on corporate policy:

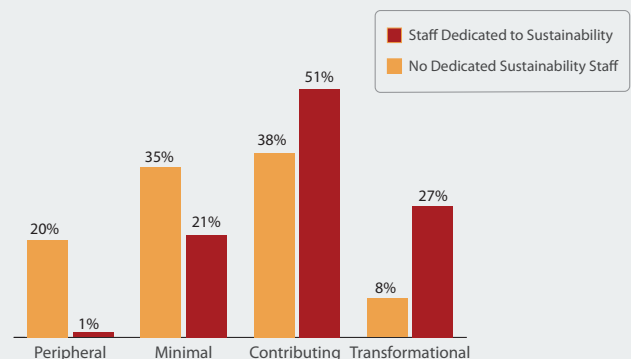
- **With a dedicated team**—27% identify sustainability as having transformational influence and only 1% say it has a peripheral influence.
- **Without a dedicated team**—Only 8% identify sustainability as having a transformational influence and 20% say it has a peripheral influence.

Level of Influence	Description
Peripheral	No involvement in corporate strategy
Minimal	Some influence and input into strategies and goals
Contributing	Helping inform goals and reporting; integrated into some areas of company operations
Transformational	Informing goals and setting direction; leading implementation; deeply integrated into company procurement and operations

Influence of CSO in Corporate Decision-Making
(according to respondent by position of respondent)



Influence of CSO in Corporate Decision-Making
(by presence of dedicated sustainability staff)



Focus on Emission-Reduction Strategies

Budget for Measuring/Reducing Emissions

Nearly one third of corporate America (31%) has committed a budget to measuring or reducing emissions.

The presence of a budget suggests a strong commitment to climate emission control as a business practice, and is further indication that these practices are becoming more standard. Further, the establishment of these commitments of resources prior to any official U.S. government mandates suggests a conviction that such measurements will be mandated soon.

Variations by Level of Sustainability and Company Size

- **Firms at the highest stages of commitment to sustainability**—49% have a budget
- **Largest firms (revenues of \$5 billion or more)**—55%, significantly higher than smaller firms. Again, this confirms the impact that climate legislation would have on these larger firms. Therefore, early action is more in their interest than it is for smaller firms.

Attitudes Toward Emission-Reduction Policies

Corporate America demonstrates strong agreement over the importance of prioritizing renewable energy.

Over three-quarters of respondents agree that:

- Increased energy independence will lead to increased national security.
- Investing in clean energy will help limit the use of fossil fuels.
- Increasing the percentage of electricity from renewable sources is an important national priority.

Furthermore, 74% believe that investing in green energy jobs will support the economy as well as the environment.

However, despite the strong agreement on the importance of these proposals, **there is a lack of consensus over how to finance and achieve these goals.**

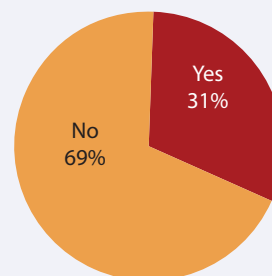
- Only 40% agree that there is a general willingness to pay more for clean technology.
- Only 31% agree that a cap-and-trade program will help reduce greenhouse gas (GHG) emissions.

Variation by Region

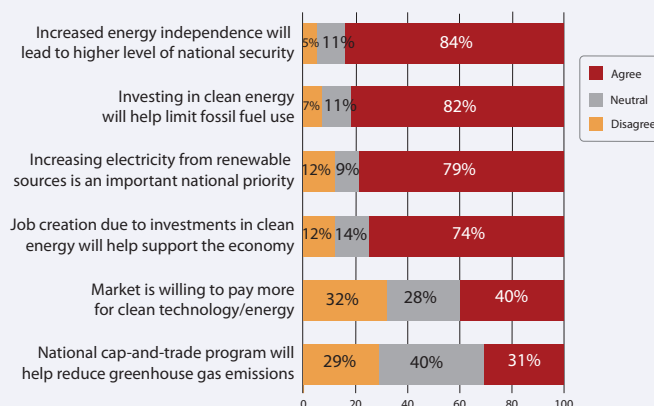
Across the board, firms in the West are the most supportive of renewable energy policies.

- **Energy independence:** 94% of respondents from the West agree that energy independence will result in higher national security. The Midwest is also strongly supportive, at 92%.

Firms with Budgets Dedicated to Measuring & Reducing Emissions



Attitudes Toward Renewable Energy Impacts and Related Policies



- **Impact of cap-and-trade policies:** Nearly half of the respondents from the West (47%) disagree that it will have a significant impact on GHG emissions. This is significantly higher than the 25% average for the other regions. This result is to be expected—policies in many of the western states are already mandating emission reductions and seeing results without a cap-and-trade program.
- **Green jobs:** Executives from the West are optimistic that green energy jobs will boost the economy and create a cleaner environment—with no respondents disagreeing with this claim.

On the other end of the spectrum, the Northeast is the most skeptical region about green energy jobs boosting the economy and creating a cleaner environment—27% of them are not convinced green jobs will improve the economy, compared to 15% in the South and 4% in the Midwest.

Federal Legislation—Recent Policies Affecting Corporate Sustainability

Some of the recent drive toward increased corporate sustainability is due to the changing regulatory environment. Though sustainability measures such as carbon footprinting, emissions reductions or annual reporting are not required of the private sector, recent mandates at the federal and local level suggest a broad shift toward increased disclosure and emissions regulation.

In particular, the proposed American Clean Energy and Security Act (see below for more information) is indicative of the kind of legislation that will be circulating in the coming months. Attention on these policies will also heighten as the U.S. participates in global climate change conference such as the United Nations Global Climate Change Conference in Copenhagen, Denmark in December 2009. These global initiatives will put pressure on the U.S. government to action around climate change. Corporations that are prepared will be best situated to capitalize on any enacted legislation.

KEY RECENT LEGISLATION

American Recovery and Reinvestment Act (ARRA) of 2009

President Obama's federal stimulus plan included a range of features aimed at improving energy efficiency:

- \$4.5 billion to the U.S. General Services Administration, earmarked for their green building and energy-efficient upgrades .
- The Departments of Defense and Veterans Affairs also received Funds—\$4.2 billion and \$1 billion respectively—earmarked for energy-efficient improvements and green renovation projects.
- \$30.6 billion set aside for smart-grid technology, energy-efficiency programs and renewable energy loans .
- A new 30% investment tax credit for manufacturers of smart-grid



technologies, renewable energy power equipment and carbon-capture and storage equipment.

Energy Economic Stabilization Act (EESA) of 2008

EESA, most known for the creation of TARP (Troubled Asset Relief Program), was passed in October 2008 to help stabilize financial markets and increase the flow of credit to both consumers and businesses. This legislation extended the tax credits first set up in the Energy Policy Act of 2005 that had expired in 2007.

Energy Independence and Security Act (EISA) of 2007

EISA has three main provisions to increase energy efficiency and the availability of renewable energy:

- **Corporate Average Fuel Economy Standard:** Increased to 35 miles-per-gallon for all cars and light trucks by model year 2020.
- **Appliance and Lighting Efficiency Standards:** A required target is set for lighting efficiency, and energy-efficiency labeling is required for consumer electronic products.

- **Renewable Fuel Standard:** Requires minimum annual levels of renewable fuel to be used in U.S. transportation fuel.

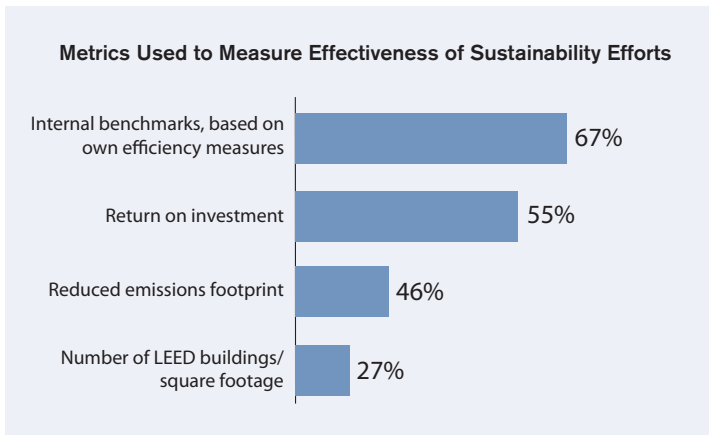
CURRENT LEGISLATION

American Clean Energy and Security Act (ACES)

Currently being debated in the Senate, ACES includes a number of requirements to improve energy efficiency and to reduce U.S. carbon footprint. The bill requires electric utilities to meet 20% of their electricity demand through renewable energy sources and energy efficiency by 2020 and a reduction of carbon emissions from major U.S. sources by 17% by 2020. It also calls for a \$190 billion investment in new clean energy technologies and energy efficiency, including \$90 billion in new energy efficiency and renewable energy investments by 2025 and \$60 billion for carbon capture and sequestration.

Sustainability Metrics

Metrics and performance standards of sustainability are becoming increasingly important and widely used by the most committed firms. The increase in sustainability reporting is also leading to firms establishing target goals and reporting progress on those goals.



Use of Metrics

Survey results back up this growing trend. **Over two-thirds of respondents (67%) report having established internal benchmarks to measure performance.**

Fifty-five percent are measuring ROI, reinforcing once again that sustainability is expected to lead to profitability as well as to cost-savings and other environmental benefits (e.g., lower carbon emissions).

Nearly half (46%) are measuring carbon emissions. This is likely to increase as legislation and incentives continue to be established.

Variation by Firm Size (based on annual revenue)

Larger companies focus more on LEED and reducing their emissions footprint than do smaller companies.

- **Reduce emissions footprint:** 66% for larger companies compared to 39% for other firms.
- **LEED:** 41%, more than double the average of 20% for smaller firms.

Regulations regarding emissions for large emitters are looming with significant consequences for the biggest firms. Further, USGBC is actively courting large companies to green their portfolios and participate in voluntary programs like the U.S. Department of Energy's Commercial Building Energy Alliances and U.S. EPA's Climate Leaders Partners and Energy Star Partners.

Variation by Region

More metrics are being used in the West—61% of firms in this region are tracking emission reductions, versus 42% of those from other regions.

Regulations dealing with air quality issues may mandate tracking the emission footprint more frequently in the West.

Variation by Executive Position

Again, the need to concretely demonstrate the effectiveness of a company's sustainability policies is important to CSOs.

- **82% of CSOs report keeping an internal benchmark,** compared to 63% of other C-Suite executives.
- **64% of CSOs use emissions footprint reduction as a metric,** compared to 41% of other C-Suite executives.

Soft Measures to Track Benefits of Sustainability

Soft measures are factors such as productivity, employee health care costs and absenteeism. According to the Building Owners and Managers Association, these expenses are 84.4% of the total annual commercial expenditures whereas energy, electricity and repair and maintenance are a combined 3%. Therefore, any reductions in these soft costs pose a tremendous advantage for corporations.

The research reveals that **soft measures of sustainability are still not tracked by the majority of firms**—only 4% currently calculate them. They are more often used by:

- **Smaller firms:** 26% of small firms track these measures, versus 11% of medium and large firms. This is likely due to how much easier it is for small firms to track performance benefits like reduced sick leave and improved employee satisfaction and productivity.
- **Firms more advanced in sustainability:** 2% of companies
- **Firms in the West:** 27% of businesses

Variation by Executive Position

Only 4% of CSOs report evaluating soft measures of sustainability. Though on the surface this may seem counterintuitive, it is indicative of two factors related to the role of different executives:

- CSO activities may be focused on more easily demonstrable metrics that can make the case to skeptical officers and be easily reported publicly (both legally and in goal setting).
- Some CEOs, COOs and CFOs recognize how important soft measures are for demonstrating the bigger paybacks of these initiatives, beyond the reduction of operating costs.

Types of Soft Measures Being Tracked

Worker productivity is tracked by 90% of those who track soft measures of sustainability success. Productivity, if it can be measured, promises to have the greatest financial impact of all green/sustainability benefits. Greater employee retention and reduced health care claims will also directly influence harder measures like ROI.

Variation by Executive Position

CSOs are more uncertain about their ability to estimate expected drops in cost or increases in productivity than are other C-Suite executives (CEOs, COOs, CFOs).

- 32% cannot report the expected percentage drop in costs, as opposed to only 17% of C-Suite executives.
- 26% cannot report expected increase in productivity, as opposed to only 14% of C-Suite executives.

There may be various factors for this difference:

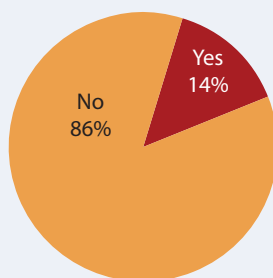
- CSOs may be more reluctant to commit to specific figures due to accountability for these results.
- CSOs, at this point, may be more engaged in implementation and policy-setting aspects of sustainability, whereas CEOs, COOs and CFOs are focused primarily on the business case.

Challenges to Effective Measurement

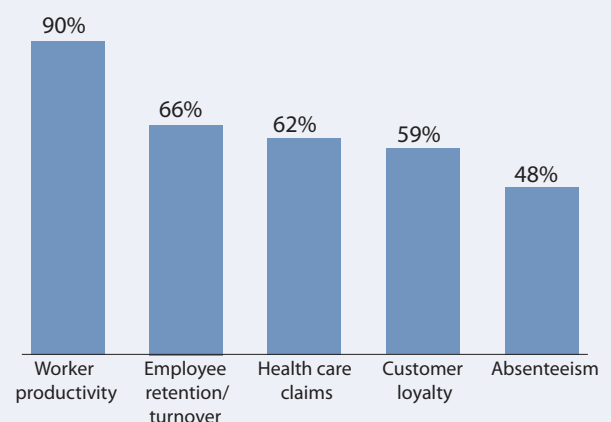
Obtaining good measurements of sustainability results is still an obstacle.

- **About a fifth (21%) of CSOs do not know how to measure the expected drop in costs** that would be critical to make the business case for sustainability.
- Close to that same number—18%—do not know how to measure increased productivity.

Company Engaged in Measuring Soft Benefits of Sustainability



Types of Soft Measures Being Tracked



Influencing the Marketplace

Green Products and Services

Over half (56%) of firms provide sustainable products or services to their customers. Sixty-eight percent of firms most committed to sustainability provide such products/services. These results reveal the demands of the marketplace.

Features of Green Products & Services

As green products proliferate, it is important to note the types of benefits they provide the customer.

- Saving resources is the advantage offered by most products/services—**84% of executives cite this as a feature of their products.**

Resources saved can be easily tracked and advertised, so claims are easy to make and justify—thus avoiding greenwash backlash. Further, this benefit directly impacts their customers' bottom lines.

- **Various aspects of product performance are also important.** Performance benefits are selected by over 70% of companies as a key green/sustainable feature.

Key elements of performance benefits:

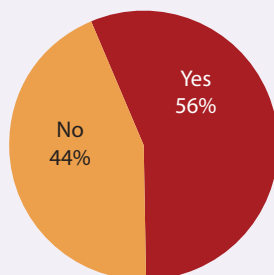
- **Energy Efficiency**—78% report this benefit
- **Improved Health/Well Being**—75%
- **Reduced Carbon Footprint**—72%

The fact that so many firms are offering green products and services suggests:

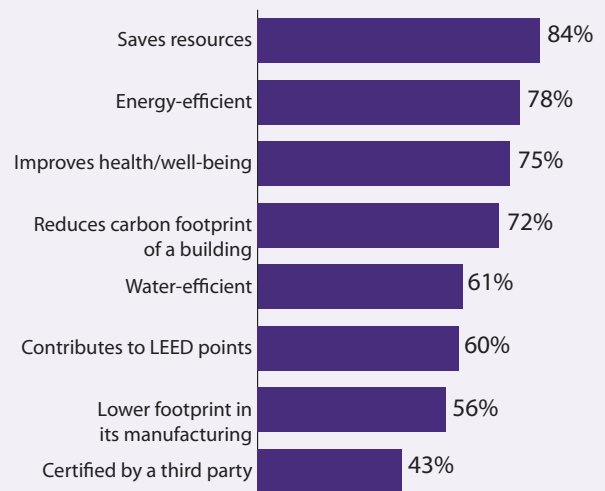
- Growing importance of green in the marketplace
- Increasing activity in green marketing
- **Third party certification is only recognized by 43% as a key green/sustainable feature.** Lack of consistent certification for products may account for this relatively low performance.

However, as marketing claims increase and concerns expand about greenwashing, third-party certification will increase in importance. Already, McGraw-Hill Construction's research of a representative sample of the entire industry (including owners, architects, engineers, contractors) in 2005 and 2008 points to a growth of concern about greenwashing during this time period. Currently, 20% of the industry is concerned. This poses both a challenge and an opportunity for corporate America moving forward as customers want proof of performance.

Firms Providing Sustainable Products or Services to the Market



Features of Green Products or Services



Supply-Chain Demand

Today, many large companies are leveraging their significant purchasing power in order to effect market transformation. It has long been a strategy the government has used, most notably in encouraging the recycled paper market in the early 1990s. Corporations are now embracing the same tactic.

Probably the highest profile of these efforts has been Wal-Mart's increasingly stringent guidelines pertaining to environmental reporting by its nearly 100,000 suppliers. In July 2009 Wal-Mart stepped up its efforts by announcing the development of a worldwide sustainability index. Phased in over a number of years, all of Wal-Mart's suppliers and vendors are expected to eventually have their products indexed. As a first step, Wal-Mart is requiring all its current suppliers to respond to a 15-question survey. U.S. suppliers—nearly 60,000—will have to return their questionnaire by the end of October 2009. It is clear that whatever future the index has, Wal-Mart's initiatives are already impacting the retail and consumer goods industry.

With regard to corporate America, this research of a representative sample of senior corporate executives revealed that **over half (53%, see right) ask their suppliers to incorporate green or sustainability in their practices.**

Significant Differences Among Respondents

- **Executive position**—nearly two-thirds (64%) of CSOs report making these requests.
- **Firms most committed to sustainability**—69% make the same requests.

Types of Supply-Chain Requests

Most common requests by all executive positions include:

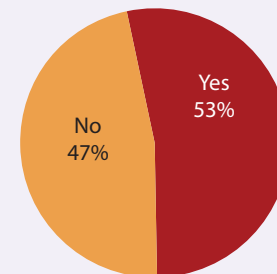
- **Knowing a product's recycled content percentage**—74% of all executives.
- **List of material sources**—66% of all executives.

One-third (33%) are requesting energy/greenhouse gas footprint information, suggesting growing concern over emissions and expected regulation.

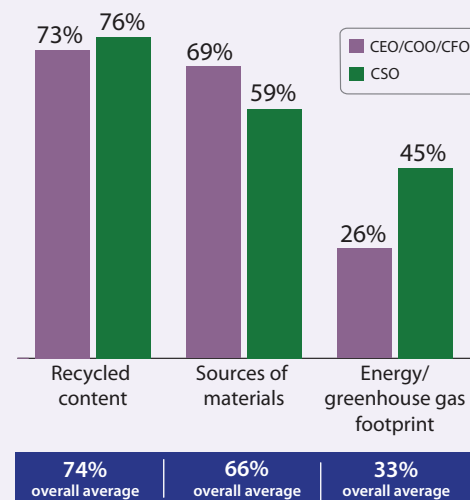
Significant Differences Among Respondents

- **Executive position**—45% of CSOs request energy/greenhouse gas footprint information, compared to 26% of other executive level positions.
- **Firm size**—88% of companies with an annual revenue of \$5 billion+ request lists of material sources, compared to less than 63% for smaller firms—a dramatic 25 percentage point difference.

Firms Requesting Vendors/Suppliers Incorporate Sustainability into Their Practices

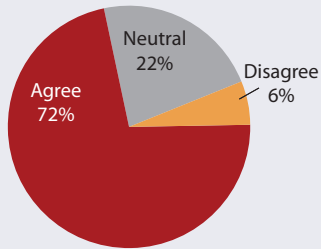


Types of Sustainable Information Being Requested of Vendors/Suppliers



Corporate Sustainability Market Trends— Perspectives from Executives

Operating Costs Are the Major Reason for Engagement in Sustainability
(according to all respondents)



Lowered Operating Costs

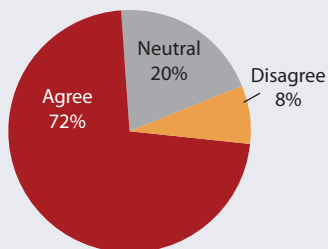
Lowered operating costs from environmental efficiencies continue to drive participation by corporate America in sustainability/green building. Seventy-two percent report this is why their firms participate in sustainability initiatives.

Furthermore, there is little difference across the industry. Most notably:

- All leaders—CEOs, COOs, CFOs, CSOs and others—have roughly the same level of agreement about operating costs' impact on sustainability incorporation.
- **The level of the respondent's firm's commitment to sustainability also does not make a difference.**

This suggests that these issues have become norms in corporate America, and that the entire industry understands how operating efficiencies can boost cost savings. This opinion is particularly important in today's down economy. **As a result, this savings will continue to be a strong driver toward sustainability moving forward.**

Government Regulations of Sustainability Will Be Required in Time
(according to all respondents)

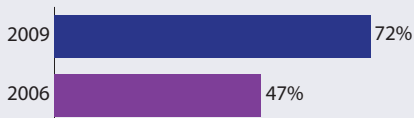


Government Regulation

The industry expects mandates from the government in the future, with 72% anticipating legislative requirements for sustainability—particularly green building mandates.

Furthermore, there is no variation among different types of respondents. Like their view on operating costs, all leaders—CEOs, COOs, CFOs, CSOs and others—have roughly the same level of agreement that government will mandate sustainability and green building. It is also notable that firms at all levels of commitment expect legislative requirements. As a result, it is critical to understand the motives influencing these groups since there are clearly factors other than mandates spurring the transition from one level of sustainability commitment to another. (See page 4 for explanation of these stages.)

Government Regulations of Sustainability Will Be Required in Time
(change in opinion from 2006 to 2009)



Changed Opinion over Time

Between 2006 and 2009, there was a marked change in corporate executives' opinion related to government mandates on sustainability—expectation of mandates grew from 47% in 2006 to 72% in 2009, an increase of 65%.

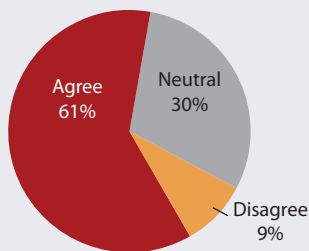
There are many indicators that support this opinion. (See page 13 for some recent federal legislation.)

Market Differentiation and Improved Financial Performance

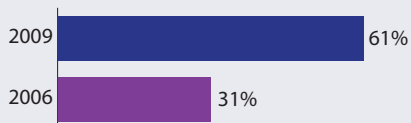
Market differentiation is also perceived as an important driver—with a clear trend toward the industry becoming more convinced of this advantage.

Between 2006 and 2009, there was a marked change in corporate executives' opinion related to the market differentiation sustainability can provide a firm—nearly doubling from 31% in 2006 to 61% in 2009.

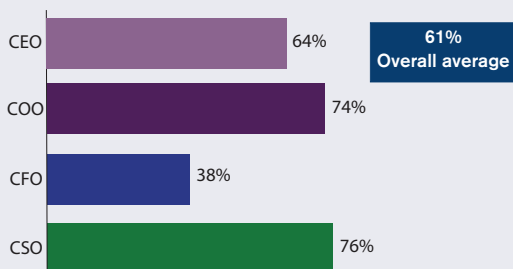
Sustainability Leads to Market Differentiation and Helps Improve Financial Performance
(according to all respondents)



Sustainability Leads to Market Differentiation
(change in opinion from 2006 to 2009)



Sustainability Leads to Market Differentiation
(by position of respondent)



Variation by Commitment to Sustainability

The shift in opinion concerning the financial rewards and market differentiation caused by sustainability over time mimics the growth of the firm's involvement in sustainability (see page 4). The differential in opinion between firms at the highest stages and the lowest stages is 32%—from 76% for those in the upper levels versus 44% for those with the lowest commitment.

This result reveals a clear correlation between the two. This is what one might expect—as a firm becomes more involved, it is reaping more market advantage from that involvement.

Variation by Executive Position

CEOs understand that sustainability provides market differentiation—64% of CEOs agree with this benefit of sustainable practices; only 9% disagree.

COOs have an even stronger opinion with 74% believing in the market differentiation caused by sustainability. Given that the biggest paybacks for sustainability are around operating costs, this result is very consistent with their role in the firm.

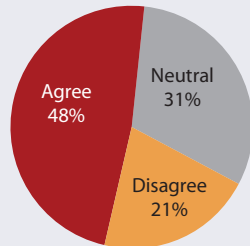
CFOs are more neutral about sustainability providing market differentiation. Their reluctance to take a stronger stance is likely impacted by their position's focus on demonstrable, bottom-line benefits. However, even with those concerns, 38% of CFOs agree—more than double the number of those that disagree.

Variation by Firm Size (based on annual revenue)

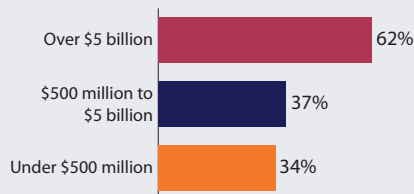
Executives from larger firms are significantly more likely to report market differentiation from sustainability—83% of large firms recognize the financial rewards versus an average of just 50% for executives from firms of smaller sizes. This is a critical result that indicates that major firms are perhaps maximizing market advantages more than are smaller firms—or this may be a product of more visible marketing efforts and brand preference at higher levels.

Corporate Sustainability Market Trends— Perspectives from Executives

Sustainability Initiatives Will Attract More Qualified Job Applicants
(according to all respondents)



Sustainability Initiatives Will Attract More Qualified Job Applicants
(according to firm size)



Attracting Better Employees

Firms are starting to understand the recruiting advantage of sustainability, and it is expected to increase as new generations enter the workforce.

Nearly half (48%) believe sustainability and green initiatives allow a company to attract more qualified and satisfied employees.

There have already been several studies that suggest strong sustainability policies are a priority for many job seekers, especially those seekers in Generation Y (born in the 1980s and 90s) who are just having a significant presence in the marketplace. It will be important to continue to track in the future the correlation between corporate sustainability and employee recruitment to see if the influence of Generation Y is significant.

Variation by Commitment to Sustainability

Regarding perceived recruitment advantage, there is a significant differential between executives at different levels of commitment to sustainability—61% for firms at the highest stages and less than half that for those at the lowest. (See page 4 for a description of different levels of engagement.)

Variation by Firm Size (based on annual revenue)

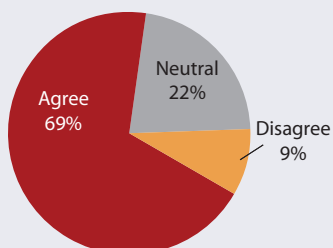
Executives from larger firms respond more positively to employee recruitment—again with a nearly doubling in opinion.

Public Expectations

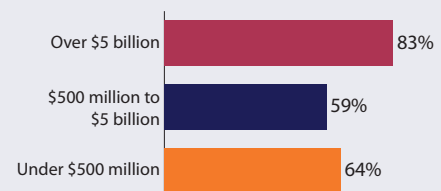
Nearly 70% of firms believe the public expects sustainability from corporations.

This is particularly true of larger firms—an overwhelming 83% see this demand versus an average of 62% for smaller firms. This result is to be expected since larger firms are monitored more by the public, industry watchdogs and government regulators.

Public Expects Corporations to be Good Citizens
(according to all respondents)



Public Expects Corporations to be Good Citizens
(according to firm size)



Green Consumers and the Changing Marketplace

The green economy has been largely driven by the changing face of today's consumers. As recent studies demonstrate, the green consumer, who seeks environmentally-friendly products and supports companies with commitments to sustainability, exerts a growing influence on the marketplace.

By understanding the characteristics and trends of green consumers described below, firms can better prepare to appeal to this segment through targeted outreach and comprehensive sustainability programs.

Research shows that green consumers fit the following characteristics:

- **Represent majority of shoppers:** 69% of Americans actively seek opportunities to buy environmentally responsible products.¹
- **Less price-sensitive** than the average shopper.²
- The majority of **consumers in the 18-29 age group** would prefer to buy a product that gives back to the

environment over a cheaper one that did not.³

- **View green as a differentiator** when choosing between two otherwise equivalent products.⁴
- **Demonstrate brand loyalty** once they purchase green products.⁵
- **Tend to buy more and shop more frequently.**⁶
- One-third of consumers will pay five to 10 percent more for quality green products.⁷

COMPANY REPUTATION CRITICAL IN DECISION TO MAKE GREEN PURCHASE

Studies also reveal that company reputation is a critical factor in the decision about whether to buy a green product.

Given the increase in green messaging and product branding, consumers are likely to consider company reputation in evaluating the validity or quality of green claims.

According to the Boston Consulting Group, "73% of consumers consider it important or very important that companies have good environmental track records,"⁸ and a study by Cone found that "70% pay attention to what the company is doing in regards to the environment today, even if they cannot buy until the future."⁹

EFFECT OF ECONOMIC CRISIS

Many recent market research studies find that consumers are as likely or more likely to buy green in the current downturn. The Cone study states that "34% were more likely to buy environmental products" during the recession, compared to 8% who were less likely.

¹ Cone, 2009 Cone Consumer Environmental Study, 18 February 2009. Accessed 10 May 2009 at <<http://www.coneinc.com/content2030>>.

² Deloitte and Grocery Manufacturer's Association (GMA), Finding the Green in Today's Shoppers: Sustainability Trends and New Shopper Insights, GMA: 29 April 2009. Accessed online 10 May 2009 at <http://www.deloitte.com/dtt/cda/doc/content/US_CP_GMADeloitteGreenShopperStudy_2009.pdf>.

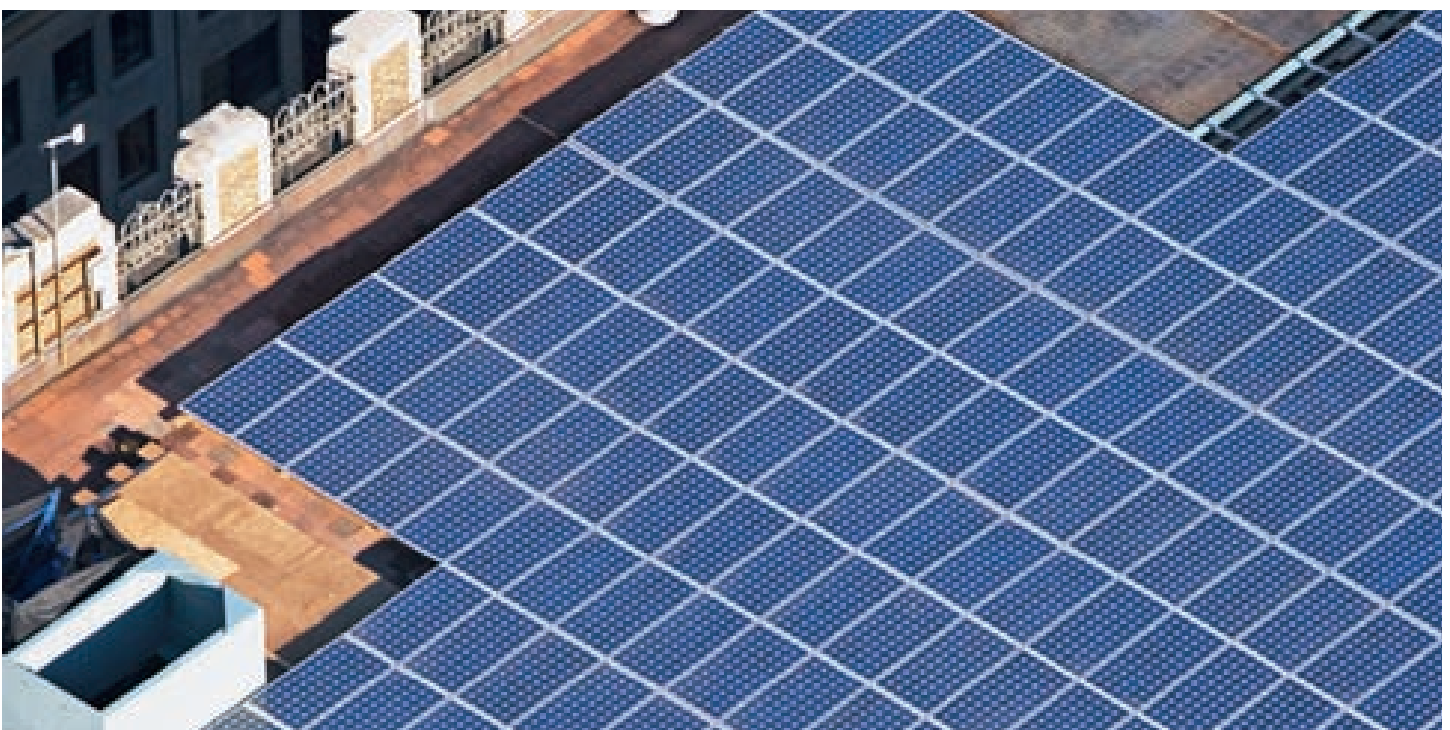
³ Generate Insight, "Confused Teens Choose 'Less Expensive' over 'Green'" Marketing Charts, Accessed online 2 July 2009 at

<<http://www.marketingcharts.com/topics/behavioral-marketing/confused-teens-choose-less-expensive-over-green-8820/generate-insight-expectations-making-difference-millennials-april-20091.jpg/>>.

⁴⁻⁶ Ibid.

⁷⁻⁸ Boston Consulting Group, *Capturing the Green Advantage for Consumer Companies*, January 2009. Accessed online 2 July 2009 at <http://209.83.147.85/publications/files/Capturing_Green_Advantage_Consumer_Companies_Jan_2009.pdf>.

⁹ Cone, 2009 Cone Consumer Environmental Survey.



Influencing Sustainability— Drivers and Challenges

Drivers Promoting Sustainability

Energy and cost savings are nearly universally recognized as important drivers in promoting sustainability—91% of respondents identify them as key drivers.

Furthermore, energy/cost savings are also selected as the *most important* driver (see page 23) more than twice as frequently than any other factor.

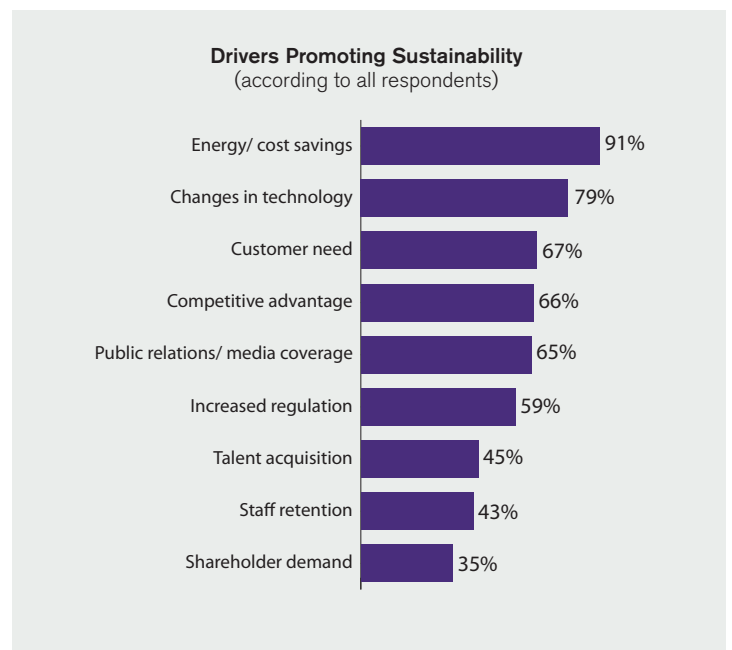
Other important factors driving corporate sustainability:

- **Technology**—79% consider it important, but only 5% select it as the most important driver.
- **Customer need**—67% consider it a key drive, ranking third most frequently cited. However, when asked to select the most important driver, it moved up to the second highest answer behind energy/cost savings, with 17% of corporate executives selecting it as most important (see page 23). This reinforces the importance of the bottom line in driving sustainability.

Variation by Commitment to Sustainability

Those at the highest levels of commitment to sustainability (see page 4 for description of the levels of engagement) are significantly more likely than those at less advanced levels to view competitive advantage and public relations/media coverage as key drivers.

- **Competitive advantage**—81% of those at the highest commitment levels consider it important versus 52% at the lowest (see overall average in chart at right). This dramatic differential confirms that firm involvement in sustainability is being linked heavily to revenue-generating and profit performance.
- **Public relations/media**—74% of those at the highest commitment levels consider it important versus 50% at the lowest levels (see overall average in chart at right).



The Most Important Drivers

When forced to choose a driver as *most important*, most executives select energy/cost savings as most critical. However, there was some variation regarding some of the other important drivers.

Variation by Executive Position

Actions that offer demonstrable results have bigger impacts on CSOs than do less easily measured factors.

- A larger percentage of CSOs (51%) select energy/cost savings as their most important driver (see overall average at right).
- **CEOs understand competitive advantage**—17% rank it as most important compared to 9% of COOs, 9% of CFOs and 2% for CSOs (see overall average in chart at right).

It is interesting to note the low number of CSOs that rank competitive advantage as the most important driver. As can be seen on page 19, 76% of CSOs believe that green/sustainable practices provide market differentiation—more than other company officers. The low number ranking this as the top reason could be due to CSOs feeling as if they need the cost savings to justify their programs and initiatives. However, moving forward, CSOs should note that CEOs are significantly more influenced by activities that can give them competitive advantage versus those that save costs.

Variation by Firm Size (based on annual revenue)

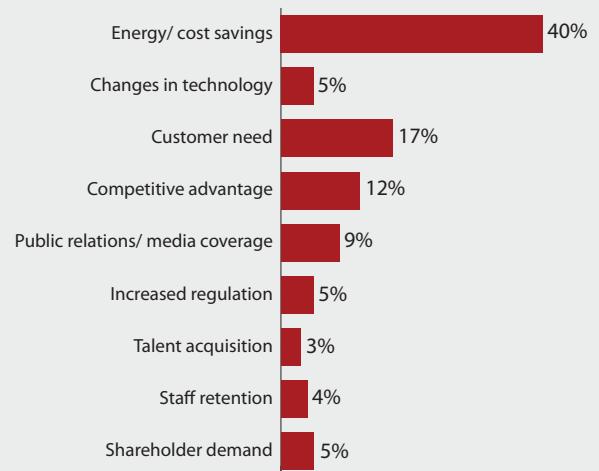
While energy and cost savings are the most commonly mentioned measure for all firms, they are comparatively less critical to larger firms than to the small or medium size ones.

- 31% select energy/cost savings—compared to an overall average of 40%
- **Nearly 20% of medium or large size firms rate customer need as the most important factor**—compared to 8% of smaller firms

Variation by Industry Type

- **Manufacturing firms cite customer need as the most important driver as frequently as they select energy/cost savings.** Each driver was selected by 26% of the manufacturing respondents.
- 45% of non-manufacturing firms select energy/cost savings as the most important driver, significantly more than any other factor.

Most Important Drivers Promoting Sustainability
(respondents could only select one)



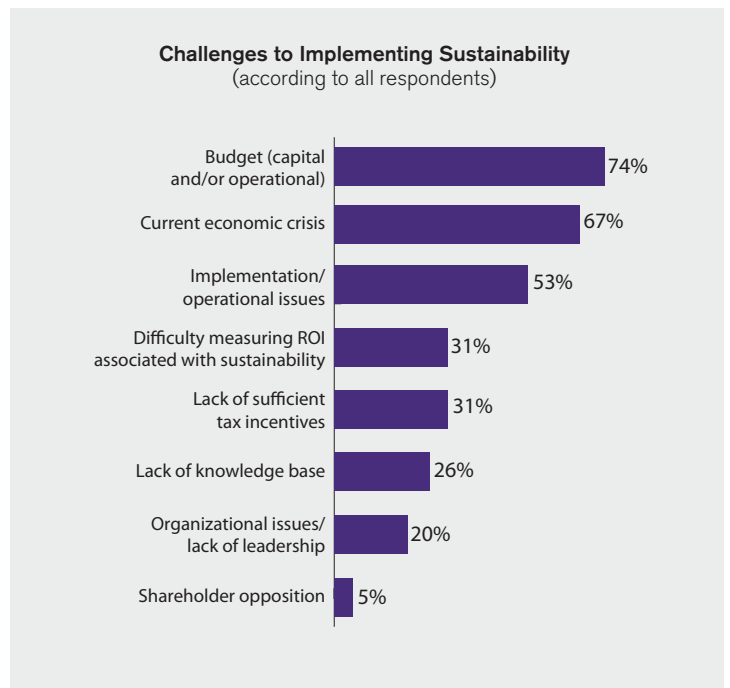
Influencing Sustainability— Drivers and Challenges

Challenges to Corporate Sustainability

Financial concerns are the main challenges behind implementation of sustainability in corporate America and are cited as a challenge by all executives.

They are also the most important drivers (see page 23), suggesting that as financial benefits of sustainability become more measured (and measurable), executives will be able to adjust budgets and create strategies that are independent of fluctuations in the economy.

Operational and implementation issues are also considered significant challenges—with 53% citing them as obstacles.



The Most Critical Challenges

When it comes to selecting the most important obstacle, the same challenges are noted. Approximately a third cite either budget (35%) or current economic crisis (32%) as their most critical challenge. The remaining third is evenly split across the other listed challenges.

The fact that financial concerns are such an important obstacle demonstrates a commitment to sustainability that goes beyond simple public relations. The progress of corporate sustainability, like any other aspect of doing business, is tied to profitability.

Other survey results, including the financial advantages of adopting sustainability (see page 8) and the lack of impact of the economic crisis on the growth of sustainability in the majority of companies (see page 5), suggest that even the two most significant obstacles are not impeding the growing adoption of sustainability as a core business practice in corporate America.

Variation by Executive Position

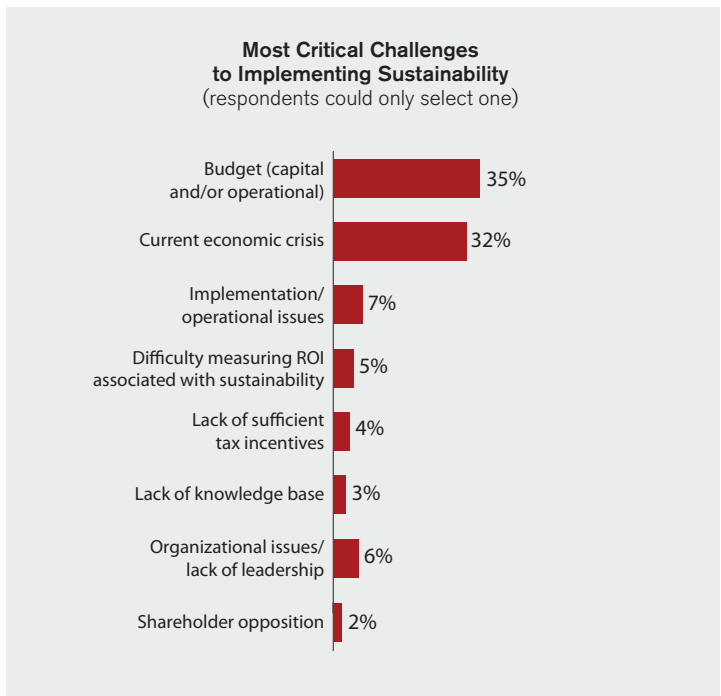
CFOs find the budget to be a more significant obstacle than the economic downturn.

- 40% select budget as the most important concern versus only 21% citing the economic crisis

Variation by Industry Type

For manufacturing firms, the economic crisis is a bigger impediment toward adoption of sustainable practices than budget concerns. This is no doubt due to reduced consumer spending on these products and the higher price of materials, energy and labor.

- 40% select economic crisis as the most important concern versus only 19% citing their budgets (see chart at right for overall average)
- 15% of executives in the manufacturing industry, as compared to just 4% in non-manufacturing firms, indicate that organizational issues/lack of leadership is the most important obstacle (the third most common response after the budget and the economic crisis). This points to the hierarchical nature of these companies as compared to other types of firms.



Corporate Sustainability Activities

Integral Components of Sustainability Programs

Energy efficiency is recognized by nearly all of corporate America (91%) as an integral component of a sustainability program—both with and without prompts.

When provided with choices, most executives (86%) also include corporate social responsibility as a key aspect of their sustainability programs.

When not provided prompts, green building emerges as the second most commonly cited feature of a sustainability program—very close to the number choosing energy efficiency (10% versus 11% respectively). However, when given prompts (see below), green building falls to the fifth most common choice at 69%.



Variation by Executive Position

- **Social progress or community contribution**—Nearly all (93%) of CSOs view community contribution as a fundamental element of sustainability, compared to only 79% of CEOs, COOs and CFOs.
- **Corporate social responsibility**—Chosen with equal frequency by CFOs and CSOs (91%) but significantly less frequently by CEOs (82%) and COOs (80%).

Variation by Firm Size (based on annual revenue)

Individuals from companies with annual revenues of \$5 billion or more, as compared to those from smaller firms, more commonly recognize green building, concerns about greenhouse gases (GHG) and climate change as integral parts of a sustainability program.

Specific variations:

- **Green building**—83% of larger firms versus 65% of smaller ones
- **Reduction of GHG footprint**—83% of larger firms versus 58% of smaller ones
- **Climate change**—69% of larger firms versus 45% of smaller ones

Proposed cap-and-trade or carbon taxes to prevent climate change will be more likely to affect large firms and as a result, are likely to be a greater priority for them than for smaller firms. Also, larger firms are more likely to have a large building portfolio, which may account for the prevalence of green building as a core element of sustainability.

Variation by Region

Renewable energy and concerns over climate change are more frequently chosen by firms from the West than from other regions:

- **Renewable energy**—76% compared to an average of 59% for the other three regions
- **Climate change concerns**—71% compared to an average of 51% for other regions

Variation by Industry Type

81% of manufacturing firms view business risk management as an integral part of their sustainability program, suggesting that they see the adoption of sustainable practices as a critical business need. Only 66% of non-manufacturing firms report the same.

Number of Sustainability Practices

Corporate America has a deep commitment to sustainability based on the number of sustainable practices they employ.

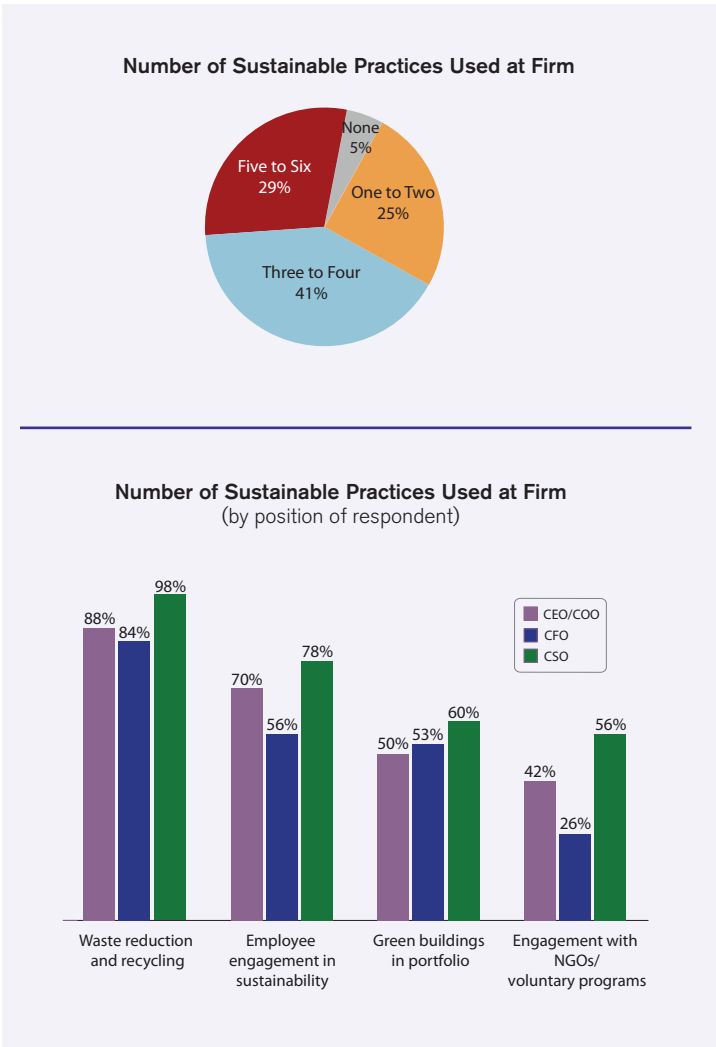
- 70% report that their firm employs three or more sustainable practices.
- Only 5% report engaging in no practices at all.

This result corresponds to the strong shift in firm commitment across the stages of involvement (see page 4).

Variation by Executive Position

CSOs report significantly more sustainable practices than do other executives. Part of the reason may be that the CSO is the person most aware of the company's sustainable practices. Additionally, engagement in multiple practices may increase due to the presence and influence of a CSO.

- CFOs may be less aware of most of these practices, except for a practice like green building that involves specific financial investment.
- These results may demonstrate that knowledge of green practices may not be spread evenly throughout a company.



Corporate Sustainability Activities

Most Common Practices Being Used

RECYCLING

At 89%, waste reduction and recycling are the most commonly reported corporate sustainability practices.

ACTIVITIES THAT HELP EMPLOYEES IMPROVE THEIR CARBON FOOTPRINT

Sixty-nine percent offer programs to encourage lower-environmental impact activities like offering public transportation incentives or encouraging telecommuting. Green office teams or 'squads' are also emerging in firms across America in order to help the office itself create a lower carbon footprint.

RENEWABLE ENERGY AND CARBON CREDITS

Half report that they use renewable energy. While activities like waste management and recycling have been part of organizations for years, the use of renewable energy and carbon credits (RECs) is a new phenomenon. Therefore, the fact that half of all firms report using renewable energy onsite or purchasing RECs suggests renewables are headed toward becoming mainstream. This is similar to the path that green building took over the last five years.

This investment today is particularly striking since the payback cycle for investments in renewables is still much longer than for simple energy-efficiency upgrades. It seems likely that public pressure and attention on energy consumption is also placing pressure on corporations to engage in such a high-profile sustainability activity.

- In fact, while green building is adopted by only 22% of firms at the lowest levels of sustainability involvement, renewable energy is used by 30%, indicating slightly greater overall penetration throughout all corporations.
- Use of renewable energy is spread relatively evenly across all four regions of the country.

Variation by Level of Commitment to Sustainability

All practices across the board are more widely reported by the firms more committed to sustainability but there are some notable dramatic differences:

- **Employee engagement in green**—85% of firms that are in the highest stages are engaging in this activity, versus only 35% in the lowest levels
- **Green buildings in portfolio**—73% of the most advanced firms have green buildings versus only 22% of the least advanced



Sustainability Implementation Activities

Having a CSO or dedicated sustainability staff increased almost all of the activities that encourage sustainable adoption. Only ride-sharing programs have equal occurrence whether there is a CSO or not.

Over two-thirds indicate that they gained an understanding of the regulatory framework to encourage the adoption of sustainability practices. Thus, regulation is still an important driving factor in sustainability adoption.

There was very little variation in the activities that are encouraging sustainability adoption in firms. Below are the very few notable differences.

Variation by Region

Sixty-eight percent of those in the West measure effectiveness of sustainability goals versus an average of 44% in the other regions. Mandates in states like California, Washington and Oregon may create a greater need for accountability.

Variation by Firm Size (based on annual revenue)

Across all categories, a larger percentage of respondents from firms with an annual revenue of \$5 billion or more report implementing these practices.

Understanding the regulatory framework becomes gradually more common as the size of the firms increase.

For all of the other categories listed in the chart at right, there is a clear demarcation between the behaviors of the largest firms and all other companies.

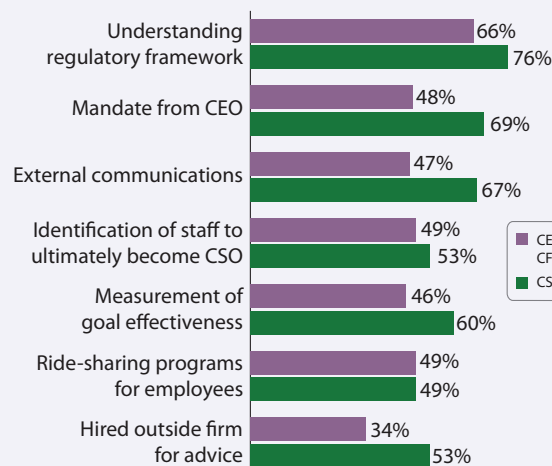
- **Mandates from CEO**—69% of the largest companies, which is 24% more than the others
- **External communications**—79% of the largest companies, which is 35% more than the others
- **Hired outside firms for advice**—55% of the largest companies, which is at least 21% more than the others

Types of Firms Hired to Provide Sustainability Guidance

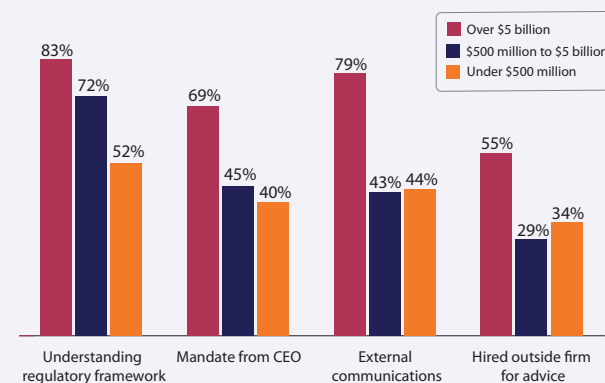
Environmental consultants emerge as the most commonly hired outside firm to advise on sustainability, chosen by two-thirds of the companies that hired an outside firm.

It is important to note that all firms with an annual revenue of \$5 billion or more report hiring an environmental consultant.

Activities Firms Are Implementing to Encourage Sustainability



Activities Firms Are Implementing to Encourage Sustainability (by firm size)



Firms reported as hired include:

- **Environmental consulting firms**—67%
- **Architectural firms**—58%
- **Service-based sustainability/green building companies**—54%
- **Strategy consulting companies**—37%

Public Reporting and Corporate Commitments to Sustainability

A growing trend among America's corporations includes corporate sustainability reporting. This practice involves using various metrics to measure the effectiveness of sustainability initiatives. As demonstrated on page 14, the most commonly used metrics today are internal benchmarks and ROI. As more firms seek to gain a competitive advantage in this down economy and increase their public profile, various organizations have emerged to help corporations develop these benchmarking strategies and gain credibility.

GOVERNMENT PROGRAMS

The federal government offers a number of partnership programs to help businesses engage in environmental performance benchmarking and enhance their brand and corporate reputation.

- **EPA Climate Leaders**
www.epa.gov/climateleaders
With 284 partner companies from various industries, this industry-government voluntary program helps these companies to develop comprehensive climate change strategies including corporate-wide emissions inventories, reduction goals and annual progress reports.
- **EPA's Green Power Partnership**
www.epa.gov/greenpower
Launched in 2001, this program that includes 1,135 partner companies emphasizes the increased use of alternative energy through estimating annual electricity use, reviewing purchase requirements and locating and purchasing green power.
- **Energy Star Partners**
www.energystar.gov
One of the most well-recognized and successful environmental voluntary programs, partners make commitments to measure, track and benchmark energy performance.
- **U.S. Department of Energy's Commercial Building Alliances**
www.eere.energy.gov
A key part of helping DOE achieve its performance goals for buildings,

these partnerships help DOE understand market drivers, incentives and technologies that can lead to high performance and net-zero energy buildings.

ANNUAL REPORTING PROGRAMS

Though reporting on sustainability and emissions programs is not yet required, many corporations have increased their annual reporting in anticipation of future regulations.

Today, there are a number of programs, associations and guidelines available to help firms demonstrate their increased commitment to sustainable business. Below are a few well-known programs.

- **Global Reporting Initiative**
www.globalreporting.org
A network-based organization that sets sustainability reporting guidelines for companies to use in reporting their sustainability initiatives. Over 560 companies participate worldwide.
- **Carbon Disclosure Project**
www.cdproject.net
Voluntary registry of corporate greenhouse gas emissions. It currently houses the largest database of corporate climate information in the world.
- **Coalition for Environmentally Responsible Economies (Ceres)**
www.ceres.org
This network helps companies develop sustainability plans, manage annual reporting and institute continuous performance improvement. Founded in Boston in 1989, Ceres now works with 82 firms.

CARBON FOOTPRINTS AND OFFSETS

The measurement of carbon footprints presents a major challenge to corporate sustainability efforts. Recently, new efforts from non-profit organizations have been developed to help companies monitor and eventually reduce their carbon emissions through benchmarking and off-set programs. A few major programs are listed below.

- **Global Footprint Network**
www.footprintnetwork.org
Provides companies with a means to calculate and manage their carbon footprint through benchmarks, quantitative targets and identification of resource challenges. As of June 2009, Global Footprint Network had begun work with 23 nations and 90 global partners.
- **CarbonFree® Partner Program**
www.carbonfund.org
This program helps over 1,000 companies purchase carbon offsets and reduce environmental impacts. The MyGreenFuture Program also helps with the purchase of renewable energy certificates.

INDUSTRY ASSOCIATIONS

Industry associations help corporate America to collaborate with other company leaders and make a concerted effort on the implementation of sustainability practices. Two major associations include:

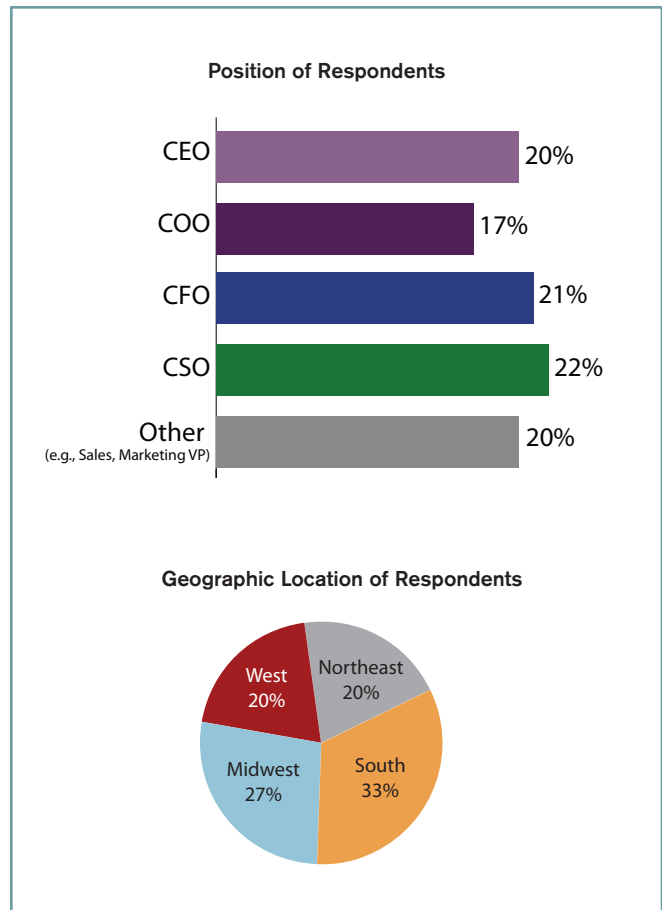
- **The Business Roundtable (BRT)**
www.businessroundtable.org
This corporate association unites top CEOs from over 150 companies. With the Sustainable Growth Initiative, the BRT provides C-level executives many opportunities to participate in programs such as Climate RESOLVE (Responsible Environmental Steps, Opportunities to Lead by Voluntary Efforts) and to learn from other firm's corporate commitments to climate change, environmental stewardship and social progress.
- **Global Environmental Management Initiative (GEMI)**
www.gemi.org
Founded in 1990, GEMI provides strategies to businesses to foster global environmental, health and safety (EHS). GEMI allows corporate leaders to assess emerging issues vital to sustainability and gain access to research tools such as benchmarking surveys to help monitor key sustainability issues.

The research in this report was conducted by McGraw-Hill Construction in order to investigate, examine and explore the broad patterns of adoption of sustainability among the largest firms in corporate America. In total, the firms interviewed represent over 75% of the \$36 trillion U.S. equities market with no firm below \$250 million dollars in revenue.

A representative sample of 203 firms was contacted by phone to participate in the research. Sample firms include a diverse range of sectors, including manufacturing, pharmaceutical, construction, computer technology, retail, real estate, insurance, energy and natural resources. Seventy-eight percent of respondents were C-level executives (e.g., CEO, CFO, COO, general manager, principal, senior vice president) and the remaining 22% were respondents holding responsibility in the area of corporate sustainability. For the most part, there was high level of agreement between CEOs and COOs. Notations are made where exceptions occurred in the data.

The use of a sample to represent the true population is based on the firm foundation of statistics. While many variables are factors in creating sample size, a key determinant is the ratio of the sample to the total population. The 203 respondents used in this research amounts to 2% of the total population of firms in corporate America. In contrast, both the popular AC Nielsen, which produces the Nielsen Television Ratings, and The Gallop Poll (elections) use less than 1/100th of a percent to represent their national populations. (See AC Nielsen PeopleMeter at www.nielsenmedia.com and Gallup Polls at www.galluppoll.com).

Data were collected between February 3rd and March 20th, 2009. The total sample size benchmarks at a high degree of accuracy: 95% Confidence Interval with a Margin of Error of +/- 7%. This study is a follow-up to the seminal *Greening of Corporate America SmartMarket Report* released in 2007 by McGraw-Hill Construction and Siemens. This research allows for longitudinal understanding by returning to a population over time.



TALKING GREEN with AT&T

Interviews with Corporate Sustainability Thought Leaders

Making Connections: Implementing Sustainability at AT&T



Charlene Lake
Senior Vice President,
Public Affairs and
Chief Sustainability Officer
AT&T

We have to understand the business, how the world's impacting us, and how we're impacting the world.

Charlene Lake, Senior Vice President, Public Affairs and Chief Sustainability Officer at AT&T, is responsible for leading AT&T's philanthropic and volunteerism endeavors, third party advocacy program, public affairs functional support, and coordinating signature initiatives that connect social needs with business objectives. She recently spoke with Catlin O'Shaughnessy, Research Specialist at McGraw-Hill Construction, about implementing and overseeing corporate sustainability at AT&T.

How would you define sustainability, and how does it relate to business?

I grew up on a farm, so I have a really healthy respect for the land. If you're going to be able to sustain a farm, you have to be able to plan for the long term...to take into account external forces in that process [and] understand how our actions impact the land. [This] is the very same concept behind developing sustainable business practices. We have to understand the business, how the world's impacting us, and how we're impacting the world.

What drove AT&T to make its commitment to sustainability?

That connection to what's going on externally and how it impacts us was always there [for AT&T]. It just wasn't formalized into a larger initiative. That [drive] really came from our CEO Randall Stevenson. He went to our board of directors and asked that they strengthen their focus on sustainable business practices. From there, we established an internal structure that tries to push that out into the organization and help set priorities and harmonize the operations of the company in that regard.

How is this structure implemented throughout the company?

It's not a CEO type of structure. We went out and identified the areas of our business that we felt were associated with a sustainability program and selected the officers that represented those areas to establish an officer level steering committee. This [group] con-

nects with roughly 20 different expert teams all throughout the company [and] with our little core team here to help prioritize issues and identify the paths of progression. The board committee has complete oversight.

As an Information and Communications Technology (ICT) firm, how is AT&T uniquely positioned to embrace corporate sustainability?

Connecting people and business is really an opportunity that the ICT industry has to help businesses and people reduce energy consumption or bring benefits they wouldn't normally have. The whole idea is that we are taking those connections and helping [people] improve their maneuverability in society. Understanding the power of ICT and what it can do in your home and in your business, to reduce your emissions and save on your bottom line, is really a powerful subject.

What are some of your environmental initiatives?

Under our program, we're using wind power and we also completed 16 lighting retrofit projects reducing 1.7 million kilowatt hours of electricity and 1,221 tons of CO₂ emissions, which provide us an annualized savings of nearly a million dollars. [But] our biggest source of direct emissions is our fleet because they're out there every day to service our customers to make those 300 million connections. We're going to spend about 565 million dollars to deploy 15,000 alternative fuel vehicles [which] is the largest commitment to compressed natural gas of any U.S. company.

We commissioned with the Center for Automotive Research to take a look at the impact of this particular project [and] they said that it would save about 49 million gallons of gasoline and reduce carbon emissions by 211 metric tons over this 10 year deployment period. We're really excited we're able to make that kind of long term commitment in a down economy. Our belief is that while we're getting through today, we need to focus on tomorrow as well. We're really encouraged by this step forward on our fleet.

What has the response been to your sustainability program, internally and externally?

The response from the employees has been very, very, very positive. [Externally], most of the reaction has come from our larger customers. Admittedly, we are reacting to them...because we are part of a supply chain as well. Our customers began to ask us what are you doing in this area? Our ability to be able to articulate to them what we are doing has received a positive reaction from those customers, who—like us—are beginning to build a program and make progress on their particular initiative.

Have there been any surprises or lessons learned as you've rolled out your sustainability initiatives?

The first thing that comes to mind...is our approach to internal administrative recycling. We hadn't been super aggressive in that area because we were pretty concentrated on more of our energy efficiency related areas. Our employees repeatedly brought that issue to us through our web system, Ecosystem.

They constantly asked why we didn't have a more aggressive recycling program within our buildings. Because our employees were so passionate about it, we are going to be rolling out a more comprehensive recycling plan this fall and finding a way to do it in a manner that is cost efficient for us and addresses their needs.

You are setting up systems to measure results. Are you seeing any paybacks to these sustainability programs yet?

We're seeing a lot of payback in our energy usage. The fleet announcement and some other [measures] are absolutely producing some benefits for us that are measurable, bottom line impacts. All of that tracking of the individual initiative is for bottom-line revenue/expense purposes, and also for the energy savings because all of that needs to factor into the goals that we're going to be setting for energy and emissions. Not only the hard savings, but there's also more of the long-term savings. ■

All of that tracking of the individual initiative is for bottom-line revenue/expense purposes...

AT&T Sustainability: Program Overview

ESTABLISHED 2008
KEY CONCEPT Delivering Benefits for Both Society and Our Company

Six Pillars of Sustainability:

- Strengthening communities
- Investing in people
- Leading with integrity
- Minimizing our environmental impact
- Connecting people and business
- Leading innovation and technology

Notable Initiatives and Programs:

- Greening fleet with 15,000 alternative fuel vehicles
- Renewable energy, including wind power and installation of a solar power system in San Ramon
- Completed 16 lighting retrofit projects in 2008, replacing 45,000 fixtures
- Reduced real estate space by 3 million sq. ft.
- Reducing travel through internal use of AT&T's telepresence conference system
- Continuous measuring and evaluation of results and savings from sustainability programs

TALKING GREEN with Owens Corning

Interviews with Corporate Sustainability Thought Leaders

Corporate Sustainability at Owens Corning: Defined by Opportunity



Frank O'Brien-Bernini
*Vice President &
 Chief Sustainability Officer*
 Owens Corning

The next five years will be the time... that real steps were taken to make a material difference in energy consumption in buildings.

Frank O'Brien-Bernini is vice president and chief sustainability officer of Owens Corning. His role encompasses global accountability for Owens Corning's corporate sustainability strategy development and execution—driving value creation inside the continuous balance of economic growth, social progress, and environmental stewardship.

McGraw Hill Construction's Donna Laquidara-Carr reports on her May 2009 interview with O'Brien-Bernini about Owens Corning and corporate America's commitment to sustainability.

What do you see as the impact of the financial crisis on the ability of companies to still pursue their sustainability goals?

The current economic pressures have us looking hard at our business for every opportunity through the lens of sustainability because it gives us visibility into some areas we wouldn't normally look, everything from the sales fleet car mileage to fuel use for air transports...and fuel consumption in our manufacturing operation

What will be the impact of the decisions made during the crisis?

Even though we are in a time right now with energy prices lower than they have been in

the past, we fully expect the pressures will drive energy prices back up. As we drive our energy intensity down, we will be in a better position to have a good cost position coming out the other side.

The point you just made about using sustainability to look at your business processes in a different and productive way, I think that's fascinating ...

It's another lens for addressing cost opportunities...if there was one thing I would highlight as the business "a-ha" to sustainability, it is when you seek out that intersection where you get an economic benefit, a social benefit and an environmental benefit from a single action, [and] it is often an action that you wouldn't have taken for any one of those [reasons] on its own.

What do you think right now is the biggest obstacle to a company adopting sustainable policies?

I certainly don't see any obstacles in our company to the path of sustainability because I see everything as an opportunity in this space. So I would guess for a company that doesn't see an opportunity in sustainability, maybe the obstacle is not having looked hard enough to find the problems worth solving that intersect with their company's capabilities.

Owens Corning Sustainability: Program Overview

ESTABLISHED 1993
 MISSION STATEMENT Delivering Solutions, Transforming Markets and Enhancing Lives

Strategic Initiatives/Tenets:

- Greening operations
- Greening products
- Accelerating energy-efficiency improvements in the built environment

Notable Initiatives and Programs:

- 10-year reduction goals from a 2002 baseline for resource use and environmental emissions.
- Unconditional commitment to employee safety.
- Established Life-Cycle Management Group responsible for performing and managing life-cycle assessments and their applications for products.
- Emphasis on research and development for more sustainable products and processes.

How has your sustainability program impacted your employees?

There is a subset of our folks that are engaged by this topic of sustainability in a way that they've not been engaged by other business topics that we have used to talk to our folks over the years with [For example] they've got grandchildren that they want to leave the planet a better place for, and for them to go home and be able to say that they work on a line that makes a product that is the most cost effective solution to greenhouse gas and climate change in the world gives them great pride.

What has been the most difficult part of sustaining a CSR over multiple years?

The area that requires the most thought leadership is the whole area of change leadership inside your company because you are never there.... What were aggressive goals in 2002 aren't aggressive enough today.... You need to be very clear where you've been, where you are and where you're going, but where you're going needs to be constantly elevated to a higher and higher bar.

What changes do you see as likely in the next five years in corporate sustainability? What general direction do you see corporate America moving in?

The biggest trend that I see is there's clearly a growing recognition that something needs to be done about the greenhouse gas emissions in the United States.... If you look at [the fact that] 40% of the energy consumption globally is attributed to operating buildings, we need ... dramatic changes: 50%, 70%, net-zero energy buildings. We need some really big moves ... I think that 10 years from now we'll look back and say... the next five years or so will be the time that buildings were first recognized for the negative contribution that they make to greenhouse gas emissions and climate change and that real steps were taken to make a material difference in energy consumption in buildings. ■



Owens Corning World Headquarters, Toledo, OH; provided courtesy of Owens Corning

TALKING GREEN with Microsoft

Interviews with Corporate Sustainability Thought Leaders

Tracking Environmental Sustainability: The Microsoft Approach

Interview with Rob Bernard, Chief Environmental Strategist; Francois Ajenstat, Director of Environmental Sustainability; and Tim McDowd, Senior Manager, Environmental Sustainability Team

You can't
reduce what
you can't
measure.

According to Rob Bernard, Microsoft's Chief Environmental Strategist, the company's approach to sustainability is holistic, focusing on next-generation practices created by using "software and technology innovations to help people and organizations around the world improve the environment." Internally, says Bernard, the company's goal is to "reduce the impact of our operations and products, and to be a responsible leader in environmental sustainability."

Bernard and his team, formed in early 2008, oversee the implementation of these goals through a range of activities from calculating and measuring the corporation's carbon footprint and sustainable guidelines in vendor contracts to using compostable cups, paper plates and utensils in campus cafeterias.

These sustainable values are not new for Microsoft, but they have been an evolution. First putting in place their Environmental Sustainability Principles in 2006, Microsoft increased its involvement through the creation of an official environmental sustainability group in 2007. "Microsoft's current focus on environmental sustainability fits within a long company tradition of tackling tough challenges at a global scale," explains Francois Ajenstat, Director of Environmental Sustainability. "We see it as both the right thing to do and an opportunity to innovate and grow our business as the world transitions to new ways of using energy and managing natural resources."

Part of Microsoft's environmental sustainability efforts focus on establishing internal controls around measuring and reducing its carbon footprint. With a goal to reduce its carbon emissions per unit of revenue by at

least 30% by 2012 from 2008 levels, Microsoft is seeking to reduce its greenhouse gas emissions through increased and improved energy efficiency in buildings and operations, reduction of air travel and increased use of renewable energy.

Calculating a baseline carbon footprint across the company proved to be difficult, with fragmented data and usage trends across the company. Tim McDowd, senior manager of the environmental sustainability team recalls, "We were all doing a good job of keeping data and tracking the data but understanding it together in one consistent way was a challenge." This challenge, however, was critical to effectively reducing the corporate footprint. As Ajenstat points out, "You can't reduce what you don't measure."

Looking at how to achieve significant carbon and energy reductions, Bernard and his team have turned to green design and construction for new and existing buildings in Microsoft's portfolio. The company has committed to seek LEED certification for the construction of all new facilities across the world, such as the new LEED Gold-certified Microsoft campus in Hyderabad, India which features a rain-water reservoir to irrigate the 48-acre campus. "Buildings are critical to the overall environmental reduction plan," says Ajenstat, adding that "this is an area that will see a lot of attention and will drive significant carbon/energy reductions."

Microsoft has also brought green building and operations to its corporate headquarters in Redmond, Washington with a LEED Gold certification in Commercial Interiors for Building 88. The corporate campus is also saving

waste by making a switch from polystyrene to compostable flatware, preventing 20,300,000 pieces of cutlery and 18,500,000 plates and bowls from going to a landfill. The company has also reduced waste by 50% and has the distinction of becoming the first U.S. corporate campus whose food service has achieved Certified Green Restaurant™ status by the Green Restaurant Association.

Microsoft also sees environmental research and development as a key component to sustainability. As a result, they see partnerships with universities as an opportunity to apply technology towards solving environmental challenges such as climate change and biodiversity. For example, a group of ecologists with a technology background are currently

investigating how bird migration is being altered due to climate change.

For McDowd, this practice of leveraging existing strengths to achieve more responsible business is at the heart of success in corporate sustainability. "I think there might be some misperceptions that becoming more environmentally sustainable is more expensive," he says. "I would say that if you put in the hard work and really try to understand the issues and the opportunities, [you] might even [already] have the solutions in hand."

The process, of course, takes time. As Ajenstat explains, "It takes time to transform large institutions in the public and private sector around the challenges of sustainability. Unfortunately, with the pressing challenges we face from climate change in particular, I fear the pace of corporate change that's occurring is not keeping up with the pace of change that's needed." ■

Microsoft Company Profile

Headquarters Location: Redmond, Washington
 Founded: 1975
 Chief Executive Officer: Steven A. Ballmer
 2008 Annual Revenue: \$60.42 Billion
 Total number of employees worldwide: 95,029 (as of April 21, 2009)

Global Partnership	Microsoft's Role
Clinton Foundation	Partner; Work to create software services to enable cities to track and improve greenhouse gas emissions
Climate Savers Computing Initiative	Board Member; Reduce global CO ₂ emissions from operation of computers
European Environmental Agency	Help Europeans stay informed of real-time changes to environmental conditions
Green Grid	Board Member; Collaborate to advance energy efficiency in data centers
Equipment Refurbishers	Provide low-cost licenses for Microsoft software to help equipment refurbishers extend the useful life of computers

Resources

Organizations and website that can help you get smarter about corporate sustainability, green building and social responsibility.

Siemens

- www.usa.siemens.com/industry

McGraw-Hill Construction

- Main website: www.construction.com
- Research & Analytics: www.analytics.construction.com
- *GreenSource*: www.greensource.construction.com
- *Architectural Record*: www.archrecord.com
- *Engineering News-Record*: www.enr.com

Federal Government

- Energy Star: www.energystar.gov
- Office of the Federal Environmental Executive: www.ofee.gov
- Office of the President, Council on Environmental Quality: www.whitehouse.gov/ceq
- U.S. Department of Energy: www.energy.gov
 - Office of Energy Efficiency and Renewable Energy: www.eere.energy.gov/buildings
 - Energy Information Administration: www.eia.doe.gov
- U.S. Environmental Protection Agency: www.epa.gov
 - Climate Leaders: www.epa.gov/climateleaders
 - Green Power Partnership: www.epa.gov/greenpower

Nonprofit Organizations

- Alliance to Save Energy www.ase.gov
- American Council for an Energy-Efficient Economy: www.aceee.org
- American Institute of Architects, Committee on the Environment: www.aia.org/cote
- The Business Roundtable: www.businessroundtable.org
- Businesses for Social Responsibility: www.bsr.org
- Carbon Disclosure Project: www.cdproject.net
- Clinton Climate Initiative: www.clintonfoundation.org/cf-pgm-cci-home.htm
- Ceres: www.ceres.org
- Environmental Defense Fund: www.edf.org
- Global Environmental Management Initiative: www.gemi.org
- Global Reporting Initiative: www.globalreporting.org
- *Harvard Business Review*: www.hbr.harvardbusiness.org
- National Association of Home Builders Green Building Program: www.nahbgreen.org
- Natural Resources Defense Council: www.nrdc.org
- Pew Center on Global Climate Change: www.pewclimate.org
- Sustainable Buildings Industry Council: www.sbicouncil.org
- United States Climate Action Partnership: www.us-cap.org
- U.S. Conference of Mayors: www.mayors.org
- U.S. Green Building Council: www.usgbc.org
- World Business Council for Sustainable Development: www.wbcsd.org
- World Green Building Council: www.worldgbc.org
- World Wildlife Fund: www.wwf.org

SIEMENS

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