

# Ten Features Often Overlooked About the Extraordinary Wood Pole

Treated wood poles have carried power and communications to consumers for more than a century and treated wood poles will continue to serve us for years to come. They have been used so long, in fact, that their amazing benefits are often overlooked or even forgotten. These poles combine exceptional inherent features, which have evolved in nature over millions of years, with the life-extending capability of

wood preservation technology. And improvements continue to be made — in conditioning processes, enhanced preservative solutions, modern treating procedures, life-extending remedial treatments and streamlined delivery methods. This ensures that economical, durable, available wood poles and crossarms will be the choice of the future.

## Treated Wood Poles: Engineered by Nature, Enhanced by Technology

### 1 Proven and Re-proven Performance

Wood poles and crossarms have dutifully served the nation's communications and electricity delivery systems since their inceptions. From the days of the telegraph to today's cable and fiber optic systems, wood poles have helped to improve our quality of life. The performance of wood poles and the effectiveness of wood treatment are well established; they have been demonstrated to generations of utility engineers and building contractors for more than 100 years.

### 2 The Economical Choice

The processing cost of a treated wood pole remains a bargain — the soil is the component source and sunshine provides most of the energy needed to create wood poles, which are then supplied by multiple producers. Initial price is only one component of a product's total cost; wood poles are also economical on a long-term basis. A recent, extensive life cycle analysis of all commercial alternatives — considering longevity, maintenance, hardware and disposal — concluded that "... for most overhead line applications, treated wood, compared to steel, fiberglass or concrete, remains the most cost effective material in terms of initial costs as well as total life-cycle costs."\*

\* Utility Structure Competitive Products Report Series, Report No. 5 "Life Cycle Economics" prepared by Engineering Data Management, Inc. 1997.

### 3 Physical Properties that Cause Envy

The longevity and economics of treated wood poles result from the outstanding characteristics of wood. Millions of years of evolution have created a material that is strong and durable. Natural resilience enables wood to withstand wind and mechanical impacts that damage less forgiving materials. Wood also boasts both a low thermal expansion coefficient and low electrical conductivity; in the case of a utility pole, this means a thermally stable product that requires less insulating hardware. Furthermore, wood won't corrode or spall, and preservative treatment protects wood against its natural enemies, termites and fungi.

### 4 Longer Lasting

(probably longer than you think)

In determining the life cycle economics, the study\* found that the assumed service life of a treated wood pole greatly understates its actual life. A review of in-service records from several utilities shows that, with a responsible maintenance program, replacement averages less than 4% per decade. Thus, excluding accidents and catastrophic natural events, a typical, maintained wood pole can last 75 years or more.

### 5 Going Up

Sometimes, it is necessary to climb a pole.

Bucket trucks may be unavailable or unable to gain access to a pole. Wood poles allow for easy climbing, using techniques that are well understood and equipment that is common and inexpensive. Wood poles do not require special climbing hardware; linemen can quickly attach gaffs and climb without delay. And, surveys show that linemen prefer wood poles.

### 6 Here Today, Here Tomorrow

Furnishing poles is not difficult when supply is large and demand is normal. However, hurricanes, ice storms and other natural catastrophes place huge burdens on the production and distribution of poles. Wood poles have met the availability challenge. In emergency after emergency, over decade upon decade, the production channel has supplied wood poles on an accelerated schedule. Some individual pole plants can produce more than 400 poles per day and, working together in an emergency like recent ice storms, the industry has the capability to provide tens of thousands of poles in as little as three weeks. For example, after Hurricane Katrina, a total of 92,000 wood poles and 90,000 wood crossarms were delivered within four weeks of the storm's passing. In the wake of Super Storm Sandy, the industry provided a total of 65,100 wood poles and 103,500 crossarms.



## 7 *Looking Good . . . Naturally*

Aesthetics is a more subjective point. Next to forests, along tree-lined streets, across fields and through residential neighborhoods — the natural appearance of wood makes wood poles an ideal choice. Wood poles easily harmonize with the environment and are recognized for minimizing neighborhood complaints about visual offensiveness.

## 8 *Kid Gloves are Not Necessary*

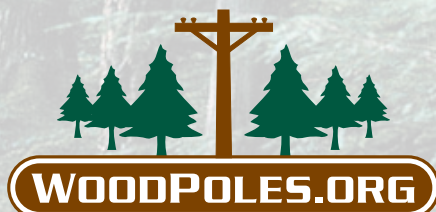
Wood poles are not only rugged in service, they are rugged before they are installed. The strength and resilience of wood, along with the deep penetration of the protective treatment, enables wood poles to withstand considerable abuse when being handled. Unloading is fast; special slings or equipment are rarely needed. Poles can be stored in space-saving piles. Dents and surface nicks that would impair other materials do not harm wood poles nor require repair procedures.

## 9 *Easy Maintenance, Easy Modifications*

Periodic inspection — with remedial treatment when needed — is a widely accepted, economical practice for adding decades of service life to wood poles. Most maintenance is simple and can be performed by trained utility personnel or outside contractors. Similarly, most modifications are easy. Drilling, reframing and adding or changing hardware can be performed promptly on the spot. Remedial treatment and modifications are done in-place without removing the line from service.

## 10 *You Don't Get Much Greener*

An independent life cycle assessment confirms that treated wood utility poles use less energy and resources, offset fossil fuel use and have a reduced environmental impact when compared to concrete, steel and fiber-reinforced composite utility poles. Wood poles are made from a plentiful and renewable resource grown on managed timberlands. Growing trees produces oxygen and wood stores carbon; wood poles help limit the accumulation of greenhouse gases. And used poles are recyclable in a variety of applications. Plus, due to the insulating properties of wood, eagles, ospreys and other large birds are able to perch on wood crossarms without danger of electrocution.



*North American Wood Pole Council*  
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