

# 2014 REPORT TO THE MEMBERSHIP



THE RAILWAY TIE ASSOCIATION  
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## INTRODUCTION:

The 95<sup>th</sup> year of continuous operation for the Railway Tie Association (RTA) is one of expansion. RTA's core programs and services remain vibrant and vigorous, while new initiatives set the scene for affirming RTA as an education-first organization.

Before launching into this year's new efforts, a review of RTA's mission and the ongoing programs and services that fulfill it provides a foundation for the next decade of work on behalf of wood crosstie manufacturers.



## MISSION:



RTA's mission is to provide the forum and direction for the continual improvement of the engineered wood crosstie system AND to communicate this effectively and efficiently to those who would be users of these products.

The fulfillment of this mission is reached by implementing programs and services that provide research and product development opportunities and educational tools for producers and members. RTA also develops and maintains wood tie specifications, publishes relevant documents and periodicals, cooperates on legislative initiatives and environmental issues with industry partners, and expands the ability of all those that interact with RTA members and the members themselves to conduct business and communicate more effectively with one another. This

is accomplished with the input and action of four standing member committees. Each committee is tasked by the Executive Committee to plan, execute and report on the progress of all assignments and committee generated ideas.

RTA functions are provided for by a 2-cent per tie program that has been the backbone of association since 1986. An interesting fact: since 1986 there have been no per tie dues increases. This means that even with massively expanded programs and activities, producer members contribute today, in real terms (inflation adjusted), less than half of what they did in when the 2-cent per tie program was instituted. The effects of inflation makes 2-cents from 1986 now equal to only 0.925-cents in real purchasing power. Huge productivity and efficiency gains, plus the growth of the rail industry over the past 30 years, have made much of this possible.



## CURRENT & ONGOING PROGRAMS & SERVICES:



RTA's three industry exclusive annual events attract hundreds of attendees for education and networking.

### 1. Three meeting events reaching 375+ members annually:

- Annual Technical Conference
- RTA Tie Grading Symposium
- RTA Member Safety and Material Handling Field Trip

### 2. Publication and distribution of the print and digital edition of *Crossties* magazine to well over 5,000 industry contacts bimonthly



### 3. Development and maintenance of the RTA website [www.rta.org](http://www.rta.org), featuring over 150 pages of public and member-only content. Google analytics show that the RTA website has over 250 hits daily, which translates into

nearly 100,000 annual visits by readers from 145 countries around the globe.



Top international hits come from Canada, Brazil, Germany and India.

### 4. 18 video on demand and CD-ROM based online training modules and tests for tie graders

### 5. Publication of more than 30 relevant documents and posters (such as *From Tree-to-Track* and *The TieGuide*) that disseminate the story of the wood crosstie and the quality control that goes into its manufacture

### 6. Specifications and encyclopedic production and engineering guides for the wood crosstie

### 7. Economic research and industry data development tools

### 8. Member production and inventory tracking, economic demand forecasting and tools for business modeling and planning

### 9. Rail industry tie usage and demand surveys conducted annually

### 10. Research Programs and Projects – 30+ in the past 25 years including:

- Quantifying wood tie and alternative tie life, plus degradation mechanisms (multiple studies)
- Borate dual treatments with creosote and copper naphthenate
- Alternative wood preservation research – RTA-AWPRP
- Identifying and classifying a Tie Usage Index for increasing the application of underutilized wood species for ties
- Developing a Gateway Document for new and alternative product introduction to the marketplace
- Analysis of wood tie vs. alternative tie unit values and installed costs (multiple studies)
- Tie condition inspection and evaluation
- Wood tie and fastener performance and wood tie recycling
- Track and traffic density studies
- End-of-life evaluation of environmental consequences and options, and
- PAH (creosote) fate in the environment research.

## CURRENT & ONGOING PROGRAMS & SERVICES:

### 11. Multiple member-driven committees covering these issues:

- Executive
- R&D
- Legislative (CLEAR)
- Manufacturing and Safety
- Education



RTA goes to DC in partnership with railroads and hardwood timber interests each year. In 2014, staff met with congressmen and senators to tell the American jobs story that defines railroading and wood tie production.

**12. Cooperation and maintenance of industry association relationships** (WWPI, SPTA, Creosote Council, TWC, AAR, AREMA, ASLRRA, NRC) on the wood preserving and railroad sides of the tie industry, including RR-Day-on-the-Hill, where RTA and its members have been key players in lobbying for balanced regulation for railroads, opposing larger trucks and weights and implementation of the short line tax credit. All these issues have had positive, direct bottom-line impact for tie producers.

**13. Publication and distribution of print and two digital online editions of the Membership Directory**

**14. Two annually awarded \$2,000 John Mabry scholarships** provided forestry students whose scholastic achievements are matched with a career path goal of working in the industry

**15. PR, advertising and image building campaigns for the wood tie.** These include annual advertisements in multiple rail publications that promote the wood tie and RTA brand. Image building ads such as Green by Nature also help promote the environmental friendliness of the wood tie.



**15. Social Media outreach on Facebook, Twitter and Wikipedia,** which has propelled over 50% more users to visit [www.rta.org](http://www.rta.org) in 2014 (YTD) and enhanced the connections and communication between members



**17. Online access to Trends Reports that track real-time conditions surrounding the procurement of ties in the field**

**18. Member Media Kit development and distribution for public outreach**

**19. Member-Only online discussion groups** (“Circles”) that allow members to post relevant documents, comments, photos, and proprietary information for customers and the membership

These are just some of the more visible activities and tools RTA has developed and continues to offer each and every year to fulfill the mission entrusted it by our members. Yet, it is only a beginning. Every association is a living and breathing organization that must continue to set new goals and increase its reach on behalf of the industries it serves.

*So what are some of the new efforts RTA began in 2014?*

## NEW VALUE-ADDED INITIATIVES:

The most important and far-reaching new program for the future will reaffirm RTA as the industry's go-to source for education for both the non-engineering professional and professional engineer on the principles of wood tie performance and application in the railroad track environment. Partnering with the University of Delaware, RTA will build and then help market multiple engineering course video modules to cover the following subjects:

### INITIAL MODULES: *(to be prepared in 2014)*

#### • Introduction to Railroads and Transit Systems for the non-railroad professional

A three-hour module for non-railroad professionals to introduce railroad and transit operations at a level designed for someone new to the rail industry. It covers the differences between freight rail, passenger rail (high speed and conventional) and transit rail operations together with an introduction to the major areas of track, vehicles (cars and locomotives), operations and signals. It presents basic terminology and functionality to include both North American (AAR) and International (UIC) railroad structures.

#### • Introduction to the function of the railroad crosstie for non-railroad professionals

A three-hour module for non-railroad professionals to introduce the railroad track structure and the role of the crosstie in that structure. It covers the functions of the crosstie, within the overall track structure, as well as the key performance requirements for the crosstie. It addresses the differences between timber, concrete, steel and plastic/composite ties, the strengths and weaknesses of each. It addresses the different failure modes of the ties and the differences in maintenance requirements and strategies.

### PHASE 2 MODULES: *(to be prepared in 2015)*

#### • The railroad load environment and the engineering of the crosstie

A one-hour module that discusses the load environment of the track structure in general and the crosstie in particular. It discusses how load transfer takes places to the crosstie and the magnitude of the loads that a crosstie will see. It addresses vertical, lateral and longitudinal loading (to include thermally induced longitudinal loading), and the effects of these loads on the crosstie. It is designed for engineers.

#### • The engineering and design of the crosstie

A two-hour module designed for engineers that discusses the engineering issues associated with the loading of the crosstie, and its performance requirements. It discusses the strengths and weaknesses of



Hands-on learning experiences are supplemented with industry first video educational modules and tests. 2014 saw additional modules in railroad engineering produced for RTA by the University of Delaware's Dr. Allan Zarembski.

different ties in addressing these engineering issues. It provides an overview of the different design issues associated with timber, concrete, steel and plastic/composite crossties.

#### • Timber crosstie failure and degradation modes

A one-hour module designed for engineers that provides a detailed discussion of the different failure modes for timber tie track. It also discussed the rate of failure, life of timber crossties as a function of key track and traffic parameters (e.g., curvature, tonnage, climate, etc.). It presents the forest products failure distribution curve and how that is used to determine the rate of failure and to predict tie replacement requirements.

#### • Economics of Timber vs. Concrete Crossties

A one-hour module that discusses the economics of wood vs. concrete crossties from a first cost and Life Cycle Cost (LCC) basis. It introduces the RTA's SelecTie model\* and shows how the economics are dependent on several key variables to include annual tonnage, curvature, and environmental condition; together with such performance parameters as life of the crosstie in service.

Along with these educational tools RTA will, over the next two years; work towards revising and simplifying the RTA SelecTie costing model for RR planning and ROI determinations.

## NEW VALUE-ADDED INITIATIVES:

### FUTURE MODULES: (TBD)

- **Wood preservation and treatment of timber cross ties**

This is a series of modules dealing with the treatment of timber cross ties. Possible topics include:

- Creosote treatment standards
- Creosote treatment process
- Drying techniques
- Dual treatment of ties
- Alternative wood preservative standards and processes



RTA's R&D efforts include test work that leads to industry revolutionizing dual treatments. New projects under way now at Mississippi State University may lead to the next big improvement in the wood tie.

- **Wood tie inspection**

A one-hour module dealing with the inspection of timber cross ties. It addresses how a tie inspector can best perform his job, what to look for and how to identify problems. Its specific focus is on a walking inspection of tie condition.

- **Tie Inspection technologies**

A one-hour module that addresses existing and emerging inspection technologies beyond the visual inspection. This is to include semi-automated inspection systems such as the hand held computer systems being used by such railroads as BNSF and UP. It also includes automated inspection systems such as Aurora, as well as newly emerging inspection systems.

- **Tie Life Forecasting and Maintenance Planning**

A two-hour module that addresses tie life forecasting techniques to include the Forest Products Curve based techniques, as well as inspection based techniques using annual bad tie counts. It then shows how to use these life-forecasting techniques to forecast annual tie maintenance requirements, both at the macro (system) level and at the micro (mile-by-mile) level.

## RESEARCH-PRODUCT DEVELOPMENT & ECONOMIC:

Product Development Research continues with the RTA-Alternative Wood Preservative Project jointly sponsored with Class 1 railroads. Plans to visit the test sites in 2015 were made this year during the RTA Annual Member Field Trip.

Also explored this year is the development of a research project to determine and optimize the utilization of bio-chars for bioremediation at both the treating plant and in the railroad operating environment.

2014 also saw RTA develop and carry out another major survey effort on recycling practices for wood ties at both Class 1 and short line RRs. This effort is ongoing now and results should be available by the end of the year. Results will not only be used to update any state or

national regulatory agency on the safe recycling, disposal and/or reuse of wood ties, but will also add to the growing data base of those who can provide services for recycling of wood ties as a bio-fuel.

Economic research expanded in 2014 to include ongoing tracking of "real" tie prices. This effort to quantify and measure the effects of inflation on tie prices as compared to benchmark wood products was initiated by Class 1 inquiries and is now published on a monthly basis on the RTA website and periodically in *Crossties* magazine. Also, added this year was the inclusion of crude-by-rail (CBR) to the RTA econometric forecasting model. The CBR data component was added to offset the effects of coal shipment reduction with a correlation of over 95%.

## MORE EDUCATION:

In 2014, RTA is also working evermore diligently with WWPI and others to meet the increasing demand of western states environmental regulatory agencies as it relates to wood crosstie performance in the environment. Meetings facilitated by RTA engaged both Class 1 and Regional roads in work designed to mitigate the effects of regulatory interference in commerce.

Late in 2013, RTA participated in a joint wood preservation association meeting with the Forest Products Laboratory in Madison, WI. The purpose of this meeting was to educate FPL staff on the ongoing activities and research in wood preservation and help prioritize FPL's future efforts to benefit industry. The final report from this effort was published at [www.rta.org](http://www.rta.org) in 2014.

Meetings with Class 1 partners continued in 2014 with invitations accepted to make high-level presentations on RTA activities and research at Canadian National and CSX.

RTA also took a leading role in advocating for members opposed to the USDA Hardwood Check-Off Program. Coordinating with NWPCA and others, RTA successfully argued that industrial products should not be included in the final USDA order creating the Check-Off Program.

RTA partnered with the University of Illinois in the RailTEC Tie Symposium held in conjunction with the RTA Field Trip at Champaign-Urbana. Over 250 attendees heard from RTA members in the wood tie component of the symposium.

RTA also traveled to Utah in 2014 to give the keynote address and provide a wood tie symposium to the International Research Group in St. George. Warmly received, over 200 researchers from around the world heard the wood tie and RTA message. New wood preservative supplier members were recruited at the IRG meeting as well.

Engagement and education of legislators increased in 2014 with RTA actively supporting the Hardwood Federation (HF) with both membership and participation in DC Fly-in Day. This year's key issues RTA will provide support for and

that could directly affect the bottom line of tie producers are preventing restrictions to timber harvesting due to the Northern Long-Eared Bat, maintaining biomass carbon neutrality and preserving the tax situation that allows timber owners to keep their lands forested and provides support for private forest owners. HF membership also allowed RTA to begin to publish the weekly Economic Report of the National Association of Manufacturers, which is provided through the Member-Only Circles online at [www.rta.org](http://www.rta.org). HF was also invited to speak and exhibit at the RTA Annual Conference.

A member outreach was conducted in Q3 designed to reenergize committee participation. This effort will be ongoing online and in *Crossties* magazine and at the annual conference until the goals of increased membership are achieved.

For future use, RTA developed and produced the graphics for an RTA Trade Show style backdrop for the annual technical conference. The new backdrop will also be used in early 2015 as RTA exhibits at the NRC Conference.

Reintroduction of the RTA media kit will occur in 2014 at the Annual Conference. This kit is designed for members that wish to conduct their own personalized public relations campaign locally to have all the tools necessary for running articles or ads in local news outlets or on their own website.

Planning for the future, RTA invested in an Audio/Visual kit designed to eliminate approximately half of the costs associated with utilizing on-site A/V rentals at major events. With an estimated payback of roughly two years, this kit will result in significant long-term savings for running the Annual Technical Conference.

Finally, with the 100<sup>th</sup> anniversary of the association now only 5 years away, preliminary planning for the celebration will begin later this year. Historical photos and documents are being collected and archived. Member outreach will begin in the coming years leading to a Centennial Celebration, the likes of which this industry has never seen.

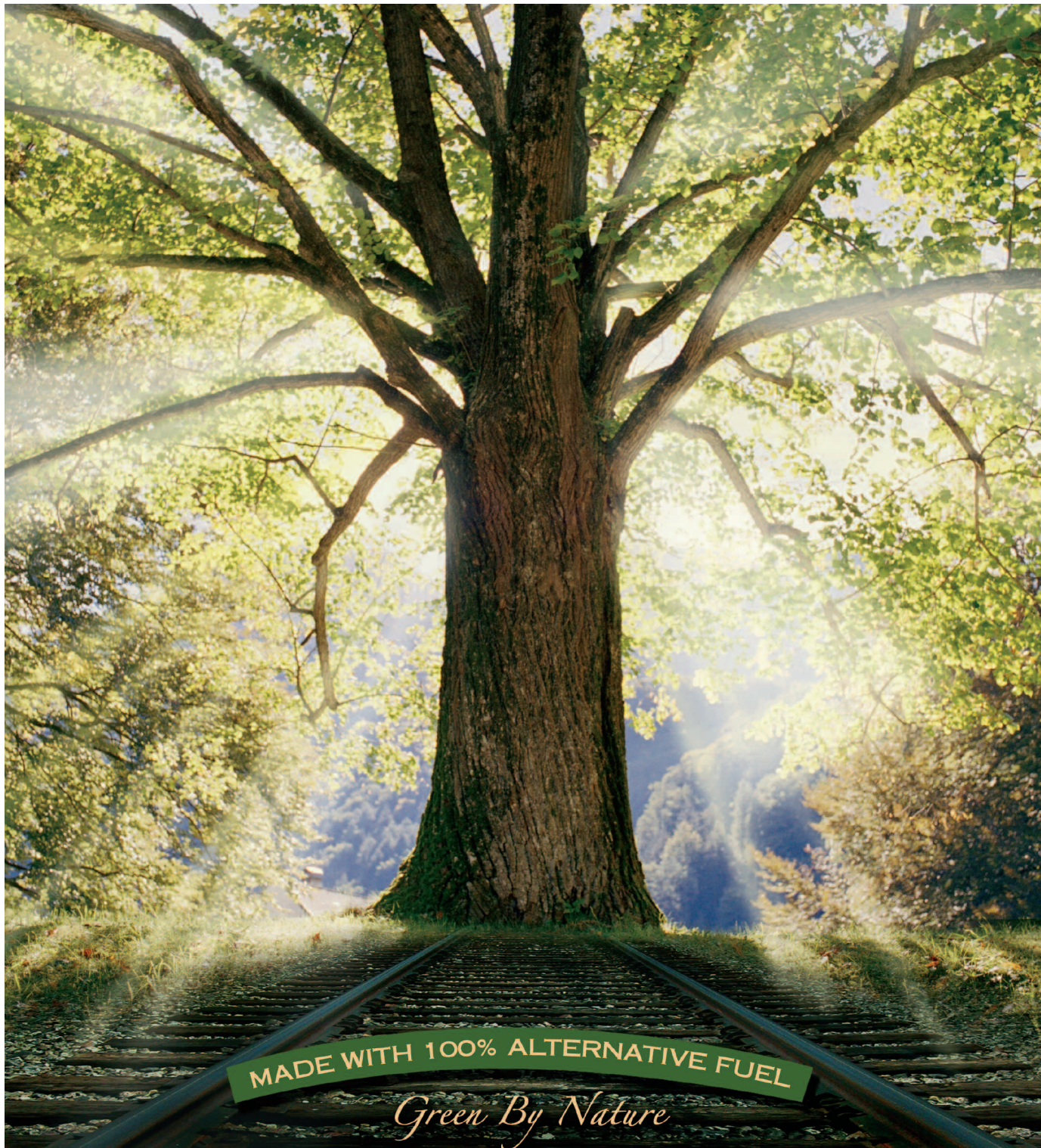
## Thank You!

Staff recognizes, thanks and applauds all the RTA members of and suppliers to the association who so generously give of their time, resources and energies to provide the wings of support that allow the realization of all of these efforts.

**Jim Gauntt**  
Executive Director

**Debbie Corallo**  
Administrator

**Barbara Stacey**  
Committee Coordinator/Webmaster



MADE WITH 100% ALTERNATIVE FUEL

*Green By Nature*

What a green idea. Forests soak in solar energy and act as a carbon trap for greenhouse gases to produce the only renewable foundation for our railroads – hard-working wood crossties. And when their decades of service in track are done, they give their all one final time – as biomass fuel in energy cogeneration plants across the land. From alternative fuel to alternative fuel. What could be greener than that?

Contact the Railway Tie Association for our free brochure to learn more about just how green wood crossties are by nature.



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