Green Building Materials

US Industry Study with Forecasts for 2017 & 2022

Study #2995 | February 2013 | $5100 | 405 pages
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US demand to rise 11% annually through 2017

US construction activity declined sharply during much of the 2007-2012 period, but demand for green building materials held its own, boosted by consumer interest in products that could reduce utility bills or promote environmentally friendly construction practices. Homeowners and builders installed ENERGY STAR-certified windows and heating, ventilation, and air conditioning (HVAC) systems to lower energy costs and reduce energy consumption, and WATERSENSE-compliant plumbing products to reduce water use.

Through 2017, a rebound in construction activity will propel growth in green building materials demand 11 percent annually to $86.6 billion. In addition to the lift supplied by general construction activity, continuing consumer interest in environmentally friendly products will increase the market share of most green building materials relative to non-green alternatives. Growth in residential construction will promote base demand for products such as carpeting, gypsum board, concrete, and metal building products, while products that contribute to the earning of Leadership in Energy and Environmental Design (LEED) certification will see an additional boost.

Over the forecast period, builders and architects will increasingly opt to earn high levels of LEED certification by specifying the use of materials that earn LEED points. Residential HVAC systems, concrete made with fly ash, and lumber harvested in a sustainable manner can all contribute to LEED certification, and all are forecast to see above-average gains in demand.

Recycled concrete, permeable pavement among best prospects

Solar power products saw explosive growth between 2002 and 2012, driven by increasing installation of rooftop-based solar power modules connected to electricity distribution systems. Going forward, favorable tax incentives and strong interest in the use of renewable energy sources will promote demand for LEED-eligible solar power products.

Green building products such as recycled concrete, ENERGY STAR-compliant HVAC systems, and permeable pavement are forecast to see substantial gains through 2017. Recycled concrete will see rising use, as concrete made with fly ash and other additives features superior performance properties and is less costly than concrete made solely from cement and aggregates. Demand for green building systems will be spurred by strong residential demand for ENERGY STAR-compliant HVAC systems that lower utility bills. Permeable pavement demand will be supported by interest in reducing water runoff and minimizing strains on older sewer and water systems.
Market Demand -- Demand for building insulation products totaled 169 billion square feet of R-1 value in 2012, a sharp decline from the level seen in 2007. Insulation demand was negatively affected by a steep fall in new housing activity during the 2007-2009 recession and a further drop in demand seen during the contraction of the nonresidential segment in 2009 and 2010. However, residential improvement and repair demand for insulation remained strong between 2007 and 2012, preventing more rapid declines in demand. Rising utility bills and tax credits that promoted energy efficiency measures spurred homeowners to install more insulation in their homes to reduce energy consumption.

Green insulation accounted for 74 percent of insulation demand in 2012, or 125 billion square feet of R-1 value. This high share of green insulation demand stems from the predominance of fiberglass insulation used in building construction applications. Fiberglass insulation is a low cost material that provides good insulative value and is easily installed. Indeed, the installation of fiberglass insulation, such as in an attic, was one of the leading home improvement and repair projects between 2007 and 2012, as spiking energy prices spurred homeowners to add insulation to reduce utility bills.

Demand for insulation is expected to advance 7.7 percent annually through 2017 to 245 billion square feet of R-1 value. This growth is driven by rebounding building construction activity. Nonresidential demand is forecast to rise at an annual rate of 6.2 percent, driven by the anticipated increase in new construction spending. This rise in demand will spur the purchase of fiberglass and cellulose insulation, the two materials most often used in residences. Moreover, interest in improving the energy performance of structures will cause architects and designers to specify the use of insulation in structures as a whole. Building and construction expenditures will be used to pay for energy efficiency improvements, including the installation of insulation.
Building Materials Corporation of America, which operates as GAF Materials Corporation (GAFMC), is engaged in the manufacture and sale of building materials, primarily roofing, for the residential and nonresidential markets. The Company is owned by BMCA Holdings Corporation (US), itself a wholly owned subsidiary of privately held G-I Holdings Incorporated (US).

GAFMC is involved in the US green building materials industry through the manufacture of roofing systems, membranes, asphalt shingles, and insulation. Roofing systems encompass built-up roofing (BUR), modified bitumen, and vegetative varieties. Among GAFMC’s BUR offerings are GAFGLAS ENERGYCAP, a cap sheet that is made in 33 foot lengths and has a solar reflectance index (SRI) of 100. Representative modified bitumen roofing systems include RUBEROID ENERGYCAP cap sheets, which are available in atactic polypropylene types with SRIs of 104 and styrene-butadiene-styrene models with SRIs of up to 99. For example, RUBEROID ENERGYCAP SBS 30 FR cap sheets are nonwoven glass mats coated with fire retardant styrene-butadiene-styrene polymer-modified asphalt. GAFMC’s vegetative

TABLE V-6
NORTHEAST GREEN BUILDING MATERIALS DEMAND
BY SUBREGION, MARKET & SEGMENT
(million dollars)

<table>
<thead>
<tr>
<th>Item</th>
<th>2002</th>
<th>2007</th>
<th>2012</th>
<th>2017</th>
<th>2022</th>
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<td>Northeast Construction Expenditures ($ bil $)</td>
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<td>Permeable Pavement</td>
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<td>% Northeast</td>
<td>33950</td>
<td>50800</td>
<td>51800</td>
<td>86600</td>
<td>11350</td>
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</tbody>
</table>

“Northeast demand for green building products is forecast to advance 10 percent per year to $14.8 billion in 2017. Growth will be spurred by the region’s rebounding building construction expenditures. Further gains will be supported by strong consumer interest in erecting LEED-certified structures, such as those made with LEED-eligible materials. The Northeast experiences harsh winters that make the use of such products as insulation and ENERGY STAR windows an important consideration. However, ...”

--Section V, pg. 196
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- Packaging
- Building Materials
- Security & Electronics
- Industrial Components & Equipment
- Automotive & Transportation Equipment
- Household Goods
- Energy/Power Equipment

### Other Studies

#### Insulation

US demand for insulation is projected to advance 7.6 percent annually to $10.3 billion in 2017. The residential market will see double-digit annual gains based on a strong rebound in housing starts. Fiberglass insulation will remain the market leader and grow the fastest, followed in growth rates by reflective/radiant and cellulose types. This study analyzes the $7.1 billion US insulation industry, with forecasts for 2017 and 2022 by product, market and US region. The study also evaluates company market share and profiles industry players.

#3109 ........................  November 2013 ........................ $5300

#### Windows & Doors in China

Window and door sales in China will rise 8.1 percent yearly to 570 billion yuan in 2017. Plastic will be the fastest growing material based on insulation and cost advantages. Wood will remain the top door material, supported by more wood/steel and wood/plastic composite doors. This study analyzes the 387 billion yuan window and door industry in China. It presents historical demand data (2002, 2007, 2012) and forecasts for 2017 and 2022 by type, material, market and region. The study also evaluates company market share and profiles industry players.

#3088 ........................ January 2014 ........................ $5300

#### World Building Boards

Global demand for building boards will rise 6.2 percent per year through 2017 to 398 million cubic meters. China will see its share of global demand rise to half of the total, with solid gains also expected in North America and other regions such as South America and Eastern Europe. Structural boards will outpace nonstructural. This study analyzes the 295 million cubic meter world building board industry, with forecasts for 2017 and 2022 by type, material, market, world region, and for 18 countries. The study also evaluates company market share and profiles industry players.

#3074 ........................ September 2013 ........................ $6100

#### Hard Surface Flooring

US demand for hard surface flooring will rise 5.0 percent per year to 9.3 billion square feet in 2017. Vinyl will remain the largest product segment and will grow the fastest, followed by tile and wood. The residential market will outpace nonresidential uses, with remodeling and replacement applications remaining the largest segment. This study analyzes the 7.2 billion square foot US hard surface flooring industry, with forecasts for 2017 and 2022 by product and market. The study also evaluates company market share and profiles industry competitors.

#3037 ........................ June 2013 ............................... $5100

#### Building Boards

US building board demand will rise 7.0 percent yearly through 2017 to 52.5 billion square feet (3/8 inch basis). Windows and doors, subflooring, and roofing will be the fastest growing uses. OSB will outpace softwood plywood among structural boards. Insulation board and high and low density fiberboard will pace nonstructural boards. This study analyzes the 37.5 billion square foot US building board industry, with forecasts for 2017 and 2022 by product, market, application, and region. The study also evaluates company market share and profiles industry players.

#3017 ........................ April 2013 ............................... $4900