RTA

The Railway Tie Association

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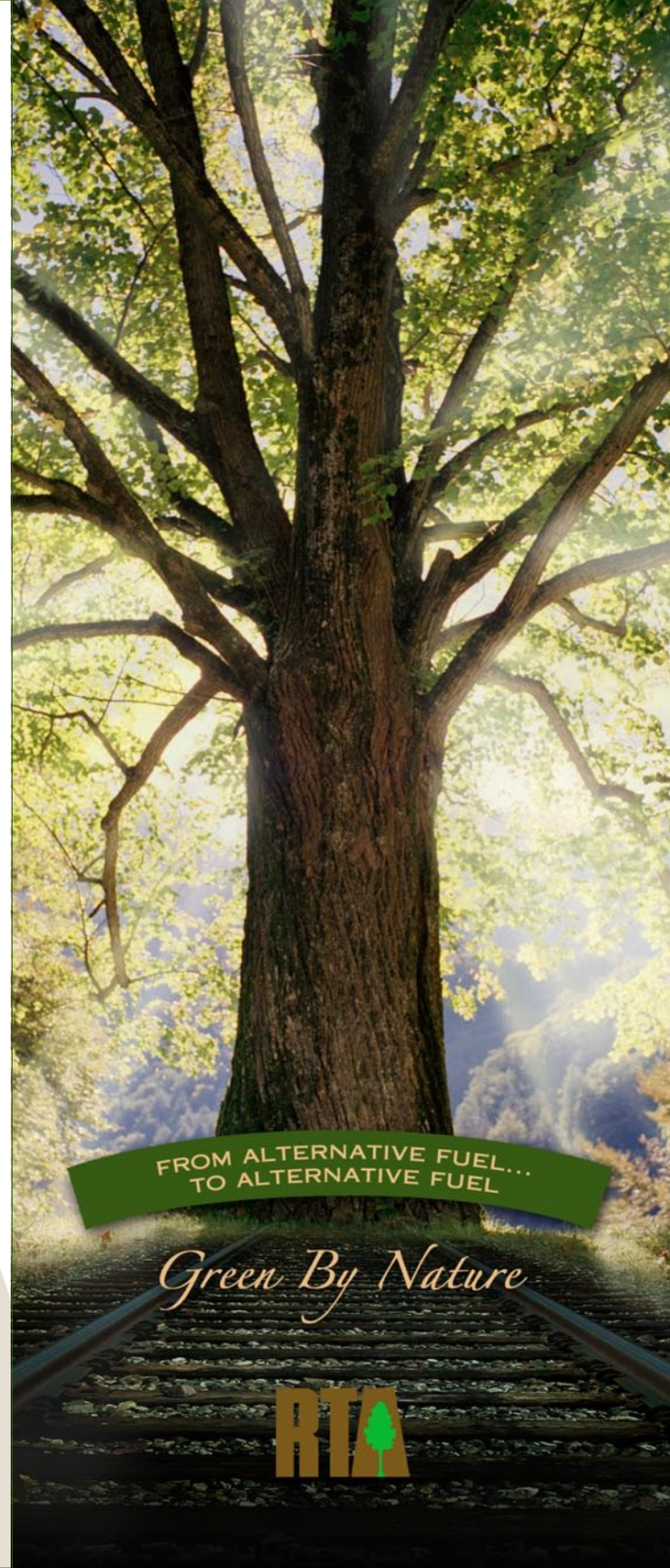

Imagine a world where the end of a product's life cycle results in a near-net balance in terms of energy consumed and generated, where our planet's health and the customer's needs gain equal footing. If this sounds like a visionary's dream, welcome to The Green Future – at least as it relates to the life cycle of the venerable wood crosstie.

Today's wood crosstie is truly a green product. In fact, it may be the greenest product used for railroad infrastructure:

- *Wood is a product derived from alternative fuel – solar energy.*
- *Wood acts as a carbon sink and traps green-house gases.*
- *Wood is the only renewable resource used as crosstie material (compared to concrete, steel and plastic).*
- *Wood crossties are far less energy-intensive to produce than steel or concrete ties.*
- *When its useful life is over, the wood tie is possibly the best source of biomass fuel that exists in our world today.*
- *Even the preservative creosote, used to make ties last over 30 years in high-stress railroad track applications, is naturally derived as a by-product of the coal-coking process. And, it is a biodegradable product as well.*

Used ties are a great biomass energy resource. And by increasing the combustion or gasification of used ties, we can reduce our dependence on fossil fuels and other sources of energy.

The Railway Tie Association is among the proponents of using wood crossties as biomass fuel after they have reached the end of their useful life. The RTA campaigns to educate decision-makers to facilitate development of reasonable guidelines and regulations that result in additional cogeneration plants in the vicinity of stocks of treated wood crossties ready for final disposal.

What Exactly Is 'Biomass'?

Biomass is a term that refers to all kinds of organic matter. Biomass energy production refers to a variety of methods that convert organic matter into forms of energy. Biomass cogeneration is the production of two forms of energy, a comparatively economical and environmentally friendly alternative to the use of fossil fuels. The gasification process generates a clean gas that can be substituted for natural gas in energy-producing applications such as gas turbines and fuel cells.

Every unit of biomass energy replaces one derived, for example, from fossil fuels, thus reducing greenhouse gas emissions.

As they grow, trees absorb carbon dioxide from the Earth's atmosphere acting as a carbon trap for greenhouse gases. At the end of their useful lives, ties produced from trees are sources of economical, recoverable biomass energy.

Why Burn or Gasify Old Ties?

The use of treated wood crossties in biomass cogeneration facilities offers numerous advantages. With today's modern technology employed in approved facilities, burning old creosote-treated ties is perfectly safe. In fact, used ties' value as a fuel source is even greater than that realized from untreated wood.

Creosote-treated ties have a higher BTU fuel content than untreated wood. Treated wood contains 7,500-10,000 BTU's compared to 3,500 for untreated material. Creosote-treated ties burn even hotter and cleaner than untreated wood, thus delivering lower NOx and SOx emissions.

Crosstie cogeneration's ash is very clean. In fact, it is safe for use for pH adjustment and soil stabilization in acidic soil profiles in landfills and strip mines. Cogeneration also reduces landfill space taken up by tie disposal. A 250-pound tie, for example, is reduced to fewer than two pounds of ash in the combustion process.

The use of treated wood crossties as a biomass fuel is a complete disposal solution, a true cradle-to-grave success story for today's environmentally conscious world.