



- * Stronger than Plastic
- * Safer than Wood
- * More resilient than Concrete
- * Smart Design flexibility
- * Lighter than concrete by 50%
- * Environmentally friendly
- * Made from recycled waste
- * Made in America

NP&G INNOVATIONS



BEFORE



The **NP&G Cross-Tie™**, a patented concept, provides important environmental benefits by two design attributes. First, the new cross-tie concept is the use of reinforced rubber sections cut from discarded tires. Nearly 300 million tires are discarded in landfills each year, with approximately 25% of them discarded in landfills with the associated environmental hazards. Second, the common hard wood cross-ties are treated with creosote to significantly improve its life cycle. The EPA has classified creosote as a restricted use material. Approximately 1.5 billion cross-ties are replaced each year in the US and many are left in the rail right-of-way due to disposal costs.

Aside from the environmental benefits a key design benefit of the NP&G Cross-Tie™ is the concept's extensive design flexibility. This flexibility enables it to be customized to specific applications. For example, intermixing some alternative cross-ties with wood ties can reduce the mismatch in bending stiffness. The NP&G cross-tie can be designed to match the wood ties and enable a smoother ride.

Another life cycle benefit of the NP&G Cross-Tie™ is its durability. Operational life times should approach 50 years, compared to the 7-10 year lifetimes of wood ties. The combination of long life and environmentally friendly materials makes the Cross-Tie™ a superior option to all the other cross tie options available today, including concrete, plastic, composite and steel.

Cal Nichols Lu Gilbert Jim Pike | www.NPGInnovations.com | 315.655.1234

2010 ushered in some exciting new opportunities for NP&G. One strengthens our rail tie with strong interest in India. The second opens a whole new product line while the third guarantees patent protection. NP&G has also attracted several NY state grants for desired development of used tires.

NP&G built ties for Escorts Ltd, Faridabad, India, a billion dollar privately held company looking to enhance their rail product line. Escorts and NP&G are currently negotiating to build ties in the US. The availability of used tires in the US will provide an excellent export opportunity. Partners spent 10 days with Escorts personnel meeting industry and government representatives. The immediate need is for a weight reduced bridge sleeper, concrete is much too heavy and would require substantial bridge reconstruction while wood products are non-existent.



Our second new opportunity is in the field of noise reduction for the US around heavily populated cities. N&G built ties for Colorado DOT to be place south east of Denver. The original premise was for noise reduction and using recycled tires. The project has been successful and NP&G has been asked to design a product specific for noise reduction. A product has been designed and now, with this product line, we offer a recycling of approximately 95% of a used tire carcass.



Our patent position grows with acceptance of current application. NP&G now has the acknowledgement of the US Patent Office of the novel concept our design encompasses. The new patent as of this writing has been accepted, although patent number has not been issued. Our new patent, when combined with already owned US patent 5, 996,901, allows comprehensive protection for our entire concept, 11/315,724 will shortly be assigned a US Patent number. PCT application number

Our tie development accomplishments continued as we succeeded in passing the TTCl electrical impedance test and completing a developmental lateral fatigue test as the last phase of official testing begins. A 2 million cycle lateral fatigue test similar to those conducted in Europe and on our own test station gave us the necessary data to complete the last test phase. The rail industry uses low current electricity for signal systems, an impedance test is required. The NP&G tie, using an insulator, passed.]



New York State has awarded NP&G a second grant that should allow us to develop some tread processing equipment. Working with RIT's Center for Integrated Manufacturing (CIMS), NP&G will begin developing planned equipment for tread processing. In 2010, RIT also designed and administered a noise/vibration test to aid us in predicting the energy absorption differential of wood, concrete, plastic and our NP&G tie. Results were as expected, plastic was similar to our SR4T while concrete provided no sound advantage and wood appeared slightly better than concrete.

2011 offers exciting opportunities to finish TTCl testing, finalizing negotiations to provide ties for the Indian market, develop needed processes and continue expanding intellectual property controlled by NP&G Innovations.

Cal Nichols, President

NP&G Innovations

November 29, 2010

Mr. Lu Gilbert
Vice President, Production
NP&G Innovations, Inc.
67 Albany Street
Cazenovia, NY 13035

Dear Mr. Gilbert:

I am pleased to inform you that the application submitted by NP&G Innovations, Inc. (NP&G) to Empire State Development's Environmental Investment Program has been approved. Approval is subject to compliance with the conditions of the forthcoming contract and all appropriate federal, state and local laws and regulations, and subject to the availability of State funds.

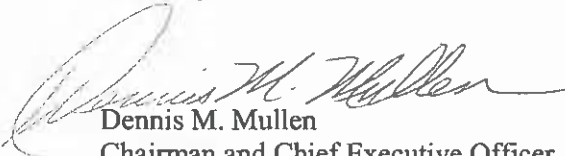
An award of \$50,000.00 toward the total project cost of \$100,000.00 will enable NP&G to work with the Center for Integrated Manufacturing Studies at the Rochester Institute of Technology in order to research and develop improved methods to cut, slice and splice scrap passenger and truck tires to make railroad cross ties. By the end of the study, new machinery will be developed that will efficiently cut, slice and splice scrap tires into 95 inch sections to meet NP&G's tolerance requirements.

Empire State Development approved this project for award on November 12, 2010, and shall remain committed through August 31, 2011, by which time all required documentation must be submitted by NP&G to prepare a contract. The commitment shall be void thereafter, unless extended in writing by Empire State Development. Eligible expenditures incurred after the November 12, 2010 award date may be considered as project costs. However, any expenses incurred prior to completion of an executed contract are made at the sole risk and discretion of the contractor.

If you are *not* interested in pursuing this award, please advise the ESU Contract Administrator, Suzanne H. Wickham, in writing, of your decision by no later than February 28, 2011. Ms. Wickham's address is Empire State Development, Environmental Services Unit, 30 South Pearl Street, Albany, NY 12245.

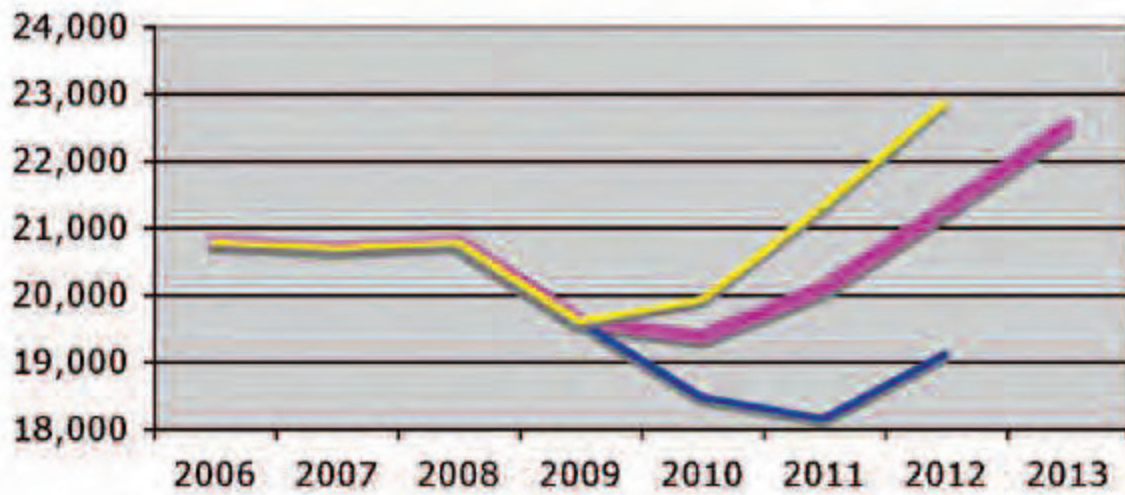
Congratulations on this award and best wishes in your endeavor. I am confident this project will have a positive impact on the environment and economy of New York State.

Sincerely,


Dennis M. Mullen
Chairman and Chief Executive Officer

cc: James Fayle, ESD
James Gilbert, ESD
Robert McNary, ESD
Amy Schoch, ESD

Purchases of Crossties (000)



Real GDP

