

AF&PA Sustainability Report

**Advancing U.S. Paper and Wood Products Industry
Sustainability Performance**

2016



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Better Practices, Better Planet 2020

Advancing U.S. Paper and Wood Products Industry Sustainability Performance

On behalf of the American Forest & Paper Association (AF&PA) and its members, we are proud to present our 2016 Sustainability Report. This report marks the halfway point in our ten-year journey to reach our 2020 goals.

AF&PA serves to advance a sustainable U.S. pulp, paper, packaging, tissue, and wood products manufacturing industry through fact-based public policy and marketplace advocacy. Our member companies produce essential products that are widely used every day and made from renewable and recyclable resources using sustainable manufacturing processes. AF&PA members represent the spectrum of the paper and wood products manufacturing sector.



Through the *Better Practices, Better Planet 2020* initiative, our members are successfully pursuing one of the most extensive sets of sustainability goals established for a U.S. manufacturing industry. Member efforts to increase efficiencies and further enhance sustainability performance within their companies resulted in the early achievement of our safety and greenhouse gas emission goals.

Our industry's commitment to sustainability reaches far beyond fulfillment of the *Better Practices, Better Planet 2020* goals. We work with our members, government agencies, communities, and other stakeholders to employ advanced sustainability practices benefitting the economy, the environment and society, and transparently report on our performance.

We invite you to look closely at the performance summary presented in this biennial report and welcome your feedback on our journey.

A handwritten signature in black ink that reads "Donna Harman".

Donna Harman
President and CEO



BETTER PRACTICES
BETTER PLANET 2020
Continuing AF&PA's Commitment to Sustainability

Progress Toward Sustainability Goals

Early Achievement Reached for Two of Six Goals

This section shows industry progress on AF&PA's *Better Practices, Better Planet 2020* sustainability goals, established in 2011. Unless otherwise noted, the progress below represents our members' calendar year 2014 performance against a 2005 baseline.

We are pleased to report that two of these 2020 goals — safety and greenhouse gas emissions — have been met.



PAPER RECOVERY FOR RECYCLING

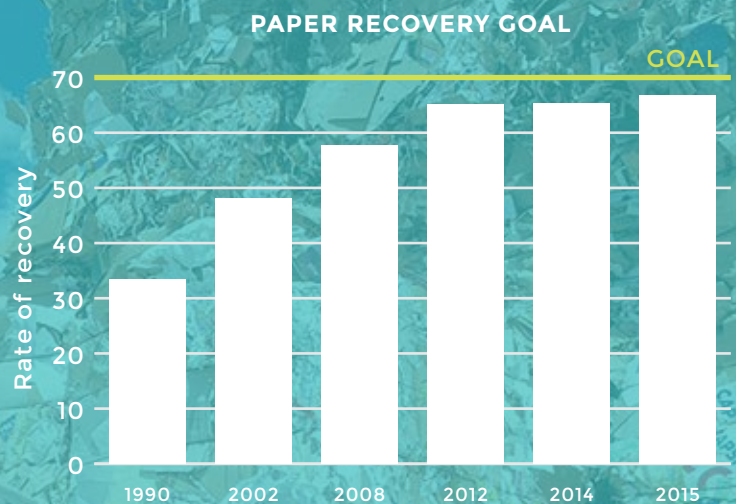
Exceed 70 percent rate of paper recovery for recycling by 2020

In 2015, the industry's recovery rate for paper consumed in the U.S. was 66.8 percent.

2014 LEADERSHIP IN SUSTAINABILITY AWARD
FOR PAPER RECOVERY FOR RECYCLING:

Verso Corporation's Duluth Mill Recycling Recovery Program

The Verso Corporation Duluth Mill Recycling Recovery Program in Minnesota was designed to get cleaner recovered paper to the mill and support the local community in the process. In this innovative recycling program, participating nonprofit organizations collect clean, high-quality recyclable paper for the mill and receive funding for their organizations in return. Through 2014, the program had recovered 2,700 tons of paper and contributed \$510,000 to more than 178 nonprofit groups.



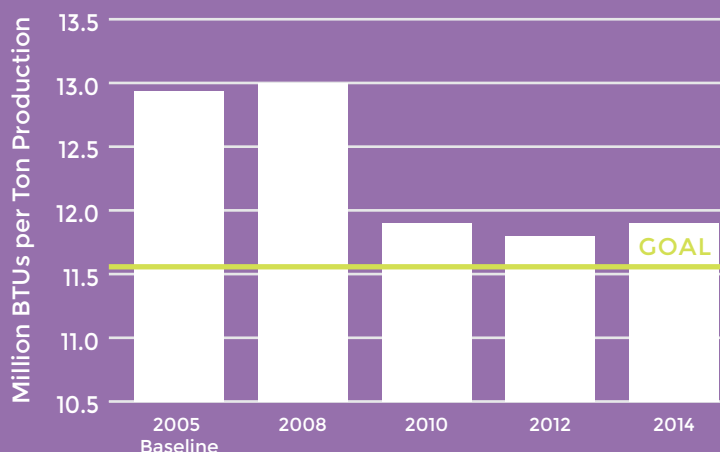


ENERGY EFFICIENCY

At least a 10 percent increase in members' purchased energy efficiency from 2005 to 2020

Member purchased energy use per ton of production was 8.1 percent lower in 2014 compared to the baseline year of 2005.

PURCHASED ENERGY GOAL



2015 LEADERSHIP IN SUSTAINABILITY AWARD FOR ENERGY EFFICIENCY / GREENHOUSE GAS REDUCTION:

Seaman Paper Company's Soft Steps Forward Initiative

As part of the Soft Steps Forward Initiative, Seaman Paper committed to decrease their purchased fuel and electricity dependency. Seaman Paper now produces 97 percent of their steam requirements from carbon-neutral biomass, and installed a backpressure turbine that runs on steam to meet a portion of their electricity needs. These measures helped decrease Seaman Paper's total energy cost despite the sharp increases in oil and electricity costs over the past decade.



✓ GOAL SURPASSED

GREENHOUSE GAS EMISSIONS

At least a 15 percent reduction of our members' greenhouse gas emissions from 2005 to 2020

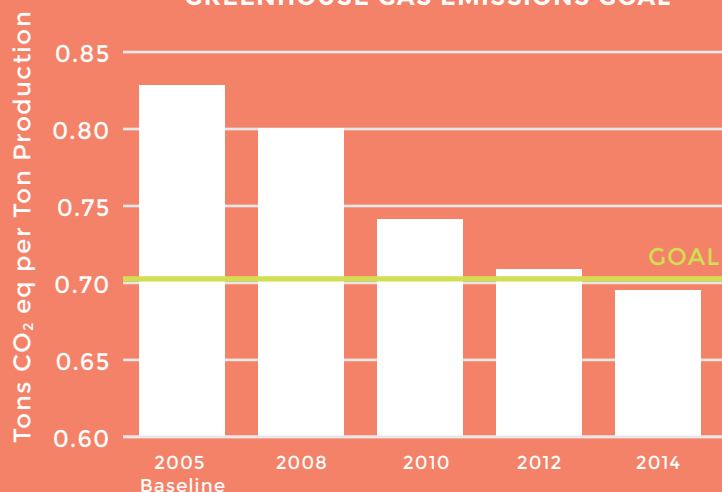
In 2014, member greenhouse gas emissions, measured in carbon dioxide equivalents per ton of production, were 16 percent lower than in the 2005 baseline year.

2015 LEADERSHIP IN SUSTAINABILITY AWARD FOR ENERGY EFFICIENCY / GREENHOUSE GAS REDUCTION:

WestRock's Covington Power Island Project

WestRock used carbon-neutral self-generated and purchased biomass to generate clean renewable electricity at their Covington, Virginia paper mill. It has enabled the mill to put net power to the grid, greatly reduce coal use and greenhouse gas emissions, and decrease freshwater usage and the generation of wastewater, while providing a market for bark and other byproducts from the forest.

GREENHOUSE GAS EMISSIONS GOAL



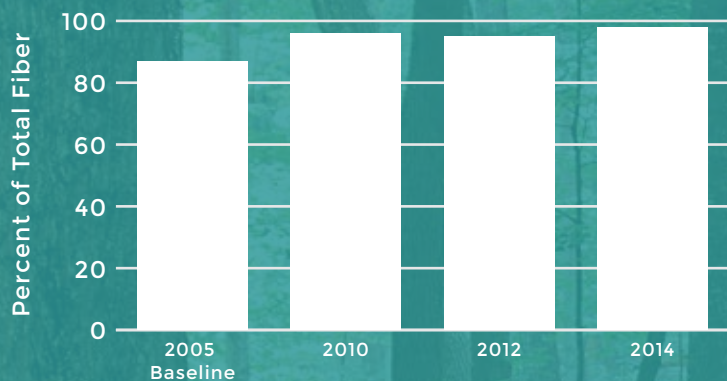


SUSTAINABLE FORESTRY

Increase the amount of fiber procured from certified forestlands or through certified fiber sourcing programs in the U.S. from 2005 to 2020 and work to decrease illegal logging

The amount of wood fiber members procured from certified sourcing programs increased from 87 percent in 2005 to 98 percent in 2014.

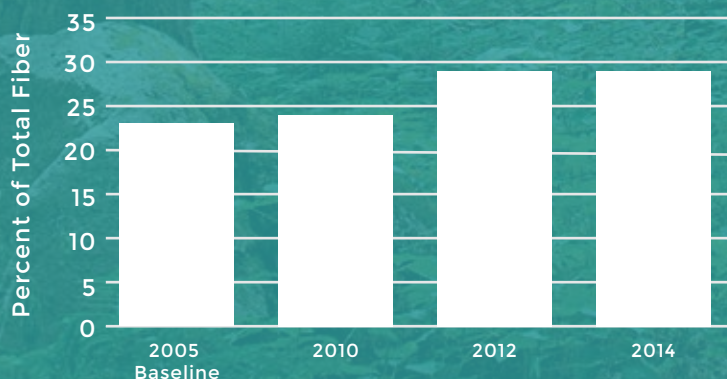
WOOD FIBER PROCURED FROM CERTIFIED FIBER SOURCING PROGRAMS GOAL



Wood fiber sourced by members from third party certified forestlands increased from 23 percent in 2005 to 29 percent in 2014.

Our members also are continuing their efforts to combat illegal logging.

WOOD FIBER PROCURED FROM THIRD PARTY CERTIFIED FORESTLAND GOAL



2014 LEADERSHIP IN SUSTAINABILITY AWARDS FOR SUSTAINABLE FOREST MANAGEMENT:

Evergreen Packaging's Evergreen Forest Certification

Evergreen Packaging developed Evergreen Forest Certification, a group certification program that allows multiple landowners to be certified under a single group certificate – a cost-effective way for landowners to have their forests certified to internationally recognized standards. Increased certification promotes sustainable forest practices and responds to the rising customer demand for paper and paperboard products that contain certified material. In its first year (2013), the program grew to include nearly 60 landowners comprising approximately 40,000 acres in North and South Carolina.

WestRock's Internal Fiber Supply Chain Certification Program

WestRock (then RockTenn) achieved its sustainability goal to achieve fiber chain-of-custody certification to credible third-party forestry certifications at all its North American wholly owned manufacturing facilities by 2020 in 2013, creating the single largest multisite fiber chain-of-custody certification in the U.S. paper industry. The company initiated a dual-purpose effort to bring all their non-certified facilities to the same certifications and combine all their existing certifications into one enterprise-wide multisite certificate.



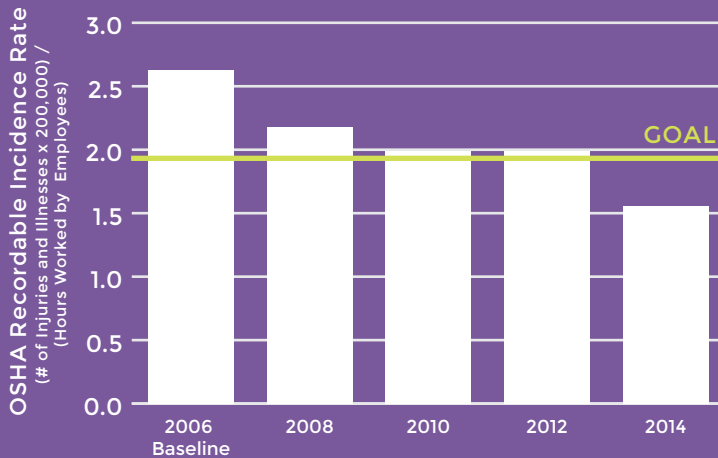
✓ **GOAL SURPASSED**

WORKER SAFETY

A vision for the industry of zero injuries and measuring progress toward that vision by further improving our incidence rate by 25 percent from 2006 to 2020

The 2014 member company recordable case incidence rate was 40.8 percent lower than in 2006. Although we have met the goal to reduce reportable incidents, we continue to look for new ways to achieve our aspirational goal of zero workplace injuries.

WORKER SAFETY GOAL



2014 LEADERSHIP IN SUSTAINABILITY AWARD FOR SAFETY:

Expera Specialty Solutions' Care Enough to Act Program

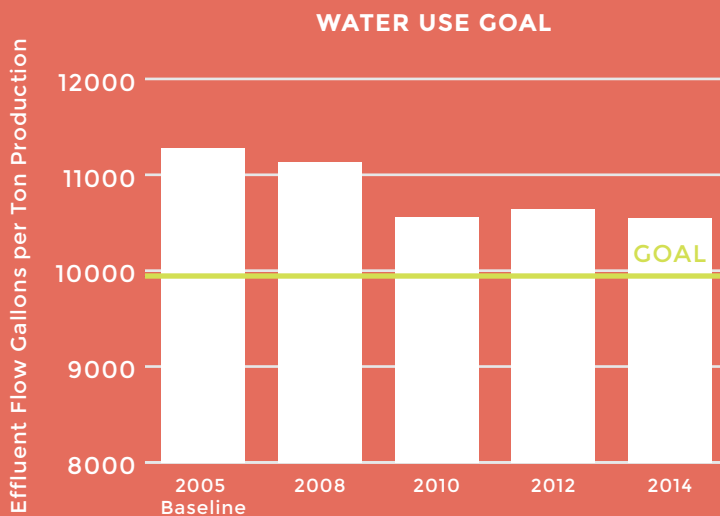
Expera Specialty Solutions' Nicolet, Wisconsin mill introduced the Care Enough to Act program, a set of initiatives to identify safety hazards, reinforce safe behaviors, and put company-wide best practices into place. This atmosphere of cooperation, accountability, and self-discipline, combined with a focus on continuous improvement, led to all-time high safety improvements.



WATER USE

A 12 percent reduction in members' pulp and paper mills' water use from 2005 to 2020

AF&PA member pulp and paper mill water use in 2014 decreased by 6.5 percent below the 2005 baseline.



2014 LEADERSHIP IN SUSTAINABILITY AWARD FOR WATER:

Verso Corporation's Escanaba Mill Water Reduction Initiative

The Verso Corporation Escanaba Mill in Michigan carried out a comprehensive program of repairs and optimization, resulting in measurable water reductions throughout the mill's operations. These water conservation efforts also reduced costs required for heating, pumping and treating water, and support ongoing resource conservation efforts at the mill.

2015 LEADERSHIP IN SUSTAINABILITY AWARD FOR WATER:

International Paper's Pensacola Mill / Emerald Coast Utilities Authority (ECUA) Partnership Project

Through the partnership, International Paper's containerboard mill in Pensacola, Florida receives treated effluent from ECUA that it uses in its industrial processes. By using reclaimed water to displace freshwater consumption, International Paper is reducing its water use at its Pensacola mill and protecting the local ecosystem, while ECUA has found a beneficial outlet for its treated effluent.



The Three Pillars of Sustainability

Economic, Environmental and Social

Economic

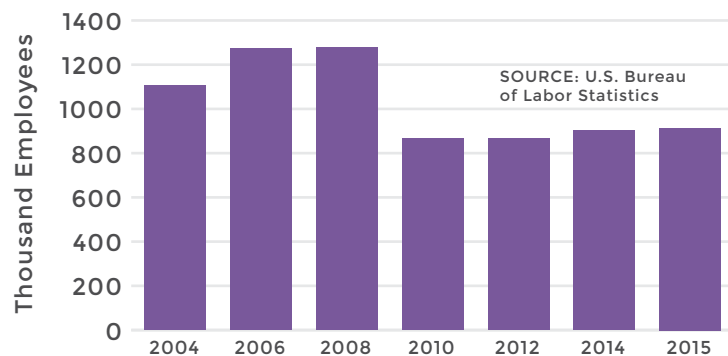
Contributions to GDP

The paper and wood products industry contributed over \$84 billion to the Gross Domestic Product (GDP) in 2014; the pulp and paper sector accounted for \$55.5 billion in GDP and the wood products sector, \$28.7 billion. Overall, the forest products industry accounted for 4 percent of manufacturing GDP in 2014. The industry is among the top ten manufacturing sector employers in 47 U.S. states.

Employment

The forest products industry employed 914,000 people in 2015. Of these, 102,000 people were employed at pulp, paper and paperboard mills, 271,000 at paper and paperboard converting plants, 380,000 at lumber and wood panel facilities, and 110,000 at wood kitchen cabinet plants. Industry employment declined sharply during the Great Recession but has been rebounding during recent years. Much of the gain has taken place at lumber and panel plants that have seen demand for their products increase with the corresponding increase in new home construction.

FOREST PRODUCTS INDUSTRY EMPLOYMENT



\$54,712

Average wage for a U.S. paper industry employee in 2014

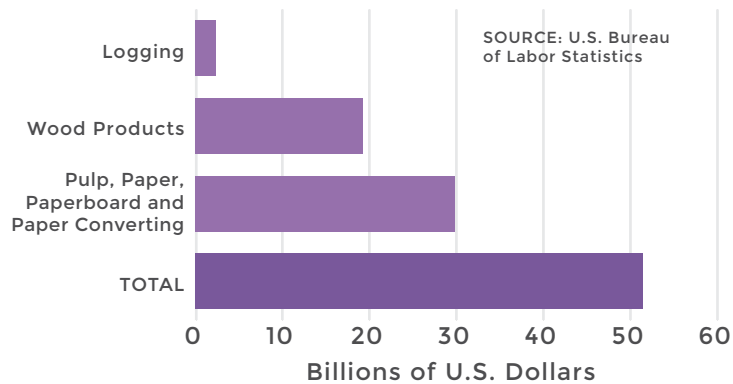
\$10.2B

Total capital spending by the U.S. paper and wood products industry in 2014

75%

U.S. pulp and paper mills located in rural areas

FOREST PRODUCTS INDUSTRY COMPENSATION



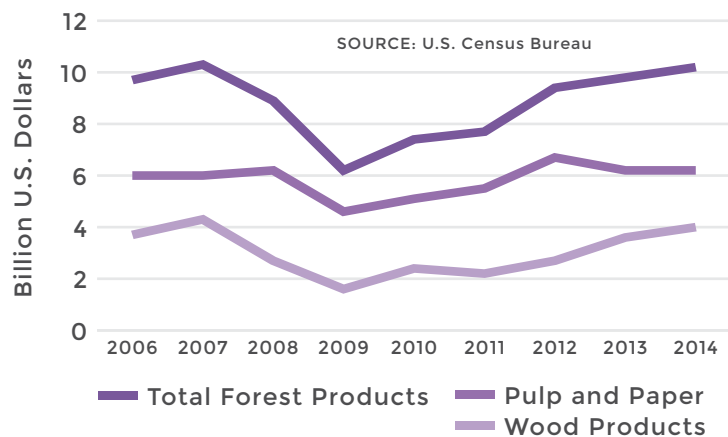
Total forest products industry employee compensation amounted to \$51.4 billion in 2014. Paper industry employees were paid an average of \$54,712 a year in 2014.¹



Capital Spending

Total capital spending by the paper and wood products industry rose to \$10.2 billion in 2014, which marked its highest level since 2007. The 2014 level of spending was up from \$6.2 billion in 2009, which was a recession year. In 2014, 89 percent of paper industry capital expenditures went for equipment and the remaining 11 percent for structures. The corresponding percentages for wood products were 83 percent and 17 percent.

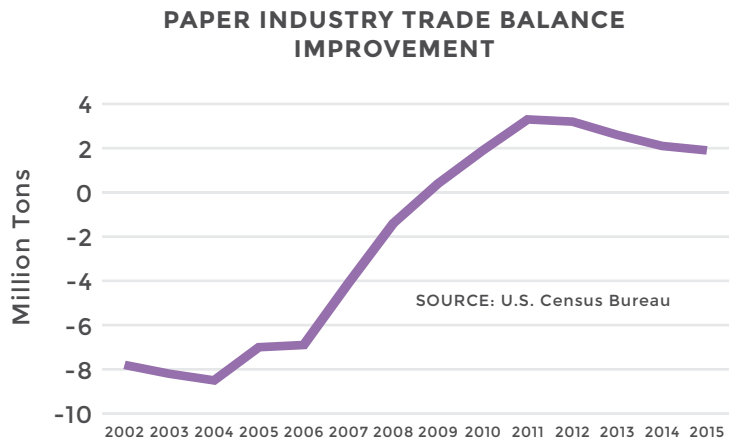
FOREST PRODUCTS INDUSTRY CAPITAL EXPENDITURES



¹ U.S. Bureau of Labor Statistics

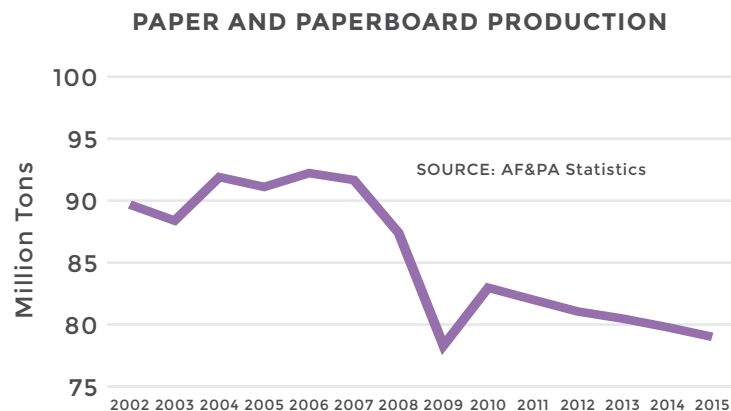
Trade Balance

Despite slow economic growth abroad and the strong dollar, the U.S. paper industry has maintained a trade surplus during recent years. The surplus first emerged in 2009 and expanded to 3.3 million tons in 2011. It subsequently contracted to 1.9 million tons by 2015, possibly due to the above-noted headwinds of weak economic growth abroad and the strong dollar.



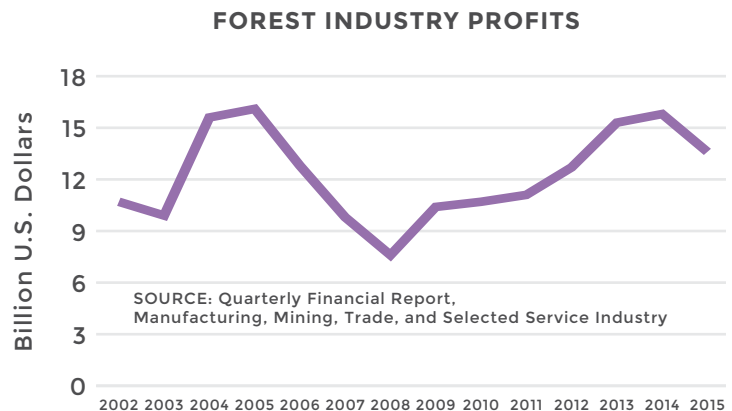
Paper and Paperboard Production

U.S. paper and paperboard production (exclusive of wet machine board and the construction grades) fell to a recession-induced low point of 78.3 million tons in 2009. It rebounded to 83 million tons in 2010 and has declined gradually since then reaching 79 million tons in 2015. The average rate of decline for the five-year period from 2011 through 2015 was 1 percent a year.



Profits

The paper and wood products industry realized operating profits of \$14 billion in 2015, which was above the industry's long-term average annual level of \$12.3 billion from 2002 through 2015. Operating profits fell to a low of \$7.6 billion during the recession year of 2008; the high point occurred in 2005, when the industry's operating profits exceeded \$16 billion.

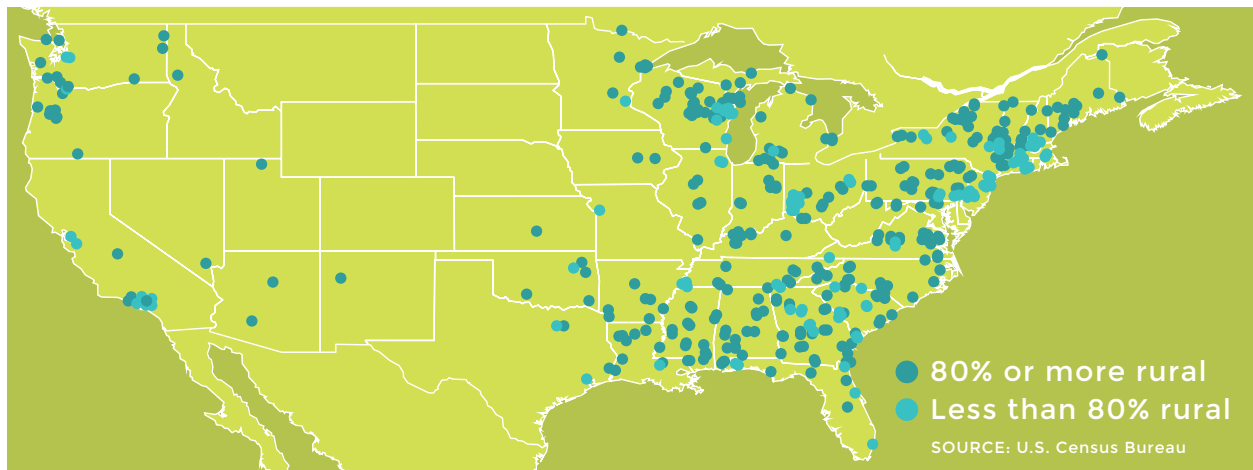




Economic Impact on Local Communities

AF&PA member facilities are often located in rural communities where they frequently serve as the largest employer. In fact, more than 75 percent of all U.S. pulp and paper mills are located in counties that are more than 80 percent rural. As a result, local economies can be highly dependent on the economic sustainability of these facilities.

COUNTY LOCATIONS OF PULP AND PAPER MILLS





Environmental

Paper Recycling

Due to voluntary industry initiatives and the millions of Americans who recycle at home, work, and school every day, the annual recovery rate has nearly doubled since 1990. In 2015, 52 million tons, or 66.8 percent of paper consumed in the U.S. was recovered for recycling. Achieving our goal to exceed 70 percent recovery will require maximizing existing sources of recovered fiber, like office buildings and smaller commercial establishments, to recover more office-type papers and reach-

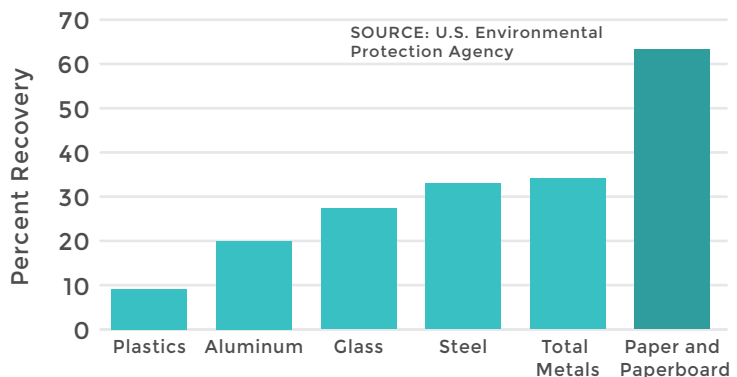
ing out to new potential sources of recovered paper and packaging. AF&PA is developing new data on the drivers of recovered fiber flows to demonstrate how the recovered fiber stream is changing.

2015 LEADERSHIP IN SUSTAINABILITY AWARD
FOR PAPER RECOVERY FOR RECYCLING:

Evergreen Packaging's On-Packaging Recycle Logo Use Tracking Project

Surveys show that consumers look for a recycle logo on a carton to determine whether it is recyclable. Given the importance of on-package logo use, Evergreen Packaging developed and implemented a recycle logo tracking system for the cartons they produce. This information is used to work with customers to include the logo on their cartons and communicate to consumers that those cartons are recyclable, thereby increasing recovery.

2013 PAPER RECYCLING VS. OTHER MATERIALS



52MM

Tons of paper recovered
for recycling in the U.S.
in 2015

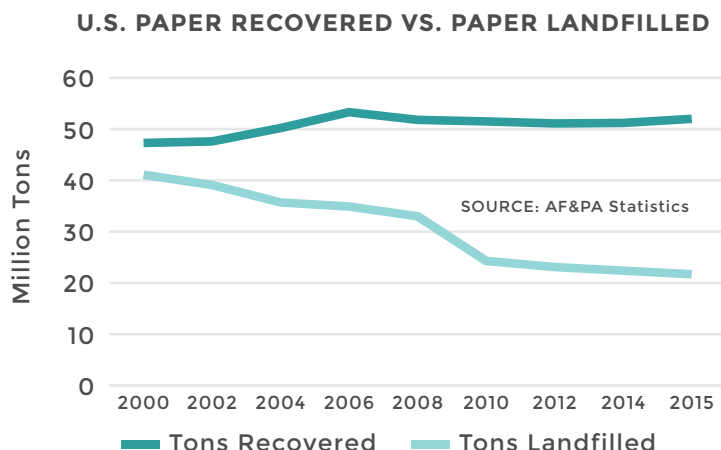
67%

U.S. pulp and paper mills' energy
needs provided by biomass and
renewable fuels, on average,
in 2014

10

Number of times water is reused
in the U.S. pulp and paper industry
before treatment and discharge,
on average

U.S. Environmental Protection Agency (EPA) data for 2013 shows that recovery of paper and paperboard from municipal solid waste streams exceeds that of plastics (by nearly seven times), aluminum (by more than three times) and glass (by more than two times).

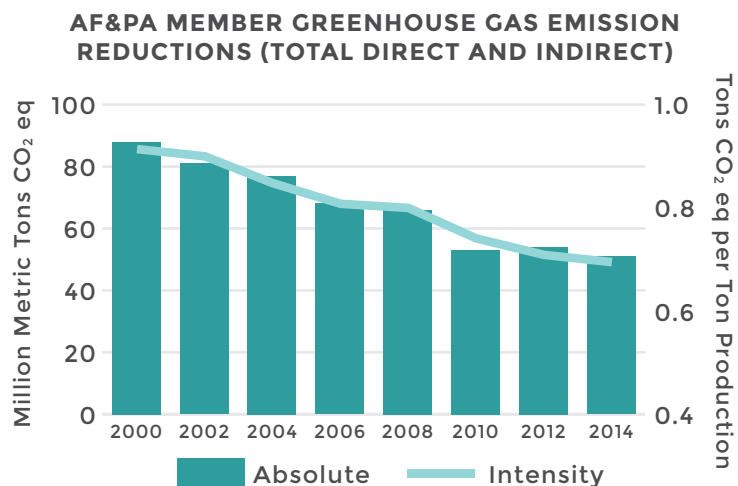


Greenhouse Gas Emission Reductions

AF&PA members' early attainment of their *Better Practices, Better Planet 2020* greenhouse gas (GHG) emission reduction goal comes as a result of efforts reaching back to at least 2000. Since 2000, total direct and indirect absolute GHG releases at member pulp, paper and wood products manufacturing facilities have decreased by 42.2 percent to 51 million tons carbon dioxide (CO₂) equivalents. GHG emissions intensity, expressed as CO₂ equivalents released per ton of product

produced, has decreased by 23.9 percent to 0.7 tons. These reductions have come about through member adoption of efficient manufacturing production measures, increased use of less carbon-intensive fossil fuels and carbon-neutral biomass-based energy sources.

These reductions and the performance we report to show progress against our *Better Practices, Better Planet 2020* goal underestimate the actual AF&PA member GHG reductions because of a conservative



convention we use in our calculations. Due to state Renewable Portfolio Standards, environmental regulations and market forces, the GHG intensity of purchased electricity has decreased 15 percent between 2005 and 2012. To make our measurements more comparable over time, however, we have held constant at 2005 levels national GHG emission factors associated with electricity² and steam³ purchased by our mills and not reflected that decrease. If we adjust our reduction calculations to reflect the changes in the grid and to reflect the locations of our members' mills, they would have achieved a 20.4 percent reduction from 2005 to 2014.⁴



Energy Production and Efficiency

AF&PA member manufacturing facilities obtain energy from a number of sources to support operations. These include biomass materials, fossil fuels, and purchased energy (electricity and steam), and members continually seek to use the energy more efficiently. In 2014, biomass and renewable fuels provided, on average, about 66.8 percent of pulp and paper mill energy needs, increasing slightly from 65.9 percent in 2012. At wood products facilities, on average, about 64.3 percent of energy needs were supplied by biomass and renewable fuels. If we did not use a conservative assumption in making our calculations and instead took the actual renewable portion of the grid into account, the percentages increase to 67.7 percent for pulp and paper and 66.7 percent for wood products facilities.

2014 LEADERSHIP IN SUSTAINABILITY AWARD
FOR ENERGY EFFICIENCY / GREENHOUSE GAS
REDUCTION:

Domtar's Barge Unloading and Conveyor Project

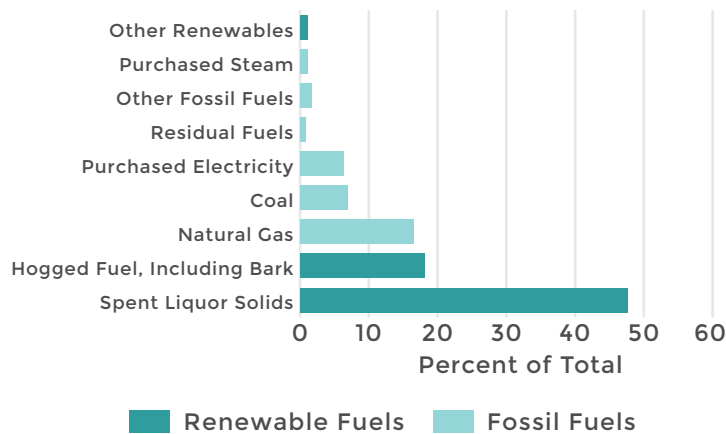
Domtar's Barge Unloading and Conveyor Project achieves GHG reductions and improves energy efficiency while transporting resources from the banks of the Ohio River straight into their Hawesville, Kentucky mill, boosting productivity in the process. The one-mile-long conveyor belt enables them to directly deliver wood chips to the mill, eliminates 54,000 wood chip delivery truck trips and drastically reduces truck traffic, related congestion and pollution.

² "The Emissions & Generation Resource Integrated Database (eGRID), a comprehensive inventory of environmental attributes of electric power systems. eGRID is based on available plant-specific data for all U.S. electricity generating plants that provide power to the electric grid and report data to the U.S. government....." U.S. EPA, eGRID FAQ, available at <https://www.epa.gov/energy/egrid-faq>.

³ United States Department of Energy (USDOE). 2007. *Instructions for Form EIA-1605. Voluntary reporting of greenhouse gases*. Form EIA-1605. U.S. Department of Energy, Energy Information Administration. http://www.eia.doe.gov/oiaf/1605/pdf/EIA1605_Instructions_10-23-07.pdf.

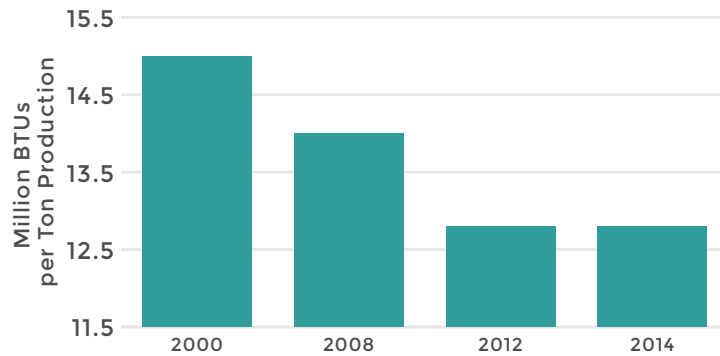
⁴ Our members' reductions in absolute GHG releases from purchased electricity for the same period would be approximately 2.3 million metric CO₂ eq. or 14 percent lower if these adjustments were made.

PULP AND PAPER MILL ENERGY SOURCES



The renewable biomass fuels used by AF&PA member facilities consist of bark, sawdust, wood shavings and other woody residuals created during manufacturing processes and collectively known as “hogged fuel.” The largest part of biomass fuels utilized by pulp and paper mills is spent pulping liquors recovered from the production of wood pulp. Spent pulping liquor solids provided 71.3 percent of the energy obtained from renewable fuels at member pulp and paper mills in 2014.

MEMBER PULP AND PAPER MILL PURCHASED ENERGY

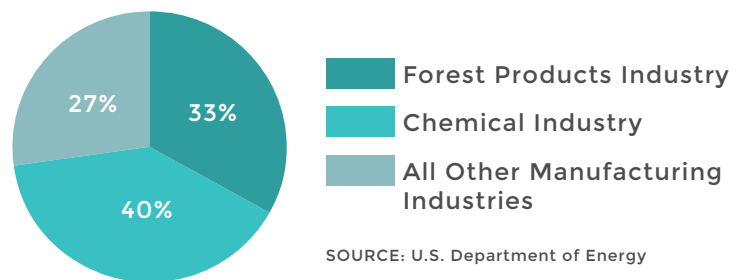


Purchased energy use at pulp and paper mills has remained relatively constant over the past few years at 12.8 million BTUs per ton of production. However, this number is 14.6 percent less than in year 2000.

Combined Heat and Power Production

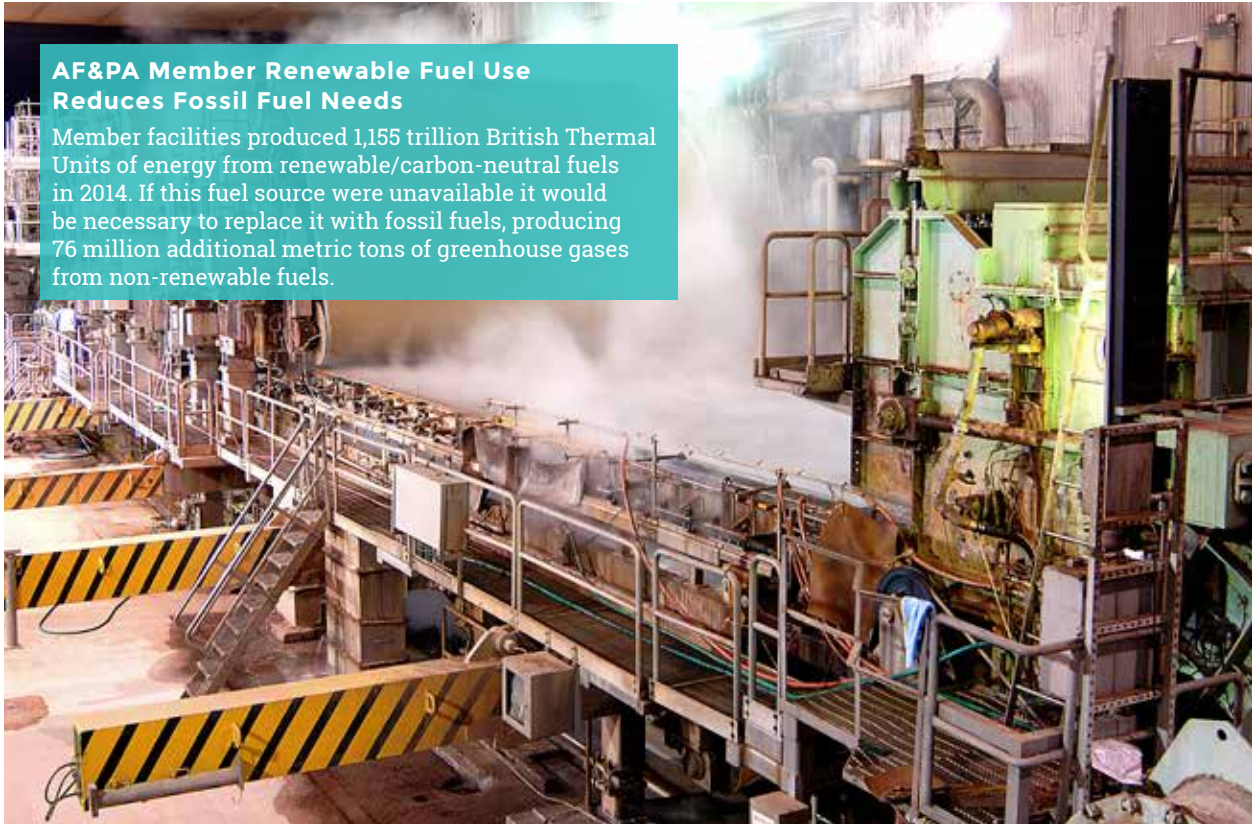
Paper and wood products manufacturing plants use electricity to drive manufacturing equipment and steam to provide heat needed to cook pulp, dry paper and produce wood products. The combined heat and power (CHP) process used at member facilities produces both, with efficiencies in the range of 50 to 80 percent, far beyond non-CHP electrical stations such as utilities, which are only about 33 percent efficient. In 2014, 97.6 percent of electricity generated in the U.S. forest products industry was produced using CHP. The forest products industry is the second largest industrial sector producer of CHP electricity. Only the chemical industry produces more.

CHP ELECTRICITY GENERATION



AF&PA Member Renewable Fuel Use Reduces Fossil Fuel Needs

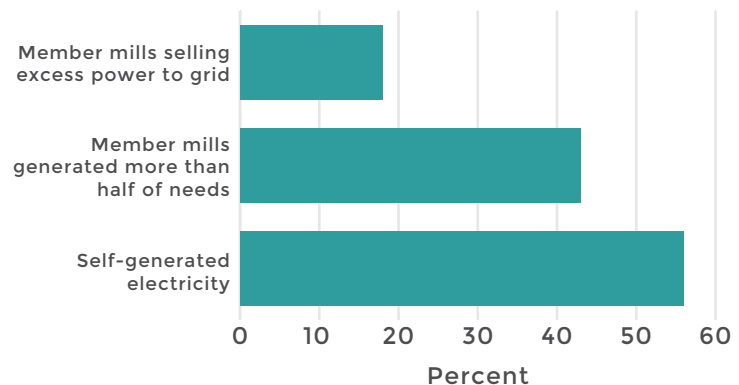
Member facilities produced 1,155 trillion British Thermal Units of energy from renewable/carbon-neutral fuels in 2014. If this fuel source were unavailable it would be necessary to replace it with fossil fuels, producing 76 million additional metric tons of greenhouse gases from non-renewable fuels.



Self-Generated Electricity

AF&PA member pulp and paper mills self-generate the majority of electricity needed to run their facilities. In 2014, 56 percent of electricity needed to power member processes was self-generated. Forty-three percent of member mills generated more than half of their needed electricity. Eighteen percent of member mills also sold excess power to the grid. Much of this sold power was also renewable.

AF&PA MEMBER SELF-GENERATED ELECTRICITY



Forestry

As a condition of AF&PA membership, AF&PA members agree to abide by a set of sustainable procurement principles for the wood fiber they purchase, thereby creating an incentive for forest landowners to practice sustainable forest management. AF&PA members owning forestland also agree to conform to credible forest management program standards. The Sustainable Forestry Initiative® (SFI®), the Forest Stewardship Council (FSC®) program, the American Tree Farm System™ (ATFS) and the Programme for the Endorsement of Forest Certification (PEFC™) all qualify for this requirement.

Members work diligently to guard against procuring fiber from illegally-logged sources. Companies maintain documentation regarding fiber sources, require suppliers to sign agreements, and use third-party certification of chain-of-custody systems that require risk assessments on imported forest products and other forest management practices. AF&PA advocates for funding of Lacey Act implementation and Forest Service International programs to prevent illegal logging and the importation of illegally harvested forest products.

AF&PA members have been leaders in implementation of forest practices certification programs. 2015 marked the 20th anniversary of the development of SFI. Since the program began in 1995, more than 160,000 harvesters have been trained regarding water quality, biodiversity and other sustainable forest practice requirements. Nearly 10,000 harvesters were trained in 2015 alone. In 2014, almost all of the fiber delivered to SFI program participant mills was harvested by trained professionals. One hundred percent of harvest areas managed under SFI is reforested.⁵

U.S. Forests Have Grown in Size Over the Past Century

According to the U.S. Department of Agriculture, one-third of the United States — 766 million acres — is covered with trees. There are more trees on U.S. land today than there were 100 years ago. Some 2 million acres of trees are planted each year, and tree growth is currently double that of annual removals.

2015 LEADERSHIP IN SUSTAINABILITY AWARD FOR SUSTAINABLE FOREST MANAGEMENT:

Domtar's Marlboro FSC Partnership Project

FSC certification can be pricey for small landowners, but paper companies often need FSC-certified fiber to meet specific customer demands. Through the Marlboro FSC Partnership, Domtar covers certification costs and pays a premium to receive certified fiber, and landowners receive advice and support in getting their wood certified. Through partnerships such as these, Domtar is getting closer to its goal of using 20 percent FSC-certified material in its pulp and paper mills by 2020.

2015 INNOVATION IN SUSTAINABILITY AWARD:

Verso Corporation's Identifying and Mapping Vernal Pools on State Lands in Michigan's Upper Peninsula Project

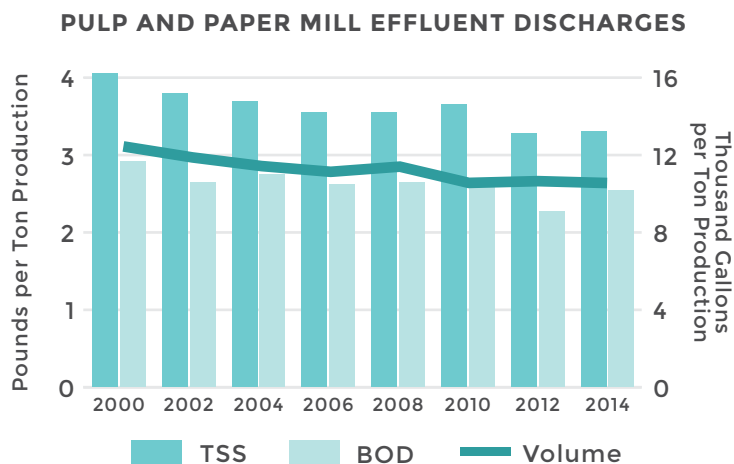
Verso Corporation engaged in a public-private partnership to identify and map vernal pools in Michigan's Upper Peninsula, where the company procures wood for its pulp and paper production. Vernal pools are small, shallow, temporary bodies of water that are important for healthy forest ecosystems because they provide food, water and habitat for a number of animal and plant species. Because vernal pools are small, isolated and dry for part of the year, they can be difficult to identify in the field, easily overlooked and unintentionally damaged or destroyed. The goal of the project was to enhance the understanding of vernal pools' distribution and ecology in Michigan to more effectively manage and conserve them.



⁵ SFI 2015 Progress Report, *Growing our Future, 1995-2015: Celebrating 20 years of Leadership and Growth*. Available at: www.sfi-program.org/files/sfi-2015-progress-report/

Water

Water is essential for production of paper and wood products, and AF&PA members have taken important steps to improve and preserve water resources. Between 2000 and 2010, AF&PA member pulp and paper mills reduced the amount of water needed to produce one ton of product by 15.2 percent. In 2011, members established a goal of further reducing water needed for paper production by 12 percent by 2020, based on a 2005 baseline. Reducing water use can lead to reduced energy demand and decreased GHG emissions.



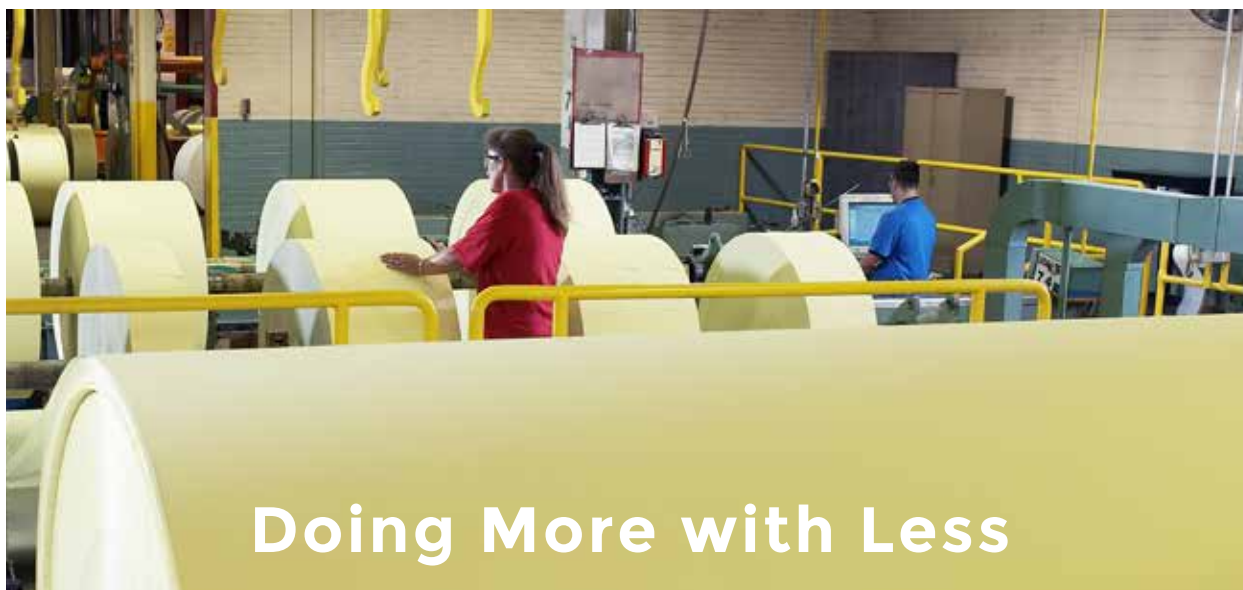
Eighty-eight percent of the water used for production of paper and wood products is returned to the environment after treatment in a wastewater system, meaning that only 12 percent is “consumed” (water that evaporates during the manufacturing process or that is in products is considered “consumed”).⁶ The water that pulp and paper mills return to the environment is reused at least ten times in the mill before discharge.⁷

Since 2000, pulp and paper mills have reduced total suspended solids (TSS) and biochemical oxygen demand (BOD) released in treated effluents by 18.5 percent and 12.7 percent, respectively.

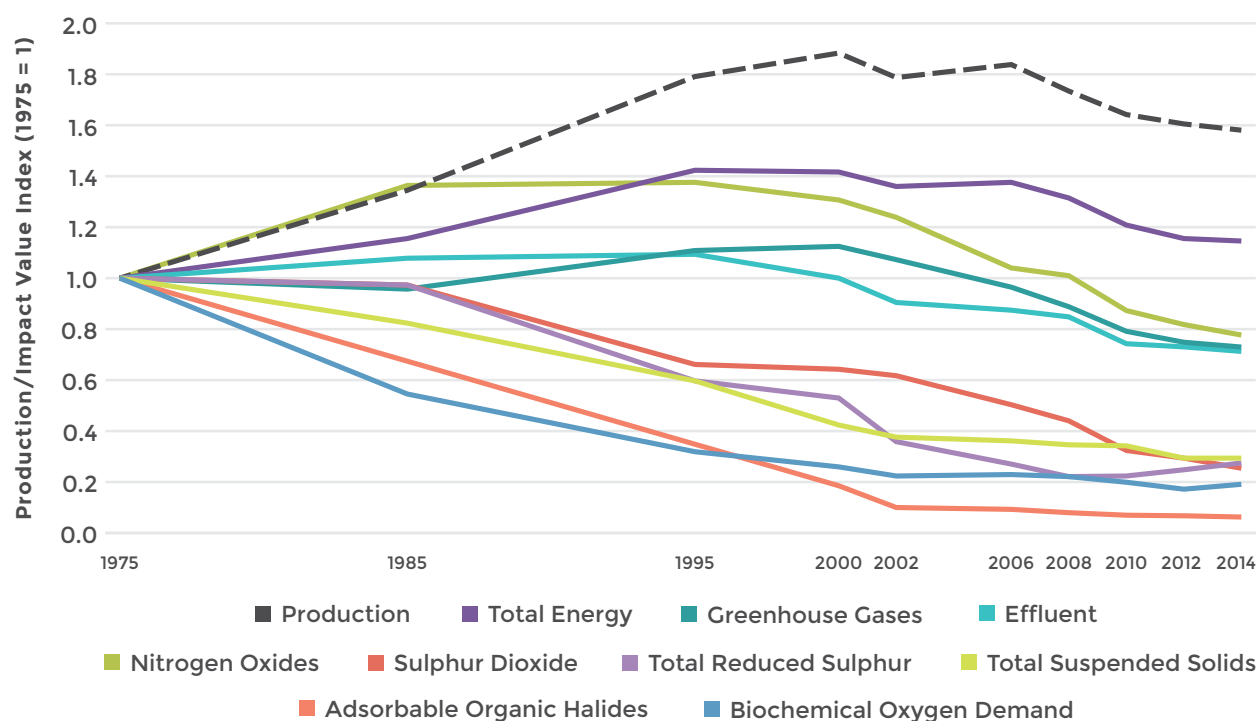


⁶ Based on analysis of 2006 data by the National Council for Air and Stream Improvement (NCASI)

⁷ Based on NCASI analysis



Through the use of science and technology, AF&PA members strive for continuous improvements that “decouple” the demand for goods and services from the demand for natural resources and emissions. The graph below shows that, for decades, the industry’s production increased, while the amount of emissions and energy use is overall declining. As we get closer to background levels of emissions, it becomes much more challenging and costly to achieve continued reductions.





Social

Safety and Employee Well-Being

The safety of our workers is of paramount concern for our members. Injuries to employees are unacceptable, which is why the industry has a vision of zero injuries in the workplace. Our members continually work to develop innovative methods to realize this vision, such as developing protective gear specially designed for potentially hazardous situations encountered by workers.

The industry recognizes that we still have further to go before we realize our vision of an injury-free workplace. AF&PA members have a variety of programs to promote the well-being of their

employees and the communities where they operate. In addition to required safety training for 100 percent of new employees and providing useful and timely safety updates, member companies offer employees health risk assessments and health promotion programs, as well as hosting on-site health fairs. Many of our members offer education on a variety of issues, including diet and weight management, high blood pressure and cholesterol, smoking cessation, stress and substance abuse.

2015 LEADERSHIP IN SUSTAINABILITY AWARD
FOR SAFETY:

Resolute Forest Products' Working Towards Zero Incidents Project

A multi-disciplinary task force at Resolute Forest Products took the initiative to design a safer, watertight, more comfortable, breathable chemical protective suit that is appropriate for all mill-related working requirements. In addition, the new suits can be used for at least a year, as opposed to the previous disposable suits, of which employees used and discarded many per month.



100%

New AF&PA member employees
who received safety training
in 2014

68%

AF&PA members who offer
apprenticeships or internships to
college students

64%

AF&PA members who have either
a charitable giving program or a
corporate foundation to promote
philanthropic activities

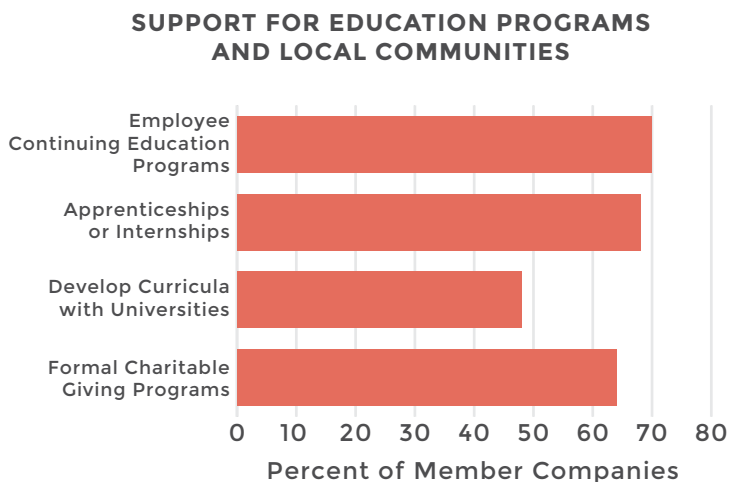


Promoting our Workforce

Beyond health and safety, our members are dedicated to helping their employees realize their full professional potential. Seventy percent of AF&PA member companies support their employees' continuing education and career development efforts through reimbursement of college tuition or external programs, in-house training or sabbaticals.

The average age of a U.S. paper and wood products industry employee is 46.9 years.⁸ To educate and train a new generation of paper manufacturers, 68 percent of AF&PA member companies offer

apprenticeships or internships to college, university and technical institute students. And 48 percent work with colleges, universities or technical institutes to develop curricula that will produce trained graduates.



⁸ U.S. Bureau of Labor Statistics

Engaging Local Communities

Sixty-four percent of AF&PA member companies either have a charitable giving program or a corporate foundation to promote philanthropic activities. Below are some examples of ways in which our members are working to improve their communities.

Improving Water Transport, Improving Lives

Greif's PackH₂O™ backpacks answer the need for clean, easy-to-carry means of transporting and storing household water in regions where water must be transported by foot from source to home and disaster areas with limited access to clean water. Seven times lighter and seven times smaller than an average plastic jerrycan, PackH₂O™ backpacks ease the burden of water transport for women and children, while reducing spills and waste and helping to keep water clean. At the end of 2014, PackH₂O™ backpacks were present in 35 countries on four continents.

Employee Volunteerism and Community Giving to Improve the Environment

Clearwater Paper joined forces with the Palouse-Clearwater Environmental Institute on a multi-year restoration project at Lindsay Creek, Idaho, a highly visible area that had deteriorated over the years. Clearwater Paper donates an annual \$10,000, and employees have volunteered hundreds of hours planting trees, weeding and providing general clean-up services for the Lindsay Creek stream bank, helping to radically improve the wildlife habitat, water quality and the area's visual appeal.

2015 INNOVATION IN SUSTAINABILITY AWARD:

Domtar's Plymouth K-Lime Project

Domtar's Plymouth, North Carolina mill eliminated materials being sent to landfill by creating K-Lime, a substitute for traditional fertilizer that consists of byproducts of the manufacturing process. K-Lime is all-natural and works better than traditional fertilizer, with farmers reporting increased crop yields. Provided by Domtar to farmers at a third of the cost, K-Lime proves that sustainability can be simultaneously good for the environment and the bottom line.

Transforming Communities, One Tree at a Time

Boise Paper, a division of Packaging Corporation of America, created Project UP™, which turns abandoned urban spaces into neighborhood gathering places where families and individuals can come together, relax and thrive. Boise Paper provides the financial support for every Project UP™ park and partners with the Arbor Day Foundation, community leaders, and hundreds of dedicated volunteers to revitalize these neglected spaces into parks that help the planet, people and economy prosper.

Providing Insights and Exposure

At the local Conval Regional High School in Peterborough, New Hampshire, **Monadnock Paper Mills** participates in a STEM program that helps to prepare students for occupations such as industrial manufacturing after they graduate. Monadnock opens their facilities to allow students to explore aspects of their operations like testing methods, capital process, and quality control.

Partnerships for Success

Sonoco executives participate on the boards of The Sonoco Institute of Packaging Design and Graphics at Clemson University and The Moore School of Business at the University of South Carolina. Through semester-long partnerships, students from these schools gain class credits through work with Sonoco on real-world business projects, providing experience to the students and fresh perspective and recruiting opportunities to Sonoco.



OUR PRODUCTS

Printing & Writing Papers

Printing and writing papers play a key role in nearly all aspects of everyday modern life. From promoting reading comprehension, information retention and learning, to communicating to individuals and wider audiences, to providing personal and vital information, printing and writing papers have adapted to fit the needs of each new generation throughout all sectors of society and around the world.

Most official documents are paper-based and serve as proof of who we are, what we have achieved and what we own, such as birth certificates, passports, social security cards, high school and college diplomas, professional licenses, the deeds to our homes, and the titles to our cars.

Paper captures, documents and preserves milestones and memories in baby books, artwork, personal diaries, handwritten letters and cards, and photo albums.

OUR PRODUCTS

Paper-Based Packaging



Corrugated Boxes

Corrugated containerboard is used to ship and transport everything from electronics to fragile glassware to perishable goods. Corrugated is a durable, versatile and light-weight paper-based material frequently used to make boxes, containers, and displays.



Paperboard Packaging

Paperboard (also known as boxboard) is a paper-based material that generally is thicker than regular paper. It packages food, medicine and toiletries, protecting products during transport and increasing the shelf-life of perishable products. It is engineered to be sturdy, yet lightweight, and is customizable to meet product- or customer-specific needs.



Paper Bags & Shipping Sacks

Paper bags come in a variety of shapes and sizes and exist with or without handles for carrying. Often, paper bags are printed with store and/or brand logos. They give customers a sustainable option to carry and contain their purchases. Paper shipping sacks are often used as containers to safely and economically ship bulk materials such as fertilizer, animal feed, sand, dry chemicals, flour and cement. Paper sacks act as a barrier to protect products from moisture absorption and loss and prevent chemicals from coming in contact with products.

OUR PRODUCTS

Pulp

Wood pulp is one of the most useful, versatile and abundant renewable resources on the planet. Not only is it used in products the average consumer is familiar with – paper, paper cups, tissue paper, cardboard boxes – but over the years the industry has found additional applications for different forms of pulp. It is present in specialty products as diverse as LCD screens, home decor, food casings, and filters.

Fluff Pulp

Fluff pulp is a chemical pulp produced from softwood trees like spruce, fir and loblolly pine, which have fibers ideal for absorbent and personal care items like diapers, feminine hygiene and adult incontinence products.



Dissolving Pulp

Dissolving wood pulp contains more than 90 percent pure cellulose. It is typically not made into paper products but instead is dissolved in a solvent or other solution and then spun into textile fibers like rayon or Lyocell; chemically reacted to be formed into fibers or films; or used as a thickener for other products.

OUR PRODUCTS

Tissue

Tissue products are a popular, growing market that includes bathroom tissue (toilet paper), facial tissue, paper napkins, paper towels, wipes, disposable baby diapers and adult incontinence products, feminine care products, special sanitary papers (such as those used in the medical industry), and decorative tissue papers, like crepe paper and laminated tissue papers.

Tissue products have helped to create modern life. They contribute to improved hygiene and convenience in our society, reducing the risks of communicable diseases. Tissue products also are lauded for their strength, ultra-light weight, and softness.

Advancements in manufacturing technology include more efficient fiber use and improving the design of tissue products and the way they are dispensed. These innovations allow the tissue sector to keep up with growing consumer demand, improve existing products, and develop new products.





OUR PRODUCTS

Wood Products

Wood products are fundamental elements in the construction of commercial and residential green buildings. They also include cabinets, fixtures and trim, home and office furniture, floorings, decorative panels, doors, and window frames.

Wood product categories include lumber, plywood, oriented strand board (also known as OSB), composite panels and particleboard.

Wood products are among the most energy-efficient and environmentally-benign of all building materials. Wood products require a lower amount of energy to harvest, manufacture and transport than competing materials, store carbon, and can be deconstructed and reused in new construction. Some wood products, such as particleboard and fiberboard, are made from wood residuals like saw dust.



The AF&PA Sustainability Awards

The annual AF&PA Sustainability Awards are designed to recognize AF&PA members' exemplary sustainability programs and initiatives. Distributed throughout this report are summaries of member company programs that won awards in 2014 and 2015.

There are two categories of AF&PA Sustainability Awards. Leadership in Sustainability Awards highlight projects that support progress toward the *Better Practices, Better Planet 2020* sustainability goals in one of five corresponding subcategories: Paper Recovery for Recycling, Energy Efficiency/Greenhouse Gas Reduction, Sustainable Forest Management, Safety, and Water. Innovation in Sustainability Awards showcase projects that merit recognition for their contribution to sustainable business practices, not one of the goals specifically.

2014 INNOVATION IN SUSTAINABILITY AWARD:

Domtar's BioChoice Lignin

Domtar's BioChoice Lignin plant produces new value streams out of existing resources, offering a timely solution for those looking to reduce their dependence on fossil fuels. Domtar leveraged their Plymouth, North Carolina mill's existing infrastructure to start a lignin separation plant – the first of its kind in North America in over 25 years. Lignin is the natural glue that holds wood fibers together. While it is most commonly used as a carbon-neutral source of fuel, modern technology allows it to be made into a wide range of sustainable products, including coatings, natural binders, plastics and resins.





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10% total recycled fiber

<http://sustainability.afandpa.org>