SUPPLY AND AVAILABILITY OF WOOD POLES

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INTRODUCTION

Three years ago (in September 1979) the Ontario Research Foundation completed a study for the Canadian Electrical Association entitled The Future of Wooden Utility Poles in Canada. This study dealt with the Canadian supply and demand for wooden poles to the year 2000. It also dealt with pole species as alternates to western red cedar; properties of potential pole species; preservative treatments and recommendations for further work.

In summary we stated that by the year 2000, annual total demand for hydro and telephone poles would be about 410,000 units with about 90 percent of them being 50 ft. (15 m) in length. The most desired pole lengths were expected to be 35 and 40 ft. (10.5 and 12 m) though 45 ft. (13.5 m) poles would have a steady demand due to multiple use.

On the basis of projected sustainable production, at then current rates of growth, the above demand would be met by Canadian forests until 1992. By 2000 a shortfall of 40,000 units was projected. We formulated an additional case in which production from British Columbia was increased by about 20 percent. In this case there would be sufficient poles for the total Canadian demand until well beyond 2000.

This paper reviews the projected supply and demand in light of today's economic reality.

THE STUDY

In Canada there are 10 or 11 major provincially based electrical utilities. Each of these have vast networks of transmission and distribution lines. In Ontario there are also regional or municipal electrical utilities which distribute electrical power. In addition there are provincially based telephone utilities using poles to carry their lines.

These major electrical and telephone utilities were surveyed by letter and questionnaire which were later followed up by a telephone interview. Information on past pole placements, expected line growth, current rate of replacement, pole size and species used were solicited. We carried out a similar survey on selected municipal utilities in Ontario. The information received gave us a reasonable idea of pole placements over the preceeding five or six years. These trends together with other factors were used to predict demand.

In order to establish similar data on the supply of poles, considerable time and effort was spent searching for data from the various provincial forestry departments. As a general rule, poles are not listed as a separate item in forest production statistics from provincial jurisdictions. In the same vein, forest inventory statistics only provide data on net merchantable volume within certain diameter limits. There is no provision of data on potential volumes of poles. It must be pointed out that a few provinces were able to provide the required data, however, they were a minority.

To supplement the above data sources we turned to the pole suppliers in B.C. and elsewhere across Canada. Discussions were held with a variety of such suppliers as well as with selected integrated forest products companies. These latter sources of information were beneficial in that they generally sold the logs to the highest bidder, i.e., pole manufacturer or sawmill.

Predictions of future pole requirements and potential supply were thus made in terms of data from the utilities and relatively soft data from the suppliers (with the exception of the pole treating companies themselves). Interwoven into the above matrix were considerations of population growth, future competitive uses for pole-sized logs, interest rates and alternate pole designs.

THE PRESENT (1982)

Since our report was completed, Canada, and indeed most of the world, has fallen into the deepest economic depression since the 1930's. We are all familiar with the litany of news of further plant closings, lay-offs, loss of markets, high interest rates and downward revisions of growth estimates. We have seen, on the supply side, a drastically reduced demand for lumber which should have made available large quantities of western red cedar poles from B.C. On the demand side we have seen a generally increasing awareness of energy conservation which has led to reduced electrical energy load growth rates. Whereas in 1978 and 1979 electrical utilities were postulating seven percent per annum load growth rates, these are now reduced to between two and four percent. The global economic situation has caused a reduction in demand for Canada's natural resources. This means that development of new facilities together with corresponding new townsites has been halted or very much curtailed. Such new projects need energy. Energy is generated, transmitted and distributed by electrical utilities which would need large numbers of poles to carry out the latter function.

Interest rates, although currently dropping, have been at their highest levels in 1981 and 1982. Producers of treated wooden poles have to maintain a certain level of inventory since there is a considerable time delay between cutting the raw pole and shipping the treated one. At high interest rates the cost of such inventory is prohibitive even though the real costs of raw poles may have decreased since 1979.

Compounding this fact is the change in buying practices of the utilities. Whereas in the past the utilities would carry inventory for perhaps 18 months these levels have dropped to less than a year. More buying on the spot market is occurring, there is less dependence on longer term commitments.

Late in 1982 we made a limited survey of selected users and suppliers of wooden poles. We attempted to obtain general rather than specific trends and were looking for visceral feelings about the short term future. It was surprising that in these tough times the same sort of refrain as heard in 1978 and 1979 was repeated. The pole suppliers felt that the utilities were their own worst enemies in that their non-steady state demand resulted in downstream interruption of supply. In the best of years the utilities give very short notice of projected requirements. The utilities have tended to continually narrow the range of pole length and class purchased. Since the forest does not produce trees in this restricted range its imposition creates many difficulties for the pole suppliers.

There have been considerable changes in the pole supply situation in B.C. One well established pole producer in the northwestern part of the province (McGillis & Gibbs) has ceased operation in Terrace. This effectively removes annual capacity for about 15,000 poles. The Koppers plant in the Vancouver area has been absorbed by Domtar Inc. The large drop in demand for cedar lumber, caused by slumps in the US housing market, has put more cedar logs on the market. Raw pole prices appear to be competitive and some bargaining can be done.

In eastern Canada the same mechanisms are at work. Reduced demand for lumber has increased the availability of poles. Prices seem to have flattened out over the past two years. There is some concern about the potential quality of poles from plantations of red pine in Ontario. Management of these stands with specific attention to pole quality is needed. Hopefully it is not too late.

The costs of petroleum have risen drastically over the past three years. This has affected the cost of oil borne preservative treatments as well as the costs of transportation. Prices paid to the treating companies for poles are static and do not totally reflect the increased petroleum costs. This implies that the treating plants are bearing the increased costs of oil. Concurrent with the increased costs of energy for transport there have been changes to freight rate boundaries which have affected prices of poles to the treating companies.

In central Canada and the Maritimes there has been reasonable competition from US poles, despite unfavorable exchange rates. In the past there have been shipments of poles from Finland but these were eliminated in 1982. Nevertheless, imports of poles in 1981 were 2.1 million linear feet, worth $6.7 million. This compares to 1979 and 1980 when about 3.6 million linear feet per year were imported having a value of $10.5 million. It would appear that Canadian utilities are still willing to buy US poles while corresponding US utilities buy only poles produced there.

The utilities appear to have reduced their pole requirements to about 75 - 80 percent of the average of the 1973 - 78 period. Their preference for better class and taller poles would likely continue if budgets allow. More utilities are actively developing and carrying out *in situ* treatment of standing poles in order to extend their useful life. Pole replacement generally has been reduced due to these treatments together with economic constraints.

THE FUTURE

Following the current, though gloomy, predictions for Canada's economic recovery, it is likely that the short term demand for wooden poles will remain about 250,000 units per year until 1985 or 1987. After that point, and assuming that there will be considerable backlog of demand, it is expected that a steeper demand curve will occur.

The net effect, however, is not expected to significantly alter demand in 2000 from that predicted in the CEA study of 1979. In realistic terms it is apparent that suppliers of poles will further cut back their operations thereby affecting the flow of materials from the forests. As demand for poles picks up in the mid-1980's the momentum lost will take time to regain. Confounding this point is the inevitable increased demand for cedar lumber which will offer a competitive and more attractive end use for the same cedar logs.

A better understanding on both parts of the difficulties that face suppliers and users of wooden poles together with a rationalization of the users' size range and the aggressive pursuit of technologies for treating other species as alternates to cedar should help to make the future less bleak.