A GREEN RECOVERY FOR AMERICA'S HOMEBUILDERS? A Survey of Sustainable Practices by the Homebuilding Industry

November 2010





Table of Contents

OVERVIEW	. 1
EXECUTIVE SUMMARY	.3
ANALYZING THE ENVIRONMENTAL RISKS,	
OPPORTUNITIES, AND IMPACTS OF THE	
HOMEBUILDING INDUSTRY	. 5

OUR RANKINGS AND DISCUSSION OF KEY FINDINGS	
CONCLUSION AND RECOMMENDATIONS	15
ABOUT THE AUTHORS	17
ABOUT CALVERT	

Overview

The homebuilding industry was one of the earliest and most visibly affected segments of the U.S. economy during the recent financial crisis. While new residential building projects are only a quarter of what they were five years ago, the trend in the first half of 2010 is moving upward. Green building, which is gaining momentum, offers an opportunity to the industry as it focuses on rebuilding its market and restoring financial profitability. Estimated at \$36-49 billion, the green building market is considerable and expected to increase twofold between 2009 and 2013.¹

Consumer and regulatory trends related to sustainability present both a challenge and an opportunity for high production builders. As consumers become more educated about environmental options and green residential construction, and as policymakers increase incentives for green development and restrict conventional development efforts, some homebuilders may be at a competitive disadvantage if they have not integrated sustainable design and construction principles into their operations. Homebuilders may also face risks from the physical impact of a changing climate, including threats to raw materials, water supplies, and altering geographical patterns of habitation.

In the green building market there is likely a first-mover advantage: companies that make a concerted national effort to integrate sustainability into project siting, construction materials, and construction processes, as well as provide energy, water, and habitat conservation options in finished products, will be able to build a brand image as the environmental choice for home construction. This brand will help empower homebuyers when making a purchase decision, and provide a signal to regulators at all levels about which companies are managing their environmental and community impacts.

As an investor, Calvert sought to discern how major U.S. homebuilders compare on policies and practices relating to the environment and resource efficiency. In an update to our 2008 analysis, Calvert has reexamined the industry's ability to manage the effects of a changing climate, public demand, and regulatory realities. As sustainable and responsible investors, we believe that these companies are more likely to provide long-term value to investment portfolios.

This survey of the 10 largest publicly traded U.S. homebuilders finds an evolving landscape. Whereas two years ago the industry had not yet begun to embrace sustainability as a core part of building design and construction, companies today have taken many meaningful steps toward developing greener and cleaner homes. Much of this progress may be attributable to companies' recognition of the environmental, societal, and economic benefits of green building, as well as the

^{1.} McGraw Hill Construction (2009). Green Outlook 2009: Trends Driving Change.

critical roles that engaged stakeholders, such as the Nathan Cummings Foundation, have diligently played over the past decade. However, given the environmental impact that homebuilding has, the industry has significantly more progress to make.

Environmental responsibility comprises only part of a company's overall sustainability profile. While this report highlights an ecological footprint of the homebuilding industry, Calvert believes that all companies must responsibly manage their impact in a variety of areas, including governance and ethics, workplace, product safety and impact, human rights, and community relations.²

Furthermore, a truly sustainable company will address the environmental, social, and governance impacts of their subcontractors. Subcontractors are undeniably a part of a builder's core operations and are inextricably linked to its brand.

Executive Summary

In an update to our 2008 report,³ this analysis of the sustainability policies and practices of the nation's largest homebuilders finds the industry still struggling to appropriately address its environmental impacts; however, meaningful progress has certainly been made. The industry overall is responsible for a significant environmental footprint, including impacts to land, resources, and health. Moreover, homes account for about 21% of U.S. energy-related carbon dioxide (CO_2) emissions, a figure which places responsibility on homebuilders to manage their contribution to climate change by addressing, among other things, the energy efficiency of their products.

Our survey of the 10 largest publicly traded U.S. homebuilders uses five major 'green' indicators: land, building materials, energy, water, and climate change. In addition to an updated ranking *(see chart)*, our recent analysis revealed the following key findings:

A sizable gap still remains between what investors need and the information that homebuilders provide. Out of 42 points, the average total score was just over six points, or 15%.

- While all 10 homebuilders have made some effort to develop environmental policies or practices, or to offer environmental products, there is strong **differentiation in the level of commitment** to sustainability and the penetration of "green" homes in each company's product mix. Without leading companies KB Home and Pulte Homes, the overall analytical performance of the industry in our study would have been far worse scoring an average of less than 6% against key green data points.
- Homebuilders are not measuring and disclosing their impact on the environment in a comprehensive manner. Our analysis looked for environmental performance data points that homebuilders use to measure and manage their footprint, but nearly all homebuilders had no relevant data.

OVERALL 2010 GREEN BUILDER RANKING

- 1 KB Home
- 2 Pulte Homes
- 3 Meritage Homes
- 4 Toll Brothers
- 5 Lennar
- 6 DR Horton
- 7 Standard Pacific
- 8 NVR
- 9 Ryland Group
- 10 MDC Holdings

^{3.} Available at http://www.calvert.com/sr-greener-pastures.html.

- Whereas our last report showed a preference towards regional policies and programs, homebuilders are now making company-wide, **national sustainability commitments** that pledge full product participation in energy, water, and climate change initiatives.
- Companies are most active in energy efficiency and conservation compared with other environmental issues. Every homebuilder reviewed for this analysis had some level of policy or program focused on curbing residential energy use.
- Ostensibly related, the 10 companies pay more attention to sustainability issues that can offer nearer-term financial benefits to operating costs and customers, such as building material recycling and energy and water efficiency measures. Issues with longer-term benefits, such as climate change, are not well addressed by this industry.
- In light of SEC interpretive guidance on climate change in early 2010, some homebuilders are choosing to disclose risks related to climate change through their annual 10-K filings. At this point, homebuilders appear most

concerned about the effect of carbon regulation on costs, rather than direct physical impacts of a changing climate.

 KB Home has maintained its #1 spot in our rankings. Toll Brothers, Meritage, and Standard Pacific have made modest to significant progress since our last review.
Overall, the economic crisis has not thwarted many homebuilders' efforts to become more sustainable companies.

With the increasing importance of issues such as energy supply, climate change, and smart growth, investors will need far greater disclosure from homebuilders in order to understand their capacity to address these major drivers. As with our previous survey, we found that the homebuilding industry still does not provide the information investors and consumers need. We believe that if these companies wish to continue as market leaders in new residential construction, they must not only embrace green building as a core business strategy, but also make information about their sustainability practices publicly available so that stakeholders can better understand, assess, and appreciate the efforts being undertaken.

Analyzing the Environmental Risks, Opportunities, and Impacts of the Homebuilding Industry

OVERVIEW

Since 2005, homebuilders have built an average of nearly 1.5 million homes each year.⁴ Through their core business of providing shelter, homebuilders help meet a basic human need. In addition, the industry directly employs hundreds of thousands of workers and generates approximately \$260 billion in revenues annually.^{5,6}

But while the homebuilding industry plays an important and positive role in our economy and society, its practices can put a strain on the nation's natural resources and on the planet's ecosystem. The current impact of the homebuilding industry on climate change, resource consumption, and open space and habitat preservation is cause for concern.

The homebuilding industry has the potential to be a catalyst for a national shift toward sustainable construction materials, energy efficiency, renewable energy use, and responsible land management. At the same time, the industry faces the possibility of significant resource constraints and regulatory changes related to changing and growing environmental risks.

KEY AREAS OF ANALYSIS

For this study, we focused on five key areas of homebuilders' environmental impact and performance:

- 1. Land Use and Conservation of Open Space and Habitat
- 2. Building Materials
- 3. Energy
- 4. Water
- 5. Climate Change

GREEN HOME VALUE?

Abstracted from Meritage Homes, *Green Q&A**

The American Society of Home Appraisers is issuing guidance to increase the value of an energy efficient home in correlation with the amount of utility cost savings a home experiences during the lifetime of the loan – often 10-20% greater value than that of a comparable, but less energy efficient home. In a recent J.D. Power survey of homeowners that purchased a "Green" home, 50% of the respondents stated they believe their home's value was increased because it was "Green." Another 94% reported they purchased their home because of the savings they would see in their power and heating bills, 63% said they purchased their homes due to reduced water usage, 60% because of the reduced impact on the environment, and 53% stated their decision to buy a Green home was due to the improved indoor air quality. No matter how you look at it a Green home adds value in many measurable ways!

*Meritage Homes (2010). Green Q&A. Avaialble at http://meritagehomes.com/builder/section/241.

U.S. Census Bureau (2010). New Privately Owned Housing Units. Available at http:// www.census.gov/const/www/quarterly_starts_completions.pdf.

National Association of Homebuilders (2007). Employment - States and Metropolitan Statistical Areas. Available at http://www.nahb.org/fileUpload_details.aspx?contentID =55105.

^{6.} Hoover's (2010). Residential Construction. Available at http://www.hoovers.com/ industry/residential-construction/11541.html.

1. Land Use

Land use planning inherently covers a range of social, environmental, and economic issues. It determines residential patterns and can put a strain on local infrastructure and social services (i.e. police, fire, schools, and utilities) or create additional challenges for residents. These challenges include traveling extra miles, less access to community resources, and less public transportation and open space. Land use decisions may compromise water quality by affecting the amount and sources of runoff that enter our rivers, lakes, and streams. Often, land conversion, or development for housing, reduces the amount of vegetation buffers that previously prevented significant runoff in the area.

Land conversion also has an effect on forest cover, wildlife habitat, soil erosion, and a host of other environmental issues. Furthermore, the conversion of farmland and rangeland may decrease domestic agricultural production, and the conversion of forest may decrease domestic timber supplies, making our economy more reliant on imports.

Nearly one in four states in the United States has implemented smart growth policies that seek to promote sustainable land use and curb sprawl through comprehensive planning measures. While many of these laws are currently found in New England and the Pacific Northwest, they represent a low-cost mechanism for addressing environmental protection that any state or municipality can adopt.⁷

In order to assess a company's performance on the issue of land use, this review considered whether the company had policies and programs covering land conversion, and smart growth and urban infill development, while avoiding wetlands and other sensitive habitats.

2. Building Materials

Building material use has important economic and social impacts, including the potential to increase air and water

pollution across the production chain (i.e. extraction, processing, transportation, and installation). Materials can also involve hazardous chemicals or dangerous production processes, which can pose a risk to workers and consumers, an important consideration given that Americans spend nearly 90% of their time inside buildings.⁸ Finally, many of these materials are either non-renewable or non-recyclable, so their shortened life cycle can present significant environmental consequences.

Homes are built with a number of important natural resources, but none is used more extensively than wood. Despite the fact that wood use per square foot has actually dropped over time, the average home size has increased, and this has resulted in more net wood use per home.⁹ With such a significant amount of lumber being used for homebuilding, forest product certifications, such as the Forest Stewardship Council (FSC), along with third-party verification, are critical for understanding the sustainability footprint of wood products in a home. Sustainable forestry can have farreaching environmental benefits, from reducing soil erosion and water pollution to dramatically increasing the amount of carbon sequestered in forests.

With regard to resource selection and use, the best companies will pay close attention to the environmental impacts of materials sourcing and will use salvaged, recycled, or sustainably-harvested materials as part of their core practices. These companies will avoid using hazardous materials in construction and will safeguard against indoor air pollution. The best companies will also consider energy use in the transportation of materials and try to source materials locally.

Finally, in the construction phase, leading companies will have a commitment to reduce, reuse, and recycle throughout building construction. These companies will avoid excessive waste, use building materials efficiently, work to salvage excess materials for re-use on other projects, and recycle and/or safely dispose of waste materials. They will also try to ensure that their construction has no adverse impact on

Natural Resources Defense Council (2008). Fighting Oil Addiction: Ranking States' Oil Vulnerability and Solutions for Change. Available at http://www.nrdc.org/energy/ states/states.pdf.

Environmental Protection Agency (1987). The Total Exposure Assessment Methodology (TEAM) Study.

McGraw Hill Construction (2010). Lumber by the Numbers. Available at http:// continuingeducation.construction.com/article.php?L=5&C=645.

the surrounding environment through air, soil, and water pollution, habitat destruction, or soil erosion.

In order to assess a company's performance on the issue of building materials use, this review considered whether the company had policies and programs covering green building certifications, sustainable product certifications, waste reduction (during the manufacturing and construction processes), recycled/salvaged materials use, and indoor environmental health.

3. Energy

The total amount of energy used in the construction, operation, and maintenance of homes is important for a number of social, environmental, and economic reasons. These include air pollution, heating and cooling costs, and our current reliance on energy supplies that often exhibit significant price volatility or come from unstable parts of the world. Residential buildings account for approximately 22% of energy use nationally.¹⁰

EnergyStar, the Environmental Protection Agency (EPA) and Department of Energy (DOE) program that is synonymous with efficiency, continues to grow in its 18th year. It is estimated that in 2009, the program prevented 45 million metric tons of greenhouse gas emissions and saved Americans nearly \$17 billion on their utility bills.¹¹ The EnergyStar label identifies products that meet the program's standards for energy efficiency. In the homebuilding sector, new homes can obtain the EnergyStar label and these homes are typically 20-30% more efficient than standard homes. An EnergyStar-qualified home will have effective insulation systems, highly efficient lighting and appliances, high performance windows, and efficient heating and air conditioning systems.¹² This translates to an average annual savings of \$200 to \$400.

 U.S. Department of Energy, Energy Information Administration (2010). Energy Consumption by Sector. Available at http://www.eia.doe.gov/emeu/aer/txt/stb0201a. xls. The best companies will aim to have every home they build efficiency-certified (EnergyStar, LEED, BuiltGreen, or Environments for Living) and will have a significant number of homes powered by 100% renewable energy in markets where this is available. Additionally, they will provide homeowners with information on environmental remediation technologies in the house as well as information on reducing energy and water use.

In order to assess a company's performance on the issue of energy use, this review considered whether the company had policies and programs covering energy efficiency and conservation, related education for current and potential homeowners (including estimated cost savings), alternative energy generation, and national efficiency initiatives.

4. Water

Homes represent half of public water consumption, with daily use averaging around 100 gallons per person.¹³ Reducing water consumption offers a number of benefits. Using less water may lead to lower water bills for consumers and reduce the overall cost to the community from water treatment processes. In areas where water is scarce, water conservation helps protect community resources and can alleviate pressures to unsustainably pump groundwater or divert freshwater resources from other areas. Indirectly, lower water consumption may result in lower energy use associated with the pumping, heating, and cooling of water. Additionally, reduced consumption can help lower the risk of contamination by the chemicals used in the purification process.

Over the next 20 years, the penetration of water-efficient technologies into the homebuilding industry will likely have the greatest impact on water consumption. Low flow showerheads and toilets can reduce water use by over 75%; heating and cooling technology such as advanced evaporator coils can help minimize water loss and energy use.¹⁴ As more than half of all home water use is outdoors, the developers'

Environmental Protection Agency, EnergyStar (2010). Available at http://www. energystar.gov/index.cfm?c=about.ab_index.

^{12.} Environmental Protection Agency, EnergyStar (2010). Available at http://www. energystar.gov/index.cfm?c=new_homes.nh_verification_process.

Environmental Protection Agency, WaterSense (2010). Available at http://www.epa. gov/watersense/docs/ws_consumer_brochure508.pdf.

^{14.} Environmental Protection Agency, EnergyStar (2008). Available at http://water.epa. gov/aboutow/owm/upload/Final-20Report-20Mar-202008-2.pdf.

choice of landscaping can have just as significant an impact as the choice of indoor water-saving technology.

Like its EnergyStar partner, the EPA's WaterSense program is the latest national initiative to provide guidance on water efficiency and conservation. WaterSense helps consumers identify water-efficient products and programs that meet WaterSense efficiency and performance criteria. WaterSense for New Homes is part of the EPA's program, and new homes that bear this label are built to reduce residential water use both indoors and out. These homes save an average of 10,000 gallons of water a year, and can reduce annual utility costs by at least \$100.¹⁵

In the building industry, the best companies will use waterefficient fixtures and systems as well as water-conscious landscaping, designed to WaterSense or Leadership in Energy and Environmental Design (LEED) standards. They will also offer the option of water collection and wastewater recycling for some customers.

In order to assess a company's performance on the issue of water use, this review considered whether the company

15. Environmental Protection Agency, WaterSense (2010). Available at http://www.epa.gov/watersense/spaces/new homes.html.

had policies and programs covering water efficiency and conservation, related education for current and potential homeowners (including estimated cost savings), and national water efficiency initiatives.

5. Climate Change

Climate change is considered to be the most critical environmental challenge of our time. According to the EPA, as the global mean temperature increases by 3-7 °F throughout this century, the changing climate will bring the following ecological effects:

- Changing precipitation patterns,
- Melting ice in the Arctic,
- Melting glaciers around the world,
- Increasing ocean temperatures,
- Rising sea level around the world,
- Acidification of the oceans due to elevated carbon dioxide in the atmosphere, and
- Responses by plants and animals, such as shifting ranges.¹⁶

16. EPA (2010). Climate Change Science Facts. Available at http://www.epa.gov/ climatechange/downloads/Climate Change Science Facts.pdf.

2010 SEC CLIMATE CHANGE GUIDANCE

In January 2010, the Securities and Exchange Commission issued guidance for companies to disclose impacts that climate change may have on assets and the consequences of carbon regulations. This guidance serves as a long-term signal for companies to consider the financial impacts of a carbon-constrained economy.

The SEC emphasized that the guidance does not impose new requirements or modify existing ones, but rather focused on the following aspects of climate change that companies should consider in their disclosure:

- Positive and negative impacts of existing pending laws and regulations related to climate change.
- Similar consideration for the impact of foreign and international treaties and accords related to climate change.
- Positive and negative impacts of legal, technological, political, and scientific developments related to climate change.
- Physical impact of climate change. For example, indirect financial and operational impacts from disruptions to the operations of major customers and suppliers from severe weather.

Calvert believes that physical risks stemming from climate change are especially material for long-term investors. The insurance industry currently analyzes population trends, conducts climate and weather variability scenarios, and performs risk analysis of coastlines. The homebuilding industry, which may be exposed to related physical challenges from climate change, appears to be far behind the insurers in its understanding of climate-related risks.

Climate change may cause vulnerability to the homebuilding industry due to uncertainty of raw materials supply and land development characteristics, among other impacts. At the same time, the industry, whose products are responsible for over one-fifth of energy-related greenhouse gasses (GHGs), must prepare for future carbon regulation by the EPA. Finally, the industry must also address its use of timber as forests play a crucial role in both the cause and mitigation of climate change.

Leading companies will acknowledge their responsibility in reducing greenhouse gas emissions and will disclose their climate impact. They will integrate climate mitigation into their development processes with an aim of reducing greenhouse gas emissions. These companies will also try to limit development in areas that could be affected by global warming (flood plains, forest fire zones, etc.) and adopt adaptive design strategies to secure homes against threats posed by global climate change. In order to assess a company's performance on the issue of climate change, this review considered whether the company had policies and programs covering greenhouse gas emissions assessment and management, climate-related risks and opportunities, and public policy.

Note that for each of these factors, achieving environmentally-desirable outcomes—reduced resource consumption and the preservation of open space—can have a material impact on a corporation's bottom line. The challenges of climate change and resource depletion will likely lead to new government regulations designed to curtail our over-reliance on our precious natural resources. Homebuilders' corporate reputations and the desirability of their products are likely to be connected to their ability to take advantage of new technologies that will allow these companies to build more efficient and environmentally-sound homes. Last, but certainly not least, careful attention to energy and resource use, as well as land conservation, can lead to reduced building and operating costs and higher returns for investors.

Rankings and Discussion of Key Findings

This ranking scored companies according to their management of five key 'green' areas of land use, building materials, energy, water, and climate change. To gain a better understanding of how they measured and managed these issues, we analyzed three key areas:

- Policies: formal commitments from the management team to explicit goals;
- Programs: integrated methods for implementing policy commitments; and
- Performance: reported data on the companies' progress towards stated goals.

Our ranking of major U.S. homebuilders is *primarily based upon publicly available data*, although in two cases we did include information that was provided to us directly by the companies. Calvert wrote to all of the companies to first

OVERALL 2010 GREEN BUILDER RANKING

lome

- 2 Pulte Homes
- 3 Meritage Homes
- 4 Toll Brothers
- 5 Lennar
- 6 DR Horton
- 7 Standard Pacific
- 8 NVR
- 9 Ryland Group
- 10 MDC Holdings

invite them to participate in the survey and later to provide them with our findings. We had hoped that by reaching out to companies directly, the report would credit companies for the initiatives they have underway, but have yet to disclose.

The homebuilding industry has been slow to join the growing trend of corporate America that discloses environmental, social, and governance (ESG) data through comprehensive sustainability reporting. Recent studies indicate that about four-fifths of the largest companies disclose important ESG information through sustainability reports.¹⁷ At the same time, the issuance of corporate social responsibility (CSR) reports has increased by over 50% from 2007 to 2008 to a total of 3,100 reports.¹⁸ At this point, KB Home is the only large U.S. homebuilder to produce a comprehensive sustainability report.

In addition to detailed disclosure, Calvert also encourages homebuilders to educate potential and current customers about the green aspects of their homes. For example, Meritage Homes offers web resources, including a "Green Q&A" that explains general green building concepts, and a "Meritage Green" webpage that gives readers specific details about the efficiency and/or environmental benefits that are standard in Meritage homes.¹⁹

^{17.} KPMG (2009). International survey of corporate responsibility reporting 2008. Available at http://kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/ Pages/Sustainability-corporate-responsibility-reporting-2008.aspx.

Calvert recommends reporting ESG information through the Global Reporting Initiative (GRI). More information on GRI is available at www.globalreporting.org.

Meritage Homes (2010). Green Q&A. Avaialble at http://meritagehomes.com/builder/ section/241.

Our survey of the 10 largest publicly traded U.S. homebuilders uses five major 'green' indicators: land, building materials, energy, water, and climate change. In addition to an updated ranking (see right), our recent analysis revealed the following key findings:

- A sizable gap still remains between what investors need and the information that homebuilders provide. Out of 42 points, the average total score by a homebuilder was just over six points, or 15%.
- While all 10 homebuilders have made some effort to develop environmental policies or practices, or to offer environmental products, there is strong **differentiation in the level of commitment** to sustainability and the penetration of "green" homes in each company's product mix. Without leading companies KB Home and Pulte Homes, the overall analytical performance of the industry in our study would have been far worse scoring an average of less than 6%.
- Homebuilders are not measuring and disclosing their impact on the environment in a comprehensive manner. Our analysis looked for environmental performance data points that homebuilders use to measure and manage their footprint, but nearly all homebuilders had no relevant data.



2010 GREEN HOMEBUILDERS RATING

- Whereas our last report showed a preference towards regional policies and programs, homebuilders are now making company-wide, **national sustainability** commitments that pledge full product participation in energy, water, and climate change initiatives.
- Companies are most active in energy efficiency and conservation compared with other environmental issues. Every homebuilder reviewed for this analysis had some level of policy or program focused on curbing residential energy use.
- Ostensibly related, the 10 companies pay more attention to sustainability issues that can offer nearer-term financial benefits to operating costs and customers, such as building material recycling and energy and water efficiency measures. Issues with longer-term benefits, such as climate change, are not well addressed by this industry.
- In light of SEC interpretive guidance on climate change in early 2010, some homebuilders are choosing to disclose risks related to climate change through their annual 10-K filings. At this point, homebuilders appear most concerned about the effect of carbon regulation on costs, rather than direct physical impacts of a changing climate.
- KB Home has maintained its #1 spot in our rankings. Toll Brothers, Meritage, and Standard Pacific have made modest to significant progress since our last review. Overall, the economic crisis has not thwarted many homebuilders' efforts to become more sustainable companies.

A CLOSER LOOK AT THE RANKINGS

Land Use

Overall, major homebuilders are not taking progressive steps with regard to land use. The industry scored an average of 6% in our analysis using land use and conservation metrics, and what information is disclosed is very limited.

With regard to sustainable land use, Standard Pacific, KB Home, Toll Brothers, and Pulte Homes currently have commitments aimed at increasing infill development. From all companies in the industry, we are seeking greater information about these policies, their implementation, and overall penetration of infill development.

Building Materials

Slightly better than land use, homebuilders received an average score of 16% against the data points we used for our analysis.

KB Home led the sector in this area. With a stated commitment to job site waste reduction, the company is working to implement waste reduction standards in every division and create a company-wide tracking system to measure performance. Additionally, KB utilizes building practices such as preconstructed panels and preengineered roof trusses that minimize waste and reduce the amount of timber needed. Low-VOC paint is standard in all KB homes and low-VOC carpets are a widely-available option. Meritage Homes also provides low-VOC paints in all new homes.

Given the significant impacts the homebuilding industry has in this area, we urge all companies to pursue more aggressive waste management practices and make sustainable options standard features throughout all regions, and in all homes.

Energy

Homebuilders have more policies and programs around energy than any other area of analysis; in fact, all homebuilders have some form of commitment or initiative concerning energy efficiency. Still, out of the data points that were available, the average company score was 30%.

Our analysis shows that KB Home, Meritage Homes, and NVR (through its subsidiaries) have national commitments to build all new homes to EnergyStar standards.

We applaud the momentum towards efficiency practices and products, but we also find that several homebuilders discuss energy efficiency too broadly, and fail to specify which energy efficient technologies are available in their homes. Additionally, many companies fail to mention whether or not these features are optional or standard in their homes. Energy efficiency represents an attractive, and simple, option that allows for significant reductions in greenhouse gas emissions and excellent cost-savings for homeowners. Companies should clearly indicate on their websites and in their marketing materials which efficiency features they offer, and in which markets homebuyers can expect to find these options.



BUILDING MATERIALS RATING



Water

In its 2010 review of corporate response to water-related risks, the national sustainability coalition Ceres found the homebuilding industry to be not only vulnerable to each aspect of water risk (physical, reputational, regulatory, and litigation), but also the industry that discloses the least information about how it addresses and manages this risk.²⁰

Calvert's findings seem to echo those reported by Ceres: homebuilders are not yet adequately assessing water risks nor disclosing how they will overcome water challenges through meaningful policies and programs.

Meritage Homes has publicly committed to equip all new homes with low-flow faucets and showerheads. KB Home, however, was the clear stand-out with its innovative programs for water conservation and efficiency. A member of the EPA's WaterSense program, the company was the first homebuilder to have several of its homes bear the WaterSense for New Homes certification.

20.Ceres (2010). Murky Waters? Corporate Reporting on Water Risk: A Benchmarking Study of 100 Companies. Available at http://www.ceres.org/waterreport.

KB Home **Meritage Homes** NVR **Pulte Homes DR Horton** Lennar **Toll Brothers** Standard Pacific **Ryland Group MDC** Holdings 0 10 20 30 40 50 60 70 80 90 100

Score (%)

ENERGY RATING

We encourage every homebuilder to embrace WaterSense as the standard in water efficiency and conservation, and while some builders, including Pulte and Lennar, provide some evidence of water efficiency programs in a few regions or developments, the industry has yet to more fully embrace WaterSense through nation-wide commitments.

Climate Change

Homebuilders have a long way to go with regard to climate change. Through our research we determined that seven of the 10 homebuilders did not report any significant information on its climate impact or the risks or opportunities that climate change may pose to the company.

Pulte Homes and KB Home, responders to the Carbon Disclosure Project (CDP), are the only companies that currently report their levels of greenhouse gas emissions, although both companies are at early stages of capturing and disclosing this information. Importantly, these companies acknowledge a responsibility for addressing climate change, and, along with Standard Pacific, disclose key risks and opportunities related to a changing climate. Finally Pulte Homes and KB Home give stakeholders information on how they plan to not only reduce the footprint of their operations and products, but also construct those products with climate impacts in mind.



WATER RATING

Most homebuilders that we surveyed had already prepared their 10-Ks when the SEC issued its January 2010 interpretive guidance, but Meritage and Standard Pacific, having later filing deadlines, had explicit disclosures on climate change. Both companies' filings noted potential effects of "expensive cap and trade," yet did not appear to undertake the necessary analysis to understand how carbon price scenarios may affect the company. Moreover, the physical impacts of climate change were not substantively addressed (although Standard Pacific does acknowledge the issue). Homebuilders are also ignoring the opportunities that addressing climate change may bring with regard to adaptation and building resiliency. Going forward, we believe that there will be numerous opportunities for homebuilders that build with adaptive strategies and technologies.

CLIMATE CHANGE RATING



COMPANY SPOTLIGHT: KB HOME

Holding steady in the number one position, KB Home continues to lead the way in sustainability within the homebuilding sector. They are still the only company to publish a comprehensive sustainability report. A closer look at the data from KB's 2010 report reveals improving performance in the areas of GHG emissions, the number of Energy Star- qualified homes built, and the number of WaterSense fixtures installed.



Consistent with its self-reported performance, KB scored higher in every area than any other homebuilder in our study.

Not only does KB's disclosure put them ahead of their peers, but the company continually seeks new and innovative ways to promote sustainability within their industry. For example, the company recently initiated a pilot study based on data provided by KB's homeowners, Southern California Edison, the Gas Company, and the U.S. Census Bureau's American Community Survey that seeks to demonstrate the long-term advantages of owning an Energy Star home. By offering prospective homebuyers a side-by-side comparison of actual energy costs from an Energy Star home and a conventional home, KB seeks to educate consumers in real time that energy efficiency is a good investment.

Available in markets across the country, KB has introduced its "Open Series" line of homes that appear to be an efficient and economical response to the 'McMansion.' Open Series homes have flexible layouts that allow for greater space in areas that customers use (e.g. living rooms), but consciously decrease space that is not needed in certain areas (e.g. hallways, utility closets, or unnecessary ceiling heights). This smarter approach to building design can help cut homeowners' utility costs and environmental footprint.

KB is experimenting with a next-generation of solar home and energy storage technologies at a home in Lancaster, California. This prototype home is equipped with battery technology that can store several days- worth of energy. What makes this experiment unique is the addition of "smog eating" roof tiles that help accelerate oxidation, which reduces nitrogen oxide pollution. While not scalable yet, this type of project allows the company to research cutting-edge technology to determine how to reduce costs and put them within reach of more consumers.

Also, the company is building a concept home in partnership with Martha Stewart, which will be unveiled to the homebuilding industry and the public at the January 2011 International Builders' Show in Orlando, Florida. The home will be a net-zero energy home containing several new green building technologies, materials, and techniques. It is designed to earn the LEED for Homes Platinum certification.

We encourage the company to continue to find sustainable ways to add value to their product and brand.

Conclusion and Recommendations

The homebuilding industry's environmental impact is tremendous, accounting for one third of national softwood use and a fifth to a quarter of all energy use. Leading companies will be those that actively seek to reduce the environmental consequences of their operations. Such leadership will involve committing to such practices as using only water- and energy-saving technologies, using materials that are recycled, salvaged, or sustainably-forested, and limiting air, water, and hazardous waste pollution. While energy efficiency and conservation is a critical component for sustainability, issues pertaining to environmental health, water and timber resources, and climate change must not be ignored.

FOR HOMEBUILDERS

There are still opportunities for any company to become a leader in sustainable residential construction. While we have seen a number of homebuilders adopt national commitments, others have yet to expand local or regional energy, water, and land conservation programs nationwide. For all homebuilders, a critical component to becoming a sustainable company is to monitor and report on environmental impacts and set benchmarks for reducing energy and resource use. Measures should also be in place to assess and limit pollution and habitat destruction in their land conversion activities. In order to sell environmentally sustainable homes, companies need to market their advantages more explicitly. Educating consumers about the benefits of green home ownership can influence demand and push the industry to adopt sustainable design as the expected rather than exceptional standard. Increasingly, investors also value sustainability data that helps paint a picture of how a company is measuring and managing related risks and opportunities.

FOR HOMEBUILDING INDUSTRY ASSOCIATIONS

While we welcome the presence of green building certifications, the industry should work with policymakers and environmental organizations to streamline the green home credentialing process. Having various national environmental certifications is a testament to the recent growth and interest in green building practices; however this groundswell in options has the potential to confuse potential homebuyers and even jeopardize the credibility of the green building standards themselves. In addition, we encourage the homebuilding industry to continuously re-evaluate how it can become more sustainable. Green technologies and strategies are constantly becoming more robust and sophisticated, quickly deeming outdated those less effective approaches to sustainability.

FOR LENDERS AND INSURERS

As green building practices offer numerous economic, environmental, and societal benefits, we believe that lenders and insurers can play a key role in offering greater market signals towards green homebuying. While green mortgages currently exist mainly to help homeowners borrow additional money to help make their home more efficient, more options must be available to encourage the purchase of new green homes. Additionally, we welcome the increasing momentum in offering green homeowners insurance products, but believe that greater market penetration is needed.

materials and lower-impact redevelopment to make it an attractive, cost competitive option.

Calvert also believes that there are important opportunities for policymakers to promote green homebuying among consumers and spur greater demand for green home products. Nearly three-quarters of states provide energy efficiency rebates for appliances, fixtures, and/or HVAC systems.²¹ HOMESTAR, a federal program promoted by the Obama Administration in the first half of 2010, would have provided consumers with direct incentives to improve the efficiency of existing homes. We support such intitatives, but would also like to see clear incentives to encourage the purchase of green homes.

FOR POLICYMAKERS

As was the case when we first issued this report in 2008, homebuilders still have much progress to make with regard to smart growth and building materials selection. Regulators can help by creating incentives for sustainable building

As of 9/30/10, accounts managed by Calvert Asset Management Company, Inc. held securities issued by the following companies: KB Home, Pulte Homes, Meritage Homes, Toll Brothers, Lennar, DR Horton, Standard Pacific, NVR, Ryland Group, and MDC Holdings. Calvert may or may not still invest in, and is not recommending any action on, companies listed.

Wired (2010). Cash For Clunkers: Last Chance for Home Appliance Rebates. Available at http://www.wired.com/gadgetlab/2010/10/cash-for-clunkers-last-chance-for-homeappliance-rebates/#ixzz143uVjHUJ.

About the Authors



Rebecca Schlesinger Henson Sustainability Analyst, Calvert Asset Management Company, Inc.*

As an Environment Analyst, Rebecca Henson focuses on climate change, renewable

energy, and energy efficiency and is currently responsible for analyzing the auto, homebuilding, and insurance industries. She has been in this role since 2007. Prior to joining Calvert, Ms. Henson worked at David Gardiner & Associates, where she provided expertise in renewable energy policy and climate risk disclosure. She has worked in the industry since 2004. She earned a B.A. in history from Vanderbilt University and an M.A. in contemporary political studies from the University of Bath (UK). She currently serves on the board of DC Greenworks and the Women's Climate Initiative.



Jennifer Green Associate Sustainability Analyst Calvert Asset Management Company, Inc.*

Since 2008, Jennifer Green has been providing direct support to the department's

Environment Team, with a particular focus on water. She covers a variety of industries including furniture, consumer goods, and software. She also works closely with other analysts on sustainability-related advocacy efforts. Her career at Calvert began in 2006 when she joined the company as a temporary research assistant. Ms. Green has earned a B.A. in psychology from the University of Maryland, College Park.

Special thanks to **Stu Dalheim** and **Lily Donge** of Calvert for their contributions to the report.

*Effective 4/30/2011, Calvert Asset Management Company, Inc. (CAMCO) will be renamed Calvert Investment Management, Inc.

About Calvert

Calvert Investments is an investment management company that offers mutual funds and separate accounts to institutional investors, retirement plans, financial intermediaries, and their clients. By combining rigorous analysis with independent thinking, our disciplined approach to money management goes beyond traditional factors in order to manage risk and to identify investment opportunities with greater long-term potential. We offer more than 40 equity, bond, cash, and asset allocation investment strategies, many of which feature integrated corporate sustainability and responsibility research. Founded in 1976 and based in Bethesda, Maryland, Calvert Investments managed assets of more than \$14 billion as of October 31, 2010. More information is available at **www.Calvert.com**.

A leader in Sustainable and Responsible Investments (SRI), Calvert Investments offers investors among the widest choice of SRI strategies of any investment management company in the United States. Each SRI strategy employs one of three proprietary approaches. Calvert Signature™ Strategies integrate two distinct research frameworks: a rigorous review of financial performance plus a thorough assessment of environmental, social, and governance performance. Only when a company meets Calvert standards for both frameworks will we consider investing. Calvert Solution[™] Strategies selectively invest in companies that produce products and services designed to solve some of today's most pressing sustainability challenges. Calvert SAGE[™] Strategies emphasize strategic engagement to advance environmental, social, and governance performance in companies that may not meet Calvert standards today, but have the potential to improve. More information on Calvert SRI strategies is available at www.Calvert.com/SRI.

A SURVEY OF SUSTAINABLE PRACTICES BY THE HOMEBUILDING INDUSTRY—NOVEMBER 2010 | 19



www.Calvert.com

For more information on any Calvert fund, please contact your financial advisor, call Calvert at **800.368.2748** or visit **www.calvert.com** for a free summary prospectus and/or prospectus. An institutional investor should call Calvert at **800.327.2109**. An investor should consider the investment objectives, risks, charges, and expenses of an investment carefully before investing. The summary prospectus and prospectus contain this and other information. Read them carefully before you invest or send money.

Calvert funds are available at NAV for RIAs and Wrap Programs. Not all funds available at all firms.

Calvert mutual funds are underwritten and distributed by Calvert Distributors, Inc., member FINRA, and a subsidiary of Calvert Group, Ltd.

*Effective April 30, 2011, Calvert Distributors, Inc. will be renamed Calvert Investment Distributors, Inc. and Calvert Group, Ltd. will be renamed Calvert Investments, Inc.

BR10068-201011

Calvert saved the fol Guides, 52,500 Retai made with an average	NEW LEA N V I R O N M lowing resources by I Fact Sheets, and 1,5 e of 76% recycled fib	F PAPE ENTAL BE of using post printing 15,325 copies too Institutional Fact er and 40% post-cons	R® NEFITS ST -consumer waste fil of Funds at a Glance Sheets on New Leaf F sumer waste, processe	ATEMENT ber vs. virgin fibe , 7,075 Performance teincarnation Matte ed chlorine free, and
manufactured with e	lectricity that is offset water	with Green-e® certifie	d renewable energy o solid waste	ertificates: greenhouse gases
59	12,131	27	2,834	4,559
fully grown	gallons	million Btu	pounds	Paper Task Force.
Carcanations added	ww	w.newleafpaper.c	om	