
Treated Wood Makes Environmental Economic Sense

The use of pressure treated wood products provides Canadians with significant environmental and economic benefits. Using treated wood saves a forest the size of our smallest province each year and creates more than \$3 billion in savings for the utility and transportation industries.

While current information indicates the environmental risks are negligible there are considerable environmental and economic advantages supporting the use of pressure treated wood. The economics are relatively easy to calculate.

A residential deck built with untreated jack pine has an average life of five to 10 years compared with a pressure treated jack pine deck which lasts up to 50 years. The material replacement costs alone, without considering labour, make pressure treated wood an obvious choice.

In industrial applications, pressure treated wood makes a significant contribution towards environmental protection while providing substantive costs savings to business and society in general. Treated wood products are used for utility poles, highway retaining barriers, docks, bridges and railway ties. All of these products are considerably less expensive than alternatives. Since most of these uses involve public service organizations, such as power, telephone, cable television companies and railways, these substantive savings work to keep costs down so that everyone benefits from the relatively low costs and long life span of pressure treated wood products.

The U.S. Environmental Protection Agency, in a 1984 study, estimated the economics of substituting other materials for treated wood. They found the cost of converting all wood railway ties to concrete ties were \$3.7 billion for the first year, and \$2.4 billion per year thereafter. Substitution of treated wood poles for concrete or steel poles would cost an additional \$1.3 to \$2.3 billion per year.

While environmental comparisons are more complex to evaluate, without pressure treated wood, Canada would harvest another forest roughly the size of Prince Edward Island every year, at current consumption rates. Wood Preservation Canada figures the industry treats roughly one-seventh of domestic solid wood fibre production annually and based the calculation on the average service life of that wood if it went untreated.

While environmental costs over the entire life cycle of a material, are much more difficult to determine, a 1992 Swedish study looked at some of the environmental consequences of using creosote-treated wood, concrete, steel or aluminum poles.

The study showed steel produces 3.5 times the amount of carbon dioxide, 5 times more sulfur dioxide and uses 16 times more water than wood for an equivalent function. Aluminum and concrete poles created even more pollution than steel during their manufacture. During steel production, amounts of lead, chromium, zinc, cadmium and copper are released into the atmosphere.

Total energy requirements were estimated for raw material extraction, processing, construction and transport for equivalent amounts of steel, concrete and treated wood. The total energy requirements were 7.5 times higher for steel, and 6 times higher for concrete than treated wood.