

# Engineered Wood

FALL 2007

JOURNAL



**BANKING ON NONRES**  
Wood Products Industry  
Takes Aim at the Nonresidential  
Construction Market

**CALIFORNIA DREAMIN'**  
APA Annual Meeting  
and Info Fair  
Preview

**BIOFUEL FUTURE**  
Why the Industry's  
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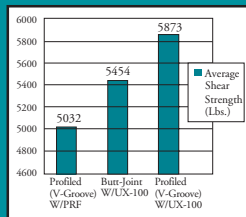


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THE OFFICIAL PUBLICATION OF APA – THE ENGINEERED WOOD ASSOCIATION

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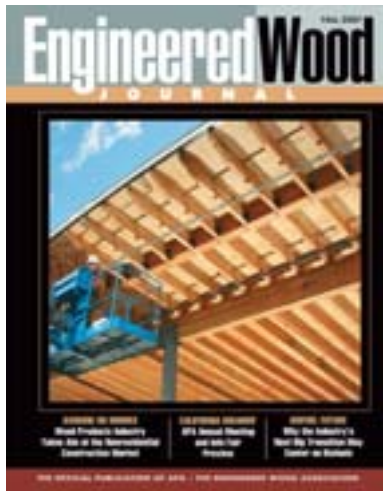
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**About the Cover:**

A wood roof goes on a new building at Pacific Lutheran University in Tacoma. The nonresidential construction market is the focus of a major new North American wood products industry initiative. See story on page 18.

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## Crying Owl

It was hailed as an “indicator species” and the entire eco-system was at risk if we allowed it to go extinct. Its forest range was a complex web of fragile interdependent relationships that, if disrupted, would spell doom to the productive forces of nature that sustain all of life, up to and including humans. There was not merely an environmental justification for preserving it at all costs, but a moral imperative to do so.

Thus in sum was the argument for assuring the survival of the northern spotted owl. The media lapped up the apocalyptic pronouncements of the preservationists, credible scientists lent scientific support, lawyers sued, judges passed judgements, and eventually the Clinton Administration joined in with its 1994 Northwest Forest Plan.

Protection of the northern spotted owl, to be sure, was not the only reason for the dramatic changes that have occurred in the Northwest timber and forest products industries over the past couple of decades. But it was certainly a significant one, with significant impacts on individuals, families, companies and communities.

There was supposed to be federal assistance, of course, for displaced workers and destroyed communities, including schools that lost timber sale receipts. But the promises were mostly cheap talk by people who were never likely to be held to account, and the assistance has been checkered and tenuous.

Now, all these years later, comes news that the northern spotted owl is on the verge of extinction not because of habitat destruction but because of a rival species, the barred owl. The barred owl, it seems, has been migrating west for a long time now and is fast displacing its more docile cousin.

We knew as early as the mid-1970s that the barred owl's numbers in the west were rising. But if anyone dared raise a caution that it ought to be considered as part of the spotted owl recovery and forest management plan, their voice was largely lost amidst the din that constituted much of the scientific and political analysis of the issue. Warnings about fuel buildup, wildfire threats and forest health were likewise dismissed, much to our regret now.

There may well have been legitimate reasons to reduce Northwest timber harvests. But if there were, they too made a weak argument in comparison with the spotted owl. It was always about the owl and how the survival of the entire ecosystem hung on its fate. And although its fate now appears sealed by nature's own doing, we do not seem any nearer to the end of the world than we were before.

News of the barred owl's displacement of the spotted owl provides clear testimony to what seems self-evident—nature is a dynamic system, not a static one that should be or even can be preserved at any and all costs.

More broadly, the spotted owl affair is a metaphor for the short-sightedness that sometimes underlies conventional wisdom, for the long reach of unintended consequences, and for the bad faith that frequently accompanies public policy debates.

Those lessons would serve us well in our approach to other environmental issues. Global warming comes to mind. ●



Jack Merry

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# Industry Watch

## Sixteen Engineered Wood Product Mills Earn Safety Awards

Sixteen structural engineered wood product mills representing six companies have taken top honors in the 2006 Mill Safety Competition sponsored by APA—The Engineered Wood Association.

Begun in 1982, the annual contest honors the management and employees of facilities with the lowest incidence rates based on guidelines established by the U.S. Occupational Safety and Health Administration (OSHA). Awards recognize both annual and three-year

average safety performances. Eleven of the 16 winning mills posted perfect zero incidence rates.

The competition is open to all structural engineered wood product mills in the U.S. and Canada, including plywood, oriented strand board, glulam timber, wood I-joists, laminated veneer lumber and specialty products. Nearly 150 facilities participated in the 2006 competition.

A total of 18 awards are given in three categories—Divisional, Three-Year Average Divisional, and Top Ten. Companies earning multiple awards

included LP (six awards), Weyerhaeuser Company (five), Georgia-Pacific Wood Products LLC (three), and PlyVeneer Products (two). The other winners were Norbord Inc. and Boise Cascade LLC.

Georgia-Pacific Wood Products LLC, Corrigan, Texas, which produces plywood, and PlyVeneer Products, Springfield, Oregon, a veneer mill, won two awards each. (The Corrigan mill was recently purchased by Georgia-Pacific from International Paper Company.)

The winning facilities will be recognized during APA's annual meeting in Indian Wells, California.

### 2006 DIVISIONAL WINNERS

	Hours Worked	Incidence Rate
<b>Division I – Veneer and Specialty Plants</b> Weyerhaeuser Company, Elma, Washington, veneer	149,217	0.00
<b>Division II – Under 400,000 Hours</b> LP, Silsbee, Texas, oriented strand board	328,420	0.00
<b>Division III – 400,000 to 600,000 Hours</b> Louisiana-Pacific Canada Ltd., Golden, British Columbia, laminated veneer lumber	595,070	0.34
<b>Division IV – Over 600,000 Hours</b> Georgia-Pacific Wood Products LLC, Madison, Georgia, plywood	997,341	0.20

### THREE-YEAR AVERAGE (2004-2006) AWARD WINNERS

	Hours Worked	Incidence Rate
<b>Division I – Veneer and Specialty Plants</b> PlyVeneer Products, Springfield, Oregon, veneer	23,077	0.00
<b>Division II – Under 400,000 Hours</b> Weyerhaeuser Company, Simsboro, Louisiana, laminated veneer lumber	214,544	0.31
<b>Division III – 400,000 to 600,000 Hours</b> LP, Wilmington, North Carolina, I-joist and laminated veneer lumber	490,243	0.54
<b>Division IV – Over 600,000 Hours</b> Georgia-Pacific Wood Products LLC (International Paper Company in 2006), Corrigan, Texas, plywood	962,290	0.28

### 2006 TOP TEN AWARD WINNERS

	Hours Worked	Incidence Rate
• LP, Athens, Georgia, oriented strand board	316,339	0.00
• Weyerhaeuser Company, Edson, Alberta, oriented strand board	307,965	0.00
• Weyerhaeuser Company, Arcadia Plant, Simsboro, Louisiana, oriented strand board	296,319	0.00
• Norbord Inc., Nacogdoches, Texas, oriented strand board	269,985	0.00
• LP, Red Bluff, California, I-joist	237,873	0.00
• LP, Hines, Oregon, I-joist and laminated veneer lumber	224,542	0.00
• Weyerhaeuser Company, Claresholm, Alberta, parallel strand lumber	150,352	0.00
• Boise Cascade LLC, St. Helens Veneer, St. Helens, Oregon, veneer	84,419	0.00
• PlyVeneer Products, Springfield, Oregon, veneer	28,635	0.00
• Georgia-Pacific Wood Products LLC (International Paper Company in 2006), Corrigan, Texas, plywood	966,789	0.21

# Industry Watch

## SUPPLYSIDES

News and information about members of the Engineered Wood Technology Association (EWTA), the related supplier organization of APA—The Engineered Wood Association.  
Send news items to Jack Merry, jack.merry@apawood.org.

- **SIEMPELKAMP**, global supplier of continuous presses for the wood-based products industry, has established the Siempelkamp Academy for information transfer to its Machinery and Plants Business Units customers, as well as its own employees.
- **TEACHERS' PRIVATE CAPITAL**, the private investment arm of the Ontario Teachers' Pension Plan, completed the purchase of specialty resins and paper overlays producer **DYNEA NORTH AMERICA** from Dynea Chemicals Oy of Finland in July. Dynea North America has been renamed **ARCLIN**.
- **ELECTRONIC WOOD SYSTEMS (EWS)**, announced the launch of its new web site at [www.ews-usa.com](http://www.ews-usa.com). The site serves as a resource for learning about all types of measuring equipment for the wood-based panel industry.
- **MEGTEC SYSTEMS** announced that its **CLEANSWITCH®** regenerative thermal oxidizer has been chosen by Louisiana-Pacific to replace an existing RTO at the company's Houlton, Maine oriented strand lumber mill.
- **HEXION SPECIALTY CHEMICALS** announced in July it had signed an agreement to acquire **HUNTSMAN CORPORATION**, a global manufacturer and marketer of differentiated chemicals. The combined enterprise will have annual sales of more than \$14 billion and 180 facilities worldwide.
- **BAUM INTERNATIONAL MEDIA INC.**, publishers of *Specialty Wood Journal*, *Mill Product News*, and *Logging Management*, has been purchased by **CLB MEDIA INC.** Former owner Heri Baum and Baum associate publisher Kevin Cook remain with the new owners as publisher and associate publisher, respectively.

## Wood Technology, Atlanta Conference & Expo on Upcoming Show Schedules

Some 300 exhibitors and thousands of industry professionals are expected to attend the biennial Wood Technology Clinic and Show scheduled for March 12-14, 2008 at the Oregon Convention Center in Portland, Oregon.

The event is organized by The Nielsen Company (formerly VNU) and sponsored by APA, the Southern Forest Products Association, Western Wood Products Association, and Hatton Brown Publishers, Inc. Registration and other information can be found at [www.woodtechexpo.com](http://www.woodtechexpo.com).

Also planned for early next year is the first-ever Panel and Engineered Lumber International Conference & Expo. The event, to be held Feb. 7-9 at the Omni at CNN Center in Atlanta, is co-chaired by Rich Donnell, editor of *Panel World* magazine, and industry consultant Fred Kurpiel. More information is located at [www.panelworldexpo.com](http://www.panelworldexpo.com).



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## Bioenergy Research and Development Funding Continues to Rise

The U.S. Department of Energy has granted the University of Wisconsin \$125 million to create a bioenergy research center, one of a number of recent announcements underscoring the rising interest and investment in bioenergy research and development efforts.

The Great Lakes Bioenergy Research Center (GLBRC), to be housed on the University's Madison, Wisconsin campus, "represents the largest research grant ever received by the College of Agricultural Life Sciences, allowing the UW to move forward on research that will relieve dependence on foreign fossil fuels, protect the environment, and give strength to our economy," the University's press office said.

Elsewhere recently:

- Xethanol Corporation announced the establishment of the Xethanol Advanced Biomass Characterization Laboratory at Virginia Tech, Blacksburg, Virginia.
- The University of Maine has received \$1.5 million from the Department of Energy to advance the University's forest biomass conversion development efforts.
- Colorado-based Range Fuels announced it plans to build the first large-scale cellulosic ethanol plant. The rural Georgia facility is expected eventually to have 100 million gallons per year of production capacity.
- The U.S. Forest Products Laboratory (FPL) has patented and licensed a strain of yeast for cellulosic conversion to Xethanol Corporation.

FPL Director Chris Risbrudt said the U.S. harvests only 300 million tons of the 700 tons of wood grown each year. The extra biomass contributes to forest fires and costs the Forest Service up to \$1000 per acre to thin.

## NAHB Plans Launch of Green Building Program

The National Association of Home Builders (NAHB) announced recently that it will launch a National Green Building Program early next year to provide a template for



voluntary, market-driven green building throughout the U.S.

The new program will be based on the National Green Building Standard, the result of a cooperative effort between NAHB and the International Code Council that incorporates NAHB's Model Green Building Home Guidelines. The guidelines have served as the foundation for more than 20 green building programs created by state and local home builder associations across the country.

The program will be housed at the NAHB Research Center, which is also serving as the secretariat for the residential green building standard development process. The standards process is certified by the American National Standards Institute, for which the Research Center is an accredited developer.

## PwC Chain of Custody Program Certified by Standards Council of Canada

PricewaterhouseCoopers' (PwC) chain of custody certification program for forest products has been accredited by the Standards Council of Canada, the company announced recently.

PwC provides clients with accredited chain of custody certification services to the Sustainable Forestry Initiative® (SFI) and Programme for the Endorsement of Forest Certification (PEFC) standards, as well as to its own independent chain of custody standard (PwC-ICoC™: 2005).

PricewaterhouseCoopers provides industry-focused assurance, tax and advisory services to clients around the world.

## AF&PA Appoints New President/CEO

Donna A. Harman, senior vice president of policy and government affairs at the American Forest & Paper Association (AF&PA), was appointed president and CEO of the organization in June.

Harman joined AF&PA in 2001 as vice president of congressional affairs and has 25 years of management, policy and political experience, including 17 in the forest products industry. Her previous work included positions with two Fortune 500 companies and the U.S. House of Representatives.

Harman holds a bachelors degree in public affairs from American University and a law degree from American University's Washington College of Law. She is a member of the District of Columbia Bar Association.

## Alberta Organization Launches Beetle-Killed Forest Products Marketing Campaign

Alberta Wood Works, the provincial arm of a national consortium of forest products companies and nonprofit groups, has launched a "Build With Wood" campaign in an effort to create demand for the growing supply of pine-beetle killed wood products.

The pine beetle has killed 11 million hectares of trees to date, mostly in British Columbia. Some 4.8 million hectares (11.9 million acres) are at risk in Alberta.

The provincial government is accelerating the annual allowable harvests since beetle-killed wood needs to be salvaged quickly before deteriorating. With the weak U.S. housing market, a key target is Alberta's own nonresidential construction market. The Edmonton area alone has some \$20 billion in industrial capital construction planned over the next five years, much of it related to the province's fossil fuel industry, according to a report in *The Edmonton Journal*. ●

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## Uniform Enforcement of CARB Regulations Remains an APA Concern

APA remains concerned over the ability of California state regulators to enforce stringent new formaldehyde emissions rules equally and uniformly among domestic and foreign manufacturers of certain composite wood products.

The new emissions limits, which are scheduled to be phased in starting in 2009 and fully implemented in 2012, were adopted earlier this year by the California Air Resources Board (CARB), a department of the state's Environmental Protection Agency.

"Enforcement remains an issue," APA President Dennis Hardman said, "because substantial volumes of the wood products in question in California are imported. And we know there is product coming into the country that is sub-standard in other respects."

Products targeted by the measure include particleboard, medium density fiberboard and hardwood plywood, products typically made with urea formaldehyde adhesives. It will also affect manufacturers of furniture, cabinets and other consumer products that use those composite wood panels.

The regulations, called the "Airborne Toxic Control Measure to Reduce Formaldehyde from Composite Wood Products," exempt structural engineered wood products such as structural plywood, oriented strand board, glulam timber, wood I-joists and laminated veneer lumber since formaldehyde emissions from those products are negligible.

The measure requires that all domestic and foreign manufacturers certify their products by a "third party" laboratory approved by CARB and then label the items as meeting California's emissions requirements. Panel manufacturers, importers, distributors, fabricators and installers can all be held responsible for assuring that their products comply.

APA, Hardman said, is concerned about certification loopholes that could permit non-complying imported products, especially material from China, to enter the California market. Chinese hardwood plywood competes with domestic softwood plywood in some markets.

## APA Gains ANSI Accreditation as a Standards Developer

APA recently gained accreditation from the American National Standards Institute (ANSI) as a developer of consensus standards. The designation marks an important milestone in APA's ongoing efforts to advance engineered wood industry interests in the building codes and standards arena.

A new section on the APA web site covering Association standards development activities, meanwhile, also has been posted. Located at [www.apawood.org/standards](http://www.apawood.org/standards), the section includes operating procedures for development of consensus standards and provides updates on standards that APA is currently working on as an ANSI-accredited standards developer. Those at present include engineered wood siding, concrete forms, fiber-reinforced glued laminated timber and structural insulated panels (SIPs) in wall applications.

## Roseburg's Allyn Ford Appointed to APA Board

Allyn Ford, president and CEO of Roseburg Forest Products Company, Roseburg, Oregon, was appointed recently to the APA Board of Trustees. He succeeds Lindsay Crawford, who retired recently from the company.



*Allyn Ford*

is a 1964 graduate of Yale University, where he earned a bachelor of science degree in industrial administration. He also holds an MBA from Stanford University.

Ford's career at the family-owned firm began in 1968. He was executive vice president prior to becoming president and CEO in 1997. He

## APA, SILPRO Enter into Exclusive Rim Board Licensing Agreement

APA earlier this year entered into an exclusive agreement with SILPRO LLC, Boise, Idaho for the licensing of SILPRO's I CHOICE™ prefabricated rim board products

to APA's members and, via its members, to remanufacturers.

I CHOICE™ encompasses a series of products, including a perimeter rim board with modular receptacles shaped to conform to the end cross section of a wood I-joist, a support block shaped to conform to the side profile of a wood I-joist, and a rim insulation panel designed to both insulate and support the perimeter of a floor between the ends of wood I-joists. The products will be available as separate components or together as pre-assembled units.

The products provide a number of benefits, including reduced onsite measurement and installation errors, improved safety from rollover during early stages of construction, speed of installation and labor cost economies, ease of installing precision fit insulation during installation of I-joists instead of from the crawl space, and overall improved floor performance with lower potential red tags and claim costs. More information on the products will be posted soon on the APA web site.

The Association also has signed an exclusive patent licensing agreement with the University of Maine that permits sub-licensing the University's various fiber-reinforced-polymer (FRP) reinforcement technologies to APA members. The technologies apply to both panel and engineered wood framing products, although initial activity is focused on generating sufficient data from additional reinforced glulam beam tests to support APA's obtaining a code report.

## Industrial Market Surveys Nearing Completion

The results of surveys designed to gain greater intelligence on four industrial market segments selected earlier this year by the APA Industrial Market Subcommittee are expected to be compiled soon.

The segments include institutional furniture, enclosed truck trailers, and large and small enclosed trucks. The surveys follow the completion of a major industrial market study that analyzed 33 industrial market segments. The results of that study are posted in the members-only section of the APA web site.

The surveys include questions related to the importance of various product characteristics, criteria for selecting new

products, and specifications and longevity of products currently used, among others.

## Raised Floor Cost Comparison Research Plan Under Way



Plans for an APA-sponsored research study comparing the cost of raised wood versus slab-on-grade floor construction are proceeding as part of APA's Gulf Coast rebuilding efforts.

The study, to be conducted by the National Association of Home Builders Research Center and funded by the USDA Forest Products Laboratory, is expected to provide key data needed to support industry efforts to increase raised wood floor construction along the Gulf Coast. It will encompass nine test houses, including slab floors on elevated ground.

Separate plans are also under way for new research that will provide raised wood floor moisture performance data, which are necessary to demonstrate that raised floors perform as well or better as slab floors from a moisture control standpoint. That research is being funded and conducted by the USDA Forest Products Lab in cooperation with APA, Louisiana State University and the Southern Forest Products Association.

## APA Comments on Deficiencies in New LEED® Rating Systems

APA recently submitted comments citing deficiencies in two new U.S. Green Building Council (USGBC) LEED (Leadership in Energy and Environmental Design) green rating systems, including one—LEED for Homes—that has significant implications for the wood products industry because of the sheer size of the residential market.

APA's comments were linked to long-standing complaints against LEED rating systems, including their general bias against wood, failure to recognize more than one forest certification program, and lack of consideration of life cycle analysis. LEED for Homes was launched as a pilot program in 2005 and is scheduled for final implementation this fall. The other rating system, LEED for Retail—New Construction contained many of the same provisions found in other LEED programs that are unfavorable to structural wood products.

APA also submitted comments and recommendations on a proposed Standard for the Design of High Performance Green Buildings Except Low Rise Residential Buildings (189P), cosponsored with USGBC by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and the Illuminating Engineering Society of North America (IESNA). While the USGBC rating systems are voluntary, the ASHRAE/USGBC/IESNA document is a baseline standard that requires certain minimum actions to meet the standard. ASHRAE is an ANSI-accredited organization and is developing the standard through the ANSI process.

APA worked with the American Forest & Paper Association and other industry representatives to identify provisions that could put wood products at a competitive disadvantage relative to other building materials.

## APA Wall Sheathing Proposals Approved at Code Hearings

Three significant APA proposals designed to broaden the use of structural wood panel wall sheathing were approved during the International Code Council's Final Action Hearings on 2006 code revisions in Rochester, New York recently.

The three victories included acceptance of 1) APA's Narrow Wall Bracing Method (NWB) for use anywhere in the house and in any seismic design category covered in the International Residential Code (IRC), 2) structural insulated panel (SIP) walls, and 3) revisions to the wall bracing provisions

of the IRC that will help builders and code officials interpret bracing provisions to the benefit of wood construction.

In another action, an insulation proposal that would have adversely impacted the use of structural wood panel sheathing in commercial buildings was withdrawn before coming to a vote.

## APA-Authored Wall Bracing Guide Published by ICC

An illustrated *Guide to the 2006 IRC Wood Wall Bracing Provisions*, co-authored by APA Technical Services Division professional engineers Ed Keith and Zeno Martin and Engineered Wood Specialist Greg Bates of the Field Services Division, has been published by the International Code Council (ICC).

The 10-chapter, 164-page book is designed to "help building officials, designers and builders apply the bracing requirements of the 2006 International Residential Code (IRC)."

The idea for the manual arose when it became clear during code hearings that the bracing provisions of the IRC are among the most common sources of confusion and misapplication. Although written to explain the prescriptive bracing provisions of the International Residential Code, the manual also can be applied to those bracing provisions of the International Building Code (IBC) Section 2308 (Conventional Light Frame Construction) that are similar to the IRC.

John Henry and Hamid Naderi, both professional engineers with ICC, contributed to the manual. Copies are available from ICC for \$39.

## Imported Plywood Test Results Published

The results of APA evaluations of imported industrial hardwood plywood from various North American distribution sources have been compiled and published in an APA Product Advisory titled *Imported Hardwood Plywood vs. Domestic PS 1*. The evaluations benchmark the adhesive, formaldehyde emission, mechanical and connection properties of non-trademarked imported hardwood plywood relative to plywood

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The results show hardwood plywood panels imported from China and Brazil have inferior mechanical and connection properties compared with domestic plywood certified to *PS 1*. The adhesives used in the imported products also emit significantly higher levels of formaldehyde than permitted under California Air Resources Board (CARB) limits scheduled to be phased in beginning in 2009.

The evaluations were part of an ongoing APA effort to assure that the construction industry is aware of the importance of recognized and reliable product certification. The advisory can be downloaded free of charge from the publications section of the APA web site at [www.apawood.org](http://www.apawood.org).

## DIY Backyard Project Plans Site Launched



Plans for three popular APA do-it-yourself backyard building projects have been developed and are now available for downloading free of charge at [www.apahomeprojects.org](http://www.apahomeprojects.org).

The projects—a kitchen pavilion and two garden storage sheds—are designed to capitalize on the rising popularity of outdoor living spaces and structures. Each plan includes a materials list, building hints and complete assembly instructions with detailed drawings and photographs. The projects use a variety of APA member structural wood panels, including APA Rated Siding, Rated Sheathing, Rated Sturd-I-Floor and sanded panels.

The projects are being promoted through advertising and publicity in do-it-yourself and consumer project magazines. ●

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# BANKING ON NONRES



by Emily Westman

**W**ith some \$5 million of government and industry money now pledged to fund its first year, one of the most comprehensive and sustained industry-wide market development initiatives ever undertaken by the North American wood products industry is finally under way.

Developed and managed by the Wood Products Council (WPC), the initiative targets the U.S. nonresidential construction market, which offers greater realistic potential for substantial market demand growth than any other single domestic or foreign market supplied by the North American wood products industry.

The timing of the WPC effort is opportune. The market is already on a cyclical upswing. Lodging, office buildings and other commercial construction segments—all major wood construction categories—grew 8.2 percent in 2006 and are expected to grow a healthy 6.6 percent this year. Other types of nonresidential construction, including healthcare, education and manufacturing, grew 4.7 percent in 2006, a percentage that is expected to be matched in 2007.

## The Wood Products Industry Takes Aim at the Nonresidential Construction Market

Established more than 20 years ago as an ad-hoc vehicle to coordinate wood industry market development activities, WPC is an alliance of wood products industry associations. Its charter members include the American Wood Council of the American Forest & Paper Association, APA—The Engineered Wood Association, Canadian Wood Council, Southern Forest Products Association, and Western Wood Products Association. The Council incorporated late last year as a nonprofit organization to facilitate efforts to gain U.S. and Canadian government funding support.

That strategy has proven successful. Natural Resources Canada and the Province of British Columbia have committed approximately \$10 million over a three-year period. And more recently, WPC was awarded \$1.5 million for the start-up year by the U.S.-Canada Binational Council under the Softwood Lumber Agreement (SLA) between the two countries. In addition to the commercial market initiative, SLA money will be used to support WPC green building and Gulf Coast rebuilding programs.

In its *Plan to Grow the Non-Residential Market for Wood in the U.S.*,

the Council identifies key commercial markets and outlines opportunities, challenges, strategies and tactics. The initial target markets include California, the three-state region of the Carolinas and Georgia, and the north central region encompassing Minnesota, Wisconsin and Illinois. Once the program is established and showing results in those markets, the plan calls for shifting resources to other high-potential areas.

The initiative also comes at a good time in light of the current state of the housing market. In 2004 and 2005, at the height of the housing market boom, the North American structural wood panel industry operated at nearly full capacity, producing 42.7 and 43.1 billion square feet, respectively. With single and multifamily starts forecast to be down 20 percent this year from 2006, production is expected to drop to 39 billion square feet. The North American lumber, wood I-joist, glulam and laminated veneer lumber industries are experiencing similar housing-related declines this year.

An estimated 2.3 billion square feet of structural wood panels are consumed

*continued on page 20*

## CASE STUDY SUCCESS STORIES

### The Village at Germantown Germantown, Tennessee

FreemanWhite, a North Carolina design firm, has designed senior living projects since the early 1980s. With their architects more familiar with reinforced concrete and steel than with wood, it was only natural for them to overlook wood design options for the Village at Germantown.

But when the budget for the 430,000-square-foot project was cut from \$60 million to approximately \$40 million, the project team found the concrete and steel systems too expensive. So they turned to wood. And in doing so, they found answers to many other design challenges as well.



*The Village at Germantown*

“The city of Germantown has verticality restrictions,” said FreemanWhite’s project architect John Langdon, AIA. “Codes required that our mid-height mansards be less than 35 feet in height. Initially, we looked at steel with composite slabs, but the beams were too deep and lateral bracing was a challenge. So we went through a number of value engineering exercises, which led us to wood. We considered wood last because it was the structural system with which we were least familiar. Yet it ended up being the only way we could make the project work from both a building height and cost standpoint.”

The project features plywood walls and OSB floors over I-joists flush-mounted to laminated veneer lumber headers.

### Chesapeake Bay Foundation Headquarters Annapolis, Maryland

This 30,000-square-foot, two-story office building and conference center is home to the Chesapeake Bay Foundation, a non-profit organization dedicated to protecting Chesapeake

*Chesapeake Bay Foundation Headquarters*



Bay. Few would realize that this building, constructed with warm wood tones, was one of 12 pilot projects for the U.S. Green Building Council’s LEED® Platinum certification. Eventually, it became the first LEED Platinum certified project in the world.

“The client was unique in that they were interested in making this the most environmentally friendly building it could be,” said Greg Mella, AIA, LEED AP, principal of

SmithGroup. “We wanted a wood-framed building because wood features a lower embodied energy level than steel, consuming about one-tenth as much energy to make as steel. We also liked the aesthetics of wood.”

Subfloors are constructed with plywood. The entire building features parallel strand lumber—virtually all exposed. The second floor is framed with I-joists, while the skin of the building uses structural insulated panels (SIPs) with OSB skins. The interior OSB finish is exposed.

### Gunter Primary School Gunter, Texas

Completed in March 2007, the 59,700-square-foot Gunter Primary School includes classrooms, a computer lab, cafeteria and kitchen, gymnasium and administration offices.



*Gunter Primary School*

For the architect, choosing the materials for the building was easy. “School construction schedules always seem to be fast track,” said Fred Sahs, principal with SAI Architects and the architect and construction manager for Gunter Primary. “With wood, the deliveries are fast and frame assembly moves quickly.”

After shop drawing approvals, the engineered wood products were on the ground in about four weeks. In other projects using steel, the steel delivery required 15 weeks, according to Sahs. “I also like the increased design flexibility when using wood,” Sahs said.

But it was Gunter Independent School District’s past experience with wood that ultimately swayed its decision. “Most of the schools in the area are steel-framed,” said Donald Hampton, project superintendent. “But in this town, about seven years ago, a new 35,000-square-foot middle school was built using wood. Many of the decisions made for this school were based on that project.”

APA Rated Sheathing was used for the walls and roof. Wood I-joists were used for the rafters and glulam for structural support and overall aesthetics.

*continued from page 18*

annually by the commercial construction market. However, that represents only about 36 percent share of the code-defined market, leaving 4.1 billion square feet of additional potential demand. Substantial potential gains also exist for lumber and engineered wood products.

The attractiveness of the commercial construction market is underscored by the industry's existing foothold, particularly in the western U.S., the cost competitiveness of wood versus steel and concrete, and a proven track record of success when market development investments have been sustained.

An industry-government program in Finland, for example, doubled the per capita consumption of wood over a five-year period ending in 2002. As a result, Finland now has the highest per capita wood consumption in the world.

The Canadian Wood Council's (CWC) WoodWORKS! program also has increased designers' awareness and specification of wood as a viable building material in the commercial market. Two independent studies showed that for every dollar invested early in the program, approximately \$10 in wood sales were generated. That amount is expected to increase to \$15 or more as the program grows.

APA's Strategic Marketing Plan includes a similar program targeting high potential commercial construction market segments, including schools, office buildings and senior living centers. (See the nearby case studies.) As part of that effort, APA partners with *Building Design and Construction* magazine on its "Top 40 Under 40," an annual awards program that salutes 40 individuals under the age of 40 for their outstanding contributions to engineered wood architecture, engineering, construction and commercial development. Projects of three of the 2007 winners are now being featured in case studies in support of the structural, aesthetic and environmental advantages of wood in low-rise commercial building construction.

Successes in the nonresidential construction market to date have been encouraging, but until now there has never been an industry-wide plan for a sustained campaign designed to generate substantial new demand for wood products. "What makes this program different and exciting,"

said APA President Dennis Hardman, "is that all structural wood product interests have joined forces in a strategic long-term North America-wide effort to promote the benefits of wood systems, not just products."

The WPC plan delineates several strategic imperatives. Among them: train and educate specifiers on wood-related code provisions; address the lack of knowledge of low-rise wood construction methods and

systems within the commercial design and construction community; overcome concerns about fire safety, durability and cost; communicate the environmental attributes of wood products; and most importantly, provide comprehensive customer service from design through construction, including on-time delivery of products.

WPC is governed by a board of directors comprised of 15 senior executives from the organization's five charter associations and their members. APA Trustee Jim Enright of Standard Structures, Inc. and Rick Franko of West Fraser Timber Co. Ltd. are co-chairmen. APA's Hardman and Etienne Lalonde, vice president of market development at the Canadian Wood Council, are WPC's president and vice president/secretary, respectively. Day-to-day operations are managed by consultant Kelly McCloskey, former president of the Wood Promotion Network and now president and CEO of Kelly McCloskey & Associates. He in turn has retained a national accounts manager and administration, communications and other consultants.

The WPC initiative is being promoted under the name WoodWorks, thereby leveraging and extending the long-standing Canadian Wood Council program of the same name. Engineer focus groups have now been held, design aids and tools are in development, and additional contract consultants are being retained in the targeted markets. WPC also will soon launch a new web site featuring a growing library of case studies, schedule of upcoming events and activities, and links to helpful resources.

With long-term industry commitment, the funds to move forward, and now a comprehensive strategic plan in place, the nonresidential construction market outlook definitely looks promising. Research suggests that with a \$6.5 million per year investment over 10 years there is reasonable expectation that annual demand for lumber and engineered wood can be increased by almost three billion board feet, and that annual demand for plywood and OSB can be increased by nearly two billion square feet. ●

*Emily Westman (emily.westman@apawood.org) is writer and web specialist in APA's Market Communications Division.*

## WOOD PRODUCTS COUNCIL MANDATE

To help protect and grow the market for wood products in North America by serving as a vehicle through which the wood industry associations can develop and coordinate programs in the areas of market access, research, education, promotion, and technical support.

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# CALIFORNIA DREAMIN'

## APA Annual Meeting and Info Fair Preview



**W**hen will the housing market recover? What's the future of biofuels? What's new in adhesive technology?

Those are among the questions that speakers and roundtable discussion leaders will attempt to answer at APA's 70th annual meeting and Info Fair supplier exhibition at the Hyatt Grand Champions Resort and Spa in Indian Wells, California Nov. 10-13.

General session guest speakers will include David Lereah, newly appointed executive vice president of Move Inc., and Jim Bowyer,



David Lereah

professor emeritus at the University of Minnesota's Department of Bioproducts and Biosystems Engineering.

A popular past APA annual meeting speaker, Lereah was formerly senior vice

president and chief economist at the National Association of Realtors (NAR). He will talk about the state of the housing market. Move Inc. operates Realtor.com, NAR's official web site.



Jim Bowyer

Bowyer, who headed the University of Minnesota's Department of Wood & Paper Science from 1984 to 1994 and founded the University's Forest Products Management Development Institute, will speak on the impact of biofuel technology and other factors on global fiber supplies. He will also lead discussion on that topic during one of three roundtable sessions.

The other two roundtables will focus on green building, led by Ward Hubbell, executive director of the Green Building Initiative (GBI), and adhesive trends and issues, with Earl Phillips, manager of phenolic resins technology at Hexion Specialty Chemicals, Inc.

The general session also will include addresses by APA Chairman Jonathan Martin and APA President Dennis Hardman, recognition of the latest APA Mill Safety Awards Competition winners, and announcement of this year's Bronson J. Lewis Award recipient.

Some 70 exhibitors will be on hand for the Info Fair supplier exhibition sponsored by the Engineered Wood Technology Association (EWTA). EWTA and several of its members also will sponsor the opening night reception.

Other business sessions and social events will include advisory and management committee meetings, golf and tennis tournaments, a spouses' luncheon and program, and membership reception and dinner. Consult the official meeting guide for event times and locations.

The Hyatt Grand Champions Resort and Spa is set amidst the stunning desert landscape of the Coachella Valley. It is located 15 miles southeast of the Palm Springs International Airport. ●



# 2007 Info Fair Exhibitors

Partial list as of August 15

*Info Fair, held annually in conjunction with the APA annual meeting, is sponsored by the Engineered Wood Technology Association (EWTA). EWTA is a related nonprofit corporation of APA—The Engineered Wood Association and serves as a liaison between engineered wood product manufacturers and their suppliers.*



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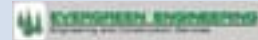
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Fax: 425-283-5081  
Email: gary.raemhild@lundbergassociates.com  
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Contact: Cal Bamford, Jr.  
Phone: 253-383-2584  
Fax: 253-572-9672  
Email: sales@globemachine.com  
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# Formaldehyde-Based Resins. Safe. Proven. Cost-Effective. (Did We Mention Safe?)

For more than 50 years, formaldehyde-based resins have been the industry standard for binding composite wood products. Recently, however, false statements about formaldehyde emissions from wood products have raised industry concerns. From listening to misleading marketing claims, you might conclude that the typical wood panel, cabinet, hardwood floor, or piece of furniture manufactured with resins based on today's formaldehyde

Untreated wood contains and emits small amounts of formaldehyde. The average oak tree, for instance, emits 0.009 parts per million (ppm) of formaldehyde. By itself, this is a very low quantity, but densely wooded areas can have higher amounts. Yet a walk in the woods is certainly not considered a health risk.

The fact is: formaldehyde is normally present at low levels in both outdoor and indoor air.

featuring modern building materials. Levels dissipate to nearly "background" concentrations (less than 0.030 ppm) within a short period of time.

Plywood, particleboard and other composite wood materials are hardly the only contributors to formaldehyde concentrations in indoor air. In fact, it has been estimated that 10–25 percent of formaldehyde in air results from tobacco smoke and

range from the low parts per billion to as high as 0.3 to 1.2 ppm of formaldehyde.

Finally, when cabinetry, furniture, trim or paneling is painted, stained, laminated or otherwise coated—as most materials are—emissions from the wood are further reduced to almost zero.

Many substances that we are exposed to every day are harmless at normal levels present in the environment. The fact is: emission levels from modern wood products are very low, well below



Studies suggest you ingest more formaldehyde daily from food than you inhale from wood products.

chemistry is a hazard. Nothing could be further from the truth. As the leading global resins supplier to the wood industry, we want to set the record straight.

## The Lowdown on Emission Levels

Formaldehyde occurs naturally. It's all around us. Humans, plants, and animals produce it as a normal part of life.



Current indoor air quality studies report that, on average, only very low levels of formaldehyde (less than 0.045 ppm) are present in the typical new home

other sources of combustion such as cooking and fireplaces. Humans also generate formaldehyde. Data from several studies report breath levels

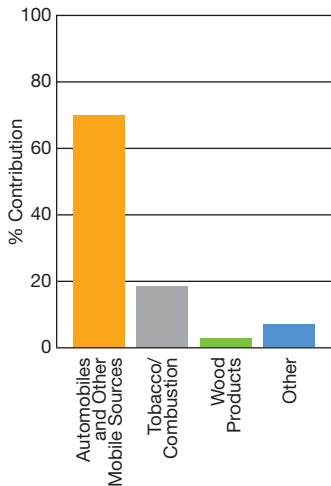
Only very low levels of formaldehyde are present in the typical home, well below standards set to protect us.

standards set to protect human health, and as a result, should not be a cause for worry.

## Bonds You've Relied on for Decades

The rewards provided by formaldehyde-based resins are substantial. They're efficient, safe to handle, offer proven quality and workability—and they're cost-effective. Put simply, they work on the plant floor, in the products made with them, and within established budgets.

## Sources of Formaldehyde Emissions



Without formaldehyde-based resins and glues, a large proportion of the environmentally-efficient wood-based panels we're all used to would not be available, or only at a potentially higher cost. Wood waste—the basic raw material for fiberboard and particleboard—

1980s. Hexion has long been a leader in this industry-wide product stewardship effort. We will continue to work on enhanced resin systems—without compromising the productivity or competitiveness of board manufacturers.

### Smart Value. Sound Science.

The cost-efficiencies and proven performance of formaldehyde-based resins and adhesives are well known throughout the wood products industry.

With exploding global competition putting manufacturers under extreme pricing pressure, ever more exacting emission standards should be put to a rigorous cost/benefit analysis utilizing the best science available.

The fact is: more is known about formaldehyde and how it acts in and outside the body than most chemicals in use today. The use of sound scientific facts has resulted

We continue to offer our broad range of high-performing UF resins and adhesives that meet or exceed all governmental standards. In addition, you can choose from our family of resins, based on both UF resins and alternative systems, featuring Hexion's EcoBind™ Resin Technology.

These products are designed to be as low emitting as technology currently allows, while still providing manufacturers with excellent productivity and value. They can be formulated to meet or exceed all global emission standards including E1, E0, Super E0, F\*\*\* and F\*\*\*\*. LEED-compliant systems are also available.

### EcoBind Resin Technology for Hardwood Plywood

- Ultra-low emitting urea



Take away formaldehyde-based resins and most modern homes couldn't be built.

### EcoBind Resin Technology for Adhesive Applications

- Ultra-low emitting UF resins
- Ultra-low emission phenol resorcinol formaldehyde (PRF) systems for engineered wood
- "No-added formaldehyde" adhesives including PVAs, EPIs and hot melt systems

Whichever Hexion solution you choose, we'll back it with unparalleled technical and process expertise as well as product stewardship assistance.



There's no such thing as "formaldehyde-free" wood or wood products.



Wood products that are painted, stained or coated—and most are—emit almost no formaldehyde.

On an average day, she'll produce 16,000 times more formaldehyde than the wood products in her home.

would have to be incinerated or end up in landfills.

Hexion and other resin manufacturers, in partnership with board producers, have improved resin technologies and reduced emissions by 80 to 90 percent since the early



in more accurate health assessments of formaldehyde. Risk at realistic exposure levels is predicted to be virtually nonexistent, according to conventional government benchmarks.

### Choose the Resin System that Makes Sense for You

Hexion is committed to meeting its customers' binder and adhesive needs with a full range of products for virtually every operation and application.

formaldehyde (UF) resins (large chamber emission levels of 0.06 ppm or below)

- Co-reactants to further reduce emissions
- PVA/Soy no-added urea formaldehyde system

### EcoBind Resin Technology for Particleboard/MDF

- Ultra-low emitting UF resins
- Co-reactants
- Phenol formaldehyde (PF) resins for LEED-compliant panels

And, we'll continue to support scientific research on formaldehyde chemistries and ways to further enhance environmental performance.

To learn more about the facts on formaldehyde-based resins and adhesives, visit [www.ecobind.com](http://www.ecobind.com)

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Email: sblackwelder@hga-llc.com

HGA is a project management, engineering, design and on-site services firm provide quality services to the forest products industry.

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Phone: 541-928-8270  
Fax: 541-928-8346  
Email: mo@isnorthwest.com

Innovative Systems Northwest is a custom design and manufacturer in the LVL, plywood and engineered wood products industry. We focus on innovative design for automated veneer handling and heavy-duty construction. Some of our products include veneer feeders, veneer dry and green and random stackers and custom design veneer handling equipment.

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Panel World's international readership receives six issues per year, with emphasis on mill project startup articles. Product coverage includes softwood and hardwood plywood and veneer, oriented strand board, medium density fiberboard, particleboard and other composite boards and engineered wood products.



### PERMAPOST

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Permapost provides custom pressure treating solutions for engineered wood products used throughout the USA and Asia.

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Specialty Wood connects customers with the "value-added" industry: veneer/plywood, panel board, engineered wood, remanufacturing and finger jointing. Published six times each year, over 10,000 copiers per issue are circulated to plant owners, managers and engineers throughout the U.S. and Canada.

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# WORKFORCE STRATEGIES

## Employee Recruitment, Retention and Succession Planning

by Jack Merry

The U.S. will face a shortage of 13 to 15 million skilled workers by 2020.

That stark reality, reported by Peggy Walton of the National Association of Manufacturers (NAM), set the stage for a lively and enlightening employee recruitment, retention and succession planning seminar held in Atlanta in June.



Peggy Walton

The half-day seminar was sponsored by the Engineered Wood Technology Association (EWTA) as part of the conference schedule at the Southern Forest Products Association's Forest Products Machinery & Equipment Exposition. APA Chairman Jonathan Martin served as seminar moderator. Walton, managing director of NAM's Workforce Initiatives, Center for Workforce

Success and the seminar's keynote speaker, noted that the U.S. working age population will shrink 47 percent between 2000 and 2050, that 90 percent of manufacturers expect a moderate to severe shortage of qualified skilled production workers, and that 39 percent anticipate a moderate to severe shortage of even qualified *unskilled* production workers.

Clearly, manufacturers face a growing employee recruitment and retention problem. While the public at large wrongly believes a declining U.S. manufacturing sector has little need for new workers, manufacturers themselves are well aware of the severity of the problem. In fact, according to a recent survey,



Jonathan Martin

approximately 75 percent believe a high-performance workforce is the most important factor for their business success over the next three years, outranking product innovation, low-cost production and several other criteria.

That realization, Walton said, is giving rise to increased attention to and support for programs such as NAM's Dream It. Do It. manufacturing careers campaign, a grassroots economic development initiative to recruit young talent to manufacturing.

The high demand for wood science and technology professionals was underscored by Paul Winistorfer, professor and head of the Department of Wood Science and Forest Products at Virginia Tech in Blacksburg, Virginia.

"If you contact us regarding job candidates in May," he said, "it's too late. If you contact us in April, it's probably too late. And if you contact us in March, it may be too late."

Winistorfer said his department, which boasts a nearly 100 percent placement rate of its graduating students, advises employers to make recruitment contacts and build company awareness during students' freshman year.

He also encouraged employers to take advantage of an evolving new alternative to the traditional career fair. Called Wood Week at Virginia Tech, the program features a week-long series of activities to build brand awareness for the department, students, faculty and industry partners. Since its launch in 2004, Wood Week has proven to be vastly more successful at bringing prospective employees and employers together.

Winistorfer also touted the growing success and promise of the WoodLINKS USA program. Begun in Canada by a group of wood products industry and education representatives, WoodLINKS is an entry level certification program focused on curriculum pertaining



Paul Winistorfer



to the advanced wood manufacturing industry. Now in 122 schools in 22 U.S. states, it is designed to prepare young people for entry-level work in the wood manufacturing industry or wood-related college or university programs.

For Jerry Pettibone, former head football coach at Oregon State University and now director of college and university relations at Jeld-Wen Windows and Doors, Klamath Falls, Oregon, successful employee recruitment requires a formal recruitment program.



*Jerry Pettibone*

At Jeld-Wen, that program incorporates a number of elements, including building relationships with career center personnel, attending career fairs, establishing relationships with faculties of targeted curriculums, supporting student organizations, conducting information sessions and

on-campus interviews, holding in-class presentations, and offering summer internships.

Jeld-Wen, Pettibone said, has a high demand for new talent and each year recruits 60-70 management trainees and 40-50 regional sales representatives from 48 carefully targeted colleges and universities in the U.S. and Canada.

Human resources is really all about sales and marketing, and employee retention is really all about customer service, said Ray Peters, vice president of human resources at Roy O. Martin Lumber Company, Alexandria, Louisiana.



*Ray Peters*

Peters said employees hunger for answers to three main questions: who is my leader, where are we going and what is my role? Clear answers to those questions, particularly from supervisors, can mean the difference between retaining and losing good employees. Turnover, he emphasized, is not an HR problem, it is a supervisory problem. A clear outline of duties and responsibilities, realistic performance expectations, the availability of tools and resources to accomplish the job

and opportunities to make a meaningful contribution to the organization are keys to employee retention.

Peters likened the rewards of work (compensation, benefits, work content, career and personal growth potential, and a sense of affiliation) to interlocking gears, all of which need to be in sync in order to effectively retain good employees. If the gears are out of sync, retention will suffer.

Employee retention, Peters said, translates to continuity in execution of the business vision and mission, and that translates to a huge competitive advantage.

Given the accelerating rate of Baby Boom Generation retirements, succession planning is another essential component of the human resources equation.

Phillip Blount, president of Phillip Blount & Associates, Atlanta, Georgia, noted that succession planning serves three primary

purposes: it ensures the availability of essential talent and organizational capacity, it supports strategic and operational goals, and it positions the enterprise for anticipated and unanticipated organization challenges and changes.

The first step, Blount said, is to establish management continuity teams that take ownership of the process, identify candidates, assess their capabilities, develop action plans, develop career plan alternatives, and evaluate organizational alternatives. He also

offered several recommendations for effective succession planning:

- Focus on a manageable number of critical positions.
- Gain heavy “line” involvement and buy-in with the succession planning program. It can’t be viewed as only a human resources initiative.
- Ensure an effective and complete talent inventory.
- Follow through from the corporate standpoint with complete plans for succession by position.
- Follow through from an individual succession candidate standpoint with communication and a personalized development plan.
- Revise the reward system to strengthen retention of key talent.

The seminar’s final speaker, Tim Hartnett, human resource and recruitment manager at LP, Nashville, Tennessee, cited five main steps for effective succession planning: assessment of key positions, identification of key talent, assessment of key talent, creation of development plans, and implementation of development followed by monitoring and review.

High potential succession candidates can be found at all levels of the organization, Hartnett said, and an employee should be considered high potential when he/she:

- Is considered by the management team to have the capability to take on a position or role of significantly greater breadth or depth.
- Has a proven track record of successfully meeting and exceeding expectations.
- Has demonstrated key leadership competencies.
- Is a fast learner.
- Demonstrates initiative by volunteering for new assignments.
- Assumes personal accountability and demonstrates managerial courage.
- Is willing to relocate, if necessary, based on development opportunities.

The presentations of all six seminar speakers are available on CD from EWTA (253-620-7237, terry.kerwood@apawood.org).

**Jack Merry (jack.merry@apawood.org) is industry communications director at APA.**



*Phillip Blount*



*Tim Hartnett*

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# SALES SAVVY

## Tips on Forest Products Industry Sales Methods and Techniques

### Editor's Note:

The following article is based on a wood products industry sales training course organized annually by the author at Virginia Tech, Blacksburg, Virginia. Information about the course can be found at [www.cpe.vt.edu/astfpi/about.html](http://www.cpe.vt.edu/astfpi/about.html).

by Bob Smith

As an “old” salesperson of treated lumber, I often wondered why certain customers bought from me and others did not. The product I sold was the same, the delivery was the same, the folks in the office were the same, and I was pretty much the same to everyone. And yet, I was extremely successful with certain individuals and not with others. What bothered me more was that my predecessor in the territory had done well with certain individuals that I struggled with. So I made an extra effort with these customers and saw little in return.

For most salespeople in our industry, sales training normally occurs on the job. Companies normally train the person on the product and the company, and then say to them, “Go forth and do

good!” It wasn’t until I left sales that I realized it wasn’t just about the product, being the cheapest, being fastest on delivery or playing golf once in awhile. It was all of these, but more importantly, it was about the individual relationship that is established between the salesperson and the customer.

All product attributes and many of the service attributes of the product are now easily copied. There are very few secrets that remain a competitive advantage in our electronic age. So differentiation relies more than ever on the one-to-one relationship that is established between the salesperson and each individual customer.

Selling wood products is not unlike selling most industrial materials, with the possible exception that personal contact and professional relationships have traditionally played a more important role in wood product sales. This may be attributed to the number of small and medium size organizations in the wood products industry. Interestingly, this style of selling has expanded into the realm of serving customers in all industries.

The sales process can be viewed as a triangle with personal and competitive skills at the base and customer skills at the peak.

### Personal Skills

Behind every sale is a person. Someone must identify the customer, determine their needs, relay these needs to the company and coordinate the activities that complete a successful sale. Every salesperson is different. Training, education, background and sales experience vary. However, successful salespeople do have common traits. Among them are:

**Pride:** The highly successful salesperson takes pride in three areas: 1) Pride in themselves: They have a strong desire to be the very best they can be. 2) Pride in the profession of selling. Few jobs have as negative a reputation as that of selling. The reality is that quality salespeople deliver valuable services every day. They help customers solve problems and help their customers’ and their own companies grow. 3) Pride in the service they offer. Salespeople are matchmakers. Their challenge is to deliver the best available product or service to meet a customer’s needs.



**Self-confidence:** No one is born with a great amount of self-confidence. It is a learned skill. However, there are a few steps that can hasten this process. Write down all your strong points. Make a list of your greatest accomplishments. Itemize areas where you would like to improve yourself. Review these items on a regular basis.

**Appearance:** You have only one chance to make a first impression. The first impression customers get about you is your appearance. Long before you ever say a word, your appearance speaks volumes. Dress for success. Your appearance shows respect for the customer. A good first impression demonstrates that the customer is important to your company.

**Personal warmth:** Give of yourself to everyone you meet. Be kind and considerate to others. The surest way to receive a warm greeting is to give one. The two strongest words in sales are “thank you.” Always show your respect and appreciation for the customer’s business.

**Self-assurance:** When you know your job, you become self-assured. Study your product and your selling skills. You must practice what you study. Choose one idea or technique and determine to improve upon it. Once you have accomplished that, start with another. You should be the most knowledgeable person about the product line that the customer can depend upon.

**Desire:** Desire to do a superior job, every day. Desire to sell more. Desire for personal promotion. Desire to earn more. The desire to be the best in the company will have a direct effect on the salesperson’s results. The desire to continually learn how to sell better and meet customers’ needs more effectively will improve sales performance.

**Enthusiasm:** If you are not enthusiastic about what you sell, change jobs. Approach everything with zeal. Enthusiasm is contagious. Most individuals will receive an enthusiastic salesperson with a positive response.

**Genuine care:** Care about helping other people. Selling is serving. You cannot serve well if you don’t care about those you are serving. Before you can care about others, you have to care about yourself. Stay mentally and physically in shape.

**Goal setting:** All great salespeople write down and follow through with their goals. They set personal and professional goals. Professional goals set benchmarks. These should not only be in volumes, sales dollars, or gross profit, but also include items such as number of new customers, new product ideas, number of retained or expanded customers, number of customers that moved from being “B” accounts to “A” accounts.

## Competitive Skills

No one person in the firm should be closer to the competition than the salesperson. They should report regularly to managers on what is happening in the market. Are there new products or services being offered? What is happening to the price? What type of quality is the competition supplying? Why is the customer buying from them and not us? These are all questions that can be answered by the salesperson through contacts with customers. Competition forces us to do our job better. To understand the competition, answer these questions:

- What do I offer that the competition doesn’t?
- What do I have that the competition has, but ours is better?
- What do I have that is the same as the competition’s, but that is still important to the customer?
- What does the competition offer that I do not?
- What does the competition have that is better than ours?

The salesperson also needs to understand the impact on business of market and economic forces, such as the “green” movement, resource supplies, international competition, trade agreements, interest rates, etc.

## The Importance of a Positive Attitude

**RESEARCH HAS SHOWN** that people like to buy from positive people. Positive salespeople create a better atmosphere for the buying situation, create more satisfied customers, handle problems better, are more creative, look at challenges as opportunities, and know they will be successful.

Some experts estimate that sales success is 80 percent attitude and 20 percent aptitude. Success is an attitude. Failure is an attitude. And you control your attitude. It has been demonstrated that individuals with a positive attitude are more satisfied with their jobs, more creative, less anxious, and more motivated.

Martin Seligman, a professor of psychology at the University of Pennsylvania, examined positive mental attitude and job performance at a major life insurance company. He found that those agents who anticipated a positive response outsold others in the company by 37 percent. He also found that those who failed the industry entrance exam, but had a positive outlook outsold the average insurance salesperson by 10 percent. In other words, having a positive outlook sells more products.

In sales we have to accept that failure (losing a sale) is part of the job. How we deal with failure will affect how successful we are in the future. Salespeople must view failure positively—as part of the education needed to improve their sales skills. Many salespeople avoid new opportunities that include risk because they are afraid to fail. However, the more calculated risks the salesperson takes, the more likely they are to increase their success.

## Customer Skills

No facet of selling has probably changed more in the recent past than the necessity to be well organized. The electronic revolution has allowed customers to receive competitive information in seconds. But this revolution is not a substitute for a well-planned sales presentation. The following tips are suggested for successful customer meetings and presentations:

**Know the customer:** What do they use your product for? How much do they use? Who does the purchasing? These are all areas that can be discovered before you ever step into your prospective customer's office. Once you have met a prospect, keep a file on them. Record important dates, what they purchase, the secretary's name, etc. This will allow you to carry on a conversation with them more easily the next time.

**Set appointments:** The day of the "cold call" is over. The average industrial personal sales call costs over \$200. No longer can the company afford outside sales personnel prospecting for new clients. This can be easily done on the telephone by inside salespeople or when you are in your office. This does not mean that if you drive past a potential customer, you can't stop to see how they may use your product. However, it should not be used in place of scheduled appointments. Appointments demonstrate that you value the client's time.

**Use the telephone:** There is no greater time-saver in the world than efficient use of the telephone. The telephone can keep you in contact with customers when you cannot see them in person. You can prospect for new customers. Efficient and professional phone manners can make a lasting impression on a customer.

**Have an objective:** Why are you seeing this particular customer? Do you plan on selling him/her something today, or is it just a fact-finding trip? The salesperson should always have a reason for seeing a customer. Successful sales is 90 percent preparation and 10 percent presentation. Know what you want to accomplish before you enter the office. A planning worksheet for customers is helpful.

**See the decision-maker:** Spend your time with the people who can best make the decision to use your products. There is no sense in spending a lot of time with persons who cannot make a purchase decision.

**Have a sales strategy:** Create a single compelling idea that differentiates your company or products from the competition. How

can you save the customer money or time? Can your product make the customer more effective in their work? Is your quality better? Can you meet delivery schedules more efficiently than the competition? Have an idea of how to assist your customers before ever seeing them. Plan your work and work your plan.

**Be confident, friendly, and flexible:** Know your product better than anyone else. Be able to answer any questions that may arise. Be kind and friendly to everyone you meet at the customer's office. Understand that customers change their minds on product needs, delivery, specifications, etc. Be flexible to meet changing needs.

**Listen, listen, and listen:** Remember that you are there to solve the customer's problems. Ask probing questions and see what your company and product can do for the customer. Listen to everything customers say about the use of your product. Identify their needs. Studies of the very best salespeople show that listening skills, not persuasive talking skills, distinguish top from average performers. Ineffective listening is one of the most frequent causes of misunderstandings, mistakes, jobs that need to be redone, and lost sales and customers.

**Show your appreciation:** The customer is doing you a favor by purchasing your product. Show your appreciation. Everyone likes to be thanked and appreciated.

Personal selling is a challenging process. Success in business requires that we sell the product *and* create long-lasting relationships with our customers. Rarely do major product feature differences exist between similarly priced products. One area where a company can separate itself from the competitors is in the quality of the sales relationship. Loyal customers are developed primarily through the added benefits that come from the salesperson. ●

*Bob Smith is a professor and extension specialist, and director of the Center for Forest Products Marketing and Management at Virginia Tech, Blacksburg, Virginia. In addition to the sales training course on campus, he conducts sales and marketing workshops for companies around the country. He can be reached at [rsmith4@vt.edu](mailto:rsmith4@vt.edu), 540-231-9759.*

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WHY THE INDUSTRY'S  
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# BIOFUEL FUTURE

*by Dick Carmical and C. Scott Miller*

In September of 1911, the fate of two world wars was preordained by England's young First Lord of the Admiralty. He made a choice at considerable national economic and political risk that sealed England's future sovereignty to a dependence on its North Atlantic military and trade relationship with America. Still, Winston Churchill decided the advantages far outweighed the liabilities. From that point on all ships in the Royal Navy would run on oil (which England imported) instead of coal (which the British isles could stockpile in rich abundance).

This counter-intuitive decision meant that England's war wagons could be built lighter, refuel at sea, and stoke their fires without drawing precious manpower during combat. It was this advantage that eventually destroyed the coal-burning German navy of WWI. It was lack of access to oil supplies that defeated the military of both Germany and Japan during WWII. The Axis powers had trained troops and

manufactured deadly weapons systems but they couldn't hold the front without fuel.

Fast forward 60 years to the third millennium. The United States is fighting terrorism in a region that is a tinderbox of passion and instability—and keepers of the richest oil reserves in the world. Price spikes have met with diplomatic hand-wringing because of the nation's over-dependence on the region for oil. Not even our allies are willing to jeopardize their access.

In his 2006 State-of-the-Union address President Bush confesses that the U.S. suffers from an "addiction to oil" which, because 60 percent is imported from abroad, threatens to compromise our national security, diplomatic integrity, economic health, and quality of life. Many believe it endangers global climate balance as well.

A great challenge looms before us: How do we significantly reduce two fossil fuel energy dependencies—transportation fuels and elec-

tricity—to restore national self-reliance and self-determination for future generations?

A significant part of the solution can come from a revitalization of the forest products industry. The predominant source of renewable energy in North America today is based on woody biomass—far more than hydroelectric, wind, and solar. For centuries, the logging slash, green waste, bark, toppings, sawdust, and black liquor of this industry have been combusted to provide heat, power, and electricity for manufacturing furniture, paper, lumber, and wood products of all kinds.

What emerging woody biomass technologies will significantly advance the generation of electricity and production of transportation fuels to cure our nation's "addiction"?

## Electricity

Widespread fear about carbon dioxide emissions are reverberating through state and

federal capitals throughout the world. A steady stream of governmental regulations and laws are being proposed and passed at lightning pace. In trend-setting California, for instance, its Renewable Portfolio Standard (RPS) is putting the clamps on the use of fossil fuels to generate electricity. In response, the power utilities are seeking and signing agreements with an array of developers who guarantee to supply megawatts of “green electricity” from renewable resources—solar, wind, and biomass-to-energy. New combustion facilities are equipped with scrubbers and filters to reduce the emission of greenhouse gases and particulate matter.

Public Service of New Hampshire (PSNH), their largest electrical utility, has replaced a declining coal burning facility with the Northern Wood Power Project—a 50MW generation plant fueled with 450,000 tons per year of woody biomass. Progress Energy of Florida (PEF), responding to new executive mandates from Governor Crist, has bought the 45MW Ridge Generation Station—66 percent of whose feedstock comes from wood waste. PEF is also contracted to purchase 75MW from Biomass Gas & Electric, based in Atlanta, Ga., who plans to build a power plant in north Florida that will use waste wood products, such as yard trimmings, tree bark and wood knots from paper mills, to create electricity. The plant is expected to avoid the need to burn nearly five million tons of coal over the 20-year life of the contract.

The “world’s largest pellet plant” is being constructed in Jackson County, Florida to feed Northern Europe’s growing demand to use them for central heating and power furnaces (CHP) and co-firing with coal to reduce fossil fuel dependence.

A cleaner and more energy efficient way to produce electricity employs conversion technologies (CTs) such as gasification and pyrolysis. The resultant heat can be used to create steam to drive generators. Several companies, such as Dynamotive Energy Systems, are using CTs to convert woody biomass into commercial grade BioOil for fueling industrial equipment such as power generators.

## Transportation Fuels

But the biggest innovation for woody biomass is the use of CTs to produce transportation fuels, such as ethanol, biobutanol and DME (dimethyl ethylene, a pure chemical form of biodiesel). Cellulosic ethanol can be produced from wood using two classifications

of conversion technologies—biochemical and thermochemical.

Biochemical processes use microorganisms, acids, and enzymes to break down wood into its basic sugars (with combustible lignin as a byproduct). These sugars can be fermented into ethanol the same way that corn is. Mascoma, Verennium and BlueFire are developers of systems at various stages of pilot and demonstration facilities who are planning commercial-scale facility deployments over the next few years.

Thermochemical processes use high heat in a closed environment to generate syngas (a combustible combination of carbon monoxide and hydrogen) which can be used in a variety of ways. The processes are usually categorized according to the level of heat generated—low or high heat pyrolysis, low and high heat gasification, and plasma arc (which generates extremely high heat around 10,000°F).

Syngas can be combusted as a renewable replacement for natural gas. Using catalysts, Range Fuels has developed a process for recomposing the syngas into higher alcohols, including ethanol and methanol. Bioengineering Resources, Inc. (BRI) has patented a hearty bacteria strain that can ingest cooled syngas to expel ethanol and water.

## Risks and Opportunities for the Forest Products Industry

With the worldwide demand for energy ever increasing and the rapid development of India and China, we are faced with immense risks and opportunities, particularly for the forest products industry.

The biggest risk comes from doing nothing. Energy prices will rise and profits will continue to fund unstable and unfriendly governments.

Some within the forest products industry see a new risk added to the overhead they currently pay. If woody biomass becomes more valuable as a feedstock, its cost will rise.

However, there are other risks that will come from new government emissions regulations. Regulations will more than likely seek to reduce the emissions from older boilers that are currently combusting woody biomass without containment or scrubbing. This may require installation of more costly equipment or replacement with gasifiers.

Fortunately, the Agenda 2020 Technology Alliance has studied the risks and opportunities faced by the forest products industry. Late last year they published their Forest Products

Industry Technology Roadmap, which is free to download at [www.agenda2020.org](http://www.agenda2020.org). It lays out an overview of many of the issues and technologies listed here and analyzes new products and revenue streams available from a forest biorefinery model mill.

There are also energy certificates becoming available that will provide valuable long-term financial offsets to the short-term capital expenditures faced by companies that replace carbon emitting boilers with cleaner technologies.

The Department of Energy is already matching development funding for the deployment of six commercial-scale cellulosic ethanol facilities throughout the U.S. Two utilize woody biomass as a feedstock while two others could also use wood. Once these conversion technologies are proven profitable for the first commercial-scale facilities, a massive infusion of investment dollars, similar to that seen for first generation ethanol facilities in the corn belt, will seek to exploit the expected boom of demand for more biorefineries using woody biomass as their primary feedstock.

It is time for state governments to make lasting decisions of international importance: define new alternative energy standards, incentivize decentralized production, revamp the infrastructure and electrical grid, and commit to it through generations of administration changeover. The answer is not to pick one alternative, but to increase the range of choices that enable consumers to make purchase decisions based on value (whatever that may be for each decade) instead of enabling others to coerce us into making bad purchase decisions caused by limited access to energy resources.

To paraphrase Churchill: “If we overcame the difficulties and surmounted the risks, we should be able to raise the whole power and efficiency of the (nation’s energy paradigm) to a higher level.” ●

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# PROCESS IMPROVEMENT

## Light Transmission Method of Green Veneer Moisture Sorting

by Brian Martin and Mike Crondabl

Accurate green veneer sorting has a significant impact on both veneer dryer productivity and final veneer quality. Although some species such as Southern Yellow Pine are not moisture content (M/C) sorted today, almost all other species are, and the moisture content of green veneer from these species is currently measured with industrial radio frequency (RF) sensors installed beneath the veneer ribbon. Based on these RF moisture readings, generally submitted as an average moisture content-only reading, the veneer is then typically sorted into three general groups—sap, light-sap and heartwood.

Laboratory testing has shown that when using contact-based RF sensor head technology, a gap as narrow as 1 mm between the veneer and the sensor head will cause inaccurate moisture readings. These can be as much as 50 percent, with the level of error and inaccuracy increasing dramatically as the sheet gap increases.

With the high speeds of today's green-end conveyors it is virtually impossible to maintain direct contact between the wavy veneer and the RF heads. This means that very inaccurate sorts occur, especially within the high moisture content veneers where RF sensor heads have been proven to be most inaccurate at moisture measuring.

The other issue with RF heads is their inability to read moisture contents above the fibre saturation point (FSP) of approximately 30 percent. This limitation makes them ineffective for measuring the M/C within the wetter species of woods, such as Southern Yellow Pine. Our own on-site mill observations indicate that there could be positive advantages to sorting these wetter woods into at least two basic sorts. These narrower moisture sorts, combined with the implementation of new dryer recipes to match the accurate sort points, could afford significant operational savings within the dryers, as well as producing a higher quality veneer.

A survey of mills showed that each 1 percent loss in dryer production from inaccurate RF sensor heads costs the average mill, conservatively, an extra \$150,000 to \$180,000 per year. (This figure factored in production losses and excess energy consumption due to high re-dry and over-dry rates; 80 percent of a mill's yearly energy costs are consumed by veneer drying.) And with today's escalating energy costs, this number is expected to rise in the future.

An alternative technology now exists that effectively solves each of these problems. By utilizing the latest advancements in both LED line-light transmission and CCD camera technology, this new patented moisture detection technology provides the industry a highly accurate, non-contact, high-speed method of green veneer moisture measuring for the first time.

By tightly controlling the pulsed light output within a high-intensity LED line-light array, the green veneer can be effectively



Westmill Machine Automation photo.

'candled,' allowing an actual visual image of the moisture locked within the veneer sheet. Gathering this visual image 'map' by utilizing a specially aligned and highly sensitive CCD camera, and then passing that information through a complex series of algorithms, an exact moisture map of each sheet of veneer can be determined to instantly provide both the average and peak moisture content sort criteria for each sheet.

With this information determined, each veneer sheet is assigned specific numerical moisture values. These peak and average moisture values effectively become the moisture 'finger print' of that particular sheet, which in turn allows the veneer to be very accurately sorted either to a set of criteria specifically formulated for each species and thickness or to any number of customized mill-specific criteria as required. With this highly accurate information, veneer sheets can then be sorted into any number of bins and without limiting the number of sorts possible.

Dryer tests of this new technology conducted recently at a British Columbia mill by Forintek Canada Corp. showed an overall improvement of 10.1 percent, based on a 7.6 percent improvement in dryer productivity, a 2.5 percent gain in target dry veneer (i.e., correct moisture content). The report also cited a 0.15 percent reduction in re-feed veneer and a 2.7 percent reduction in re-dry veneer. The tests compared a three-bin light transmission sort with a three-bin RF head sort. The improvement is expected to increase when the mill moves to a four-bin light transmission sort.

High moisture content species, such as Southern Yellow Pine, traditionally have never been separated into different moisture contents, as RF type sensor heads are unable to accurately sort at the higher moisture range above fibre saturation. This new patented technology is expected to revolutionize green veneer moisture sorting and perhaps even provide a substantial production increase by providing Southern manufacturers a method to successfully sort 'wet' species for the first time. ●

**Brian Martin is general manager, Westmill Machine Automation, and Mike Crondabl is president, Westmill Group of Companies, Aldergrove, British Columbia. The technology described in this article is patented by the company under the trade name LightSORT™. A report detailing the dryer test results cited above is available from Westmill Machine Automation, 877-607-7010.**

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### For Info Fair exhibiting information:

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## Upcoming Events

### OCTOBER

- 15-17 Transport Symposium 17 for the forest products logistics industry, Mobile Bay, Ala., [www.transportsymposium.com](http://www.transportsymposium.com).  
23-25 Third International Symposium on Veneer Processing and Products, Shanghai, China, [plywood@njfu.com.cn](mailto:plywood@njfu.com.cn).  
26 Recruiting, Training and Retaining the Right People, Woodworking Machinery & Supply Expo, Toronto, Ontario, [www.woodworkingexpo.ca](http://www.woodworkingexpo.ca).

### NOVEMBER

- 3-4 North American Building Material Distribution Association annual convention & tabletop business session, Colorado Springs, Colo., 888-747-7862, [www.nbmda.org](http://www.nbmda.org).  
7-9 U.S. Green Building Council annual conference and exhibition, Chicago, Ill., [www.greenbuildexpo.org](http://www.greenbuildexpo.org).  
10-13 APA annual meeting and Info Fair supplier exhibition, Palm Springs, Calif., 253-620-7429, [www.apawood.org](http://www.apawood.org).  
13-15 Forest Products Society Durability of Wood-Framed Housing: Lessons Learned from Natural Disasters, Biloxi, Miss., 608-231-1361, ext. 208, [www.forestprod.org](http://www.forestprod.org).  
15-17 North American Wholesale Lumber Association Traders Market, Dallas, Texas, 800-527-8258, [www.nawla.org](http://www.nawla.org).

### JANUARY

- 23-25 Northeastern Retail Lumber Association Lumber and Building Material Expo, Boston, Mass., 800-292-6752, [www.nrla.org](http://www.nrla.org).

### FEBRUARY

- 7-9 2008 Panel & Engineered Lumber International Conference & Expo, Atlanta, Ga., 334-834-1170, [www.panelworldexpo.com](http://www.panelworldexpo.com).  
13-16 International Builders Show, Orlando, Fla., 800-368-5242 ext. 8111, [www.nahb.org](http://www.nahb.org).  
24-27 Forest Products Management Development Course, Oregon State University, Corvallis, Ore., 541-737-6439, <http://woodscience.oregonstate.edu/continuing.php>.

### MARCH

- 8-11 Western Wood Products Association annual meeting, Scottsdale, Ariz., 503-224-3930, [www.wwpa.org](http://www.wwpa.org).  
12-14 Wood Technology Clinic & Show 2008, Portland, Ore., 800-241-9034, ext. 5443, [www.woodwideweb.com](http://www.woodwideweb.com).  
31-Apr 2 Washington State University 42nd International Wood Composites Symposium, Seattle, Wash., 509-335-2262, <http://woods Symposium.wsu.edu/>.

### APRIL

- 16-18 Council of Forest Industries annual convention, Kelowna, British Columbia, 250-614-4353, [www.cofi.org](http://www.cofi.org).  
21-24 Material Handling & Logistics Show and Conference, Cleveland, Ohio, [www.nashow.com](http://www.nashow.com).

## MAY

- 11-13 National Green Building Conference – ‘Greening the American Dream,’ New Orleans, La., 800-368-5242, ext. 8338, [www.nahb.org](http://www.nahb.org).
- 12-13 Forest Products Society 10th International Conference on Progress in Biofibre Plastic Composites, Toronto, Ontario, 608-231-1361, ext. 208, [www.forestprod.org](http://www.forestprod.org).
- 14-15 Southern Forest Products Association midyear meeting, New Orleans, La., 504-443-4464, ext. 225, [www.sfpa.org](http://www.sfpa.org).

## JUNE

- 23-25 Forest Products Society 62nd International Convention, St. Louis, Mo., 608-231-1361, ext. 208, [www.forestprod.org](http://www.forestprod.org).

## SEPTEMBER

- 21-24 APA annual meeting and Info Fair supplier exhibition, Las Vegas, Nev., 253-620-7429, [www.apawood.org](http://www.apawood.org).

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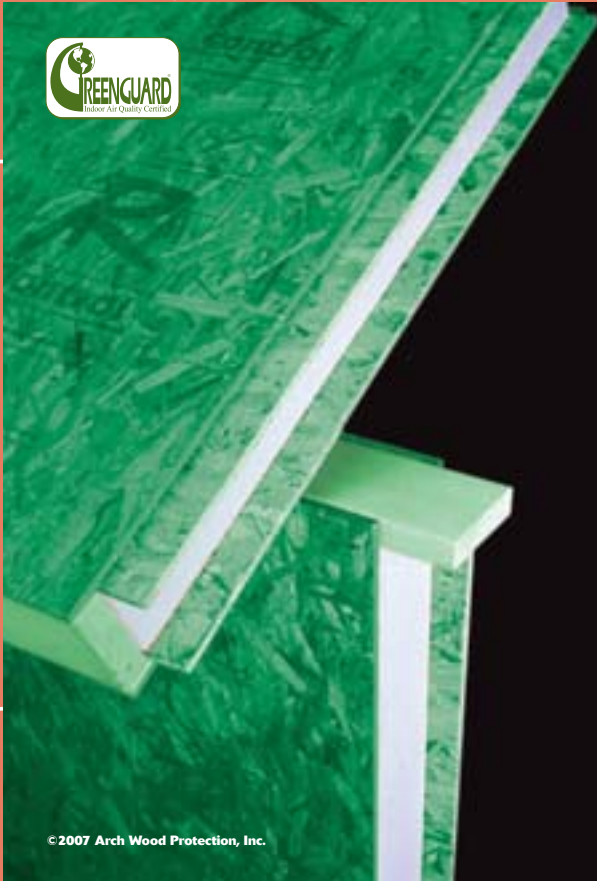


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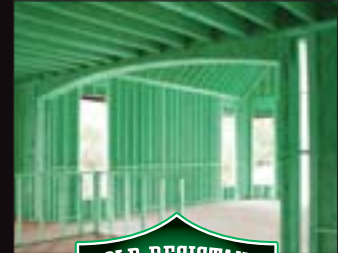
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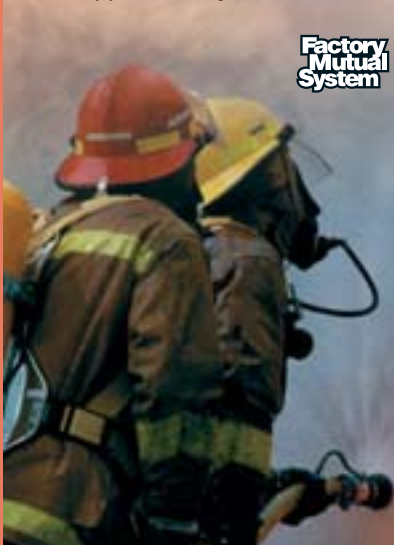
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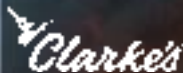
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