MILWAUKEE ROAD NEWS BUREAU

824 Union Station
Chicago, Ill. 60606
Telephone 236-7600

1318 Fourth Avenue
Seattle, Wash. 98101
Telephone MA 3-6800

CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD COMPANY

Please hold for release on
Tuesday, February 20, 1973

FACTS ABOUT MILWAUKEE ROAD ELECTRIFICATION

The Milwaukee Road's electrified lines consist of 656 route miles in two separate sections: 440 miles from Harlowton, Mont., to Avery, Ida.; and 216 miles from Othello to Tacoma and Seattle, Wash. Including yards, sidings and other secondary track, 902 miles of track are electrified, involving more than 3,000 miles of transmission, feeder and trolley wire.

* * *

Electrification of the Harlowton to Avery section began in April, 1914 and was completed in January, 1917. Electrification of the Othello to Tacoma section began in the spring of 1917 and was completed in March, 1920. A 10-mile stretch from Black River Jct., Wash., to Seattle was electrified in 1927. The first electrically-powered train on the Milwaukee Road ran 112 miles from Three Forks to Deer Lodge, Mont., on November 30, 1915.

* * *

The Milwaukee Road has 38 electric locomotive units, seven of which are inoperative. Twelve of the operative units were acquired in 1950 and the remainder between 1915 and 1919, making them very likely the oldest locomotives in regular service on American railroads. At peak ownership, in 1950, the Milwaukee Road had 116 electric units.

* * *

At present, electrified operation is used only on the Rocky Mountain Division between Harlowton and Avery, accounting for about 19 per cent of the locomotive unit miles on that

- more -

division. During 1972, Coast Division operations in Washington were completely dieselized, although catenary and substation facilities are still in place.

* * *

Only 3 per cent of the total locomotive unit miles on the Milwaukee Road system in 1972 were electrically operated. If all electrical operations had been replaced by diesels in 1972, the railroad's diesel fuel oil consumption would have increased by only about 4 per cent. This amounts to less than one hundredth of one per cent (.01%) of the total fuel oil consumption of Class I railroads in the United States in 1972.

* * *

The original cost of electrification (exclusive of the 1927 Black River Jct.-Seattle portion), including equipment, labor, material, locomotives and structures, was approximately $23 million. A study released in 1925 reported that after 8½ years of electrical operation, the original investment had been recouped in savings and an additional $12.4 million in savings had been realized by the railroad, in comparison to what the projected cost of steam operation in electrified districts would have been.

* * *

The electrical system employs 3,000-volt D.C. current to drive the locomotives. This current is gathered by the locomotives from an overhead trolley wire (catenary). The power suppliers, the Montana Power Company, the Washington Water Power Company and the Puget Sound Power and Light Company, supply electricity in the form of 100,000-volt A.C. current. At the substations, of which there is a total of 22 at approximately 30-mile intervals, the electricity is converted to the system voltage and fed into the trolley wire.

The 3,000-volt system was the highest voltage ever employed for railroad use when it was built. Modern electrified operations, like most of those in Europe, employ a much higher voltage, usually 25,000 volts A.C., but some new systems are using 50,000 volts A.C.

* * *

The primary reason for the Milwaukee Road electrification was to achieve general economy in heavy freight and passenger service on mountain grades. The electrified sections cross five mountain ranges: the Belt and Rocky Mountains in Montana; the Bitter Roots in Idaho; and the Saddle and Cascade Mountains in Washington. While the Milwaukee's was not the first railroad electrification, it was the first long-distance electrification in the world and was the first undertaken solely for economic reasons. Earlier electrifications were for purposes such as elimination of smoke in tunnels and terminals and increased traction on certain mountain grades.

* * *

The economic benefits for the Milwaukee Road derived from the numerous advantages of electrical operation over the then-prevailing steam power. Electric locomotives had greater hauling capacity over mountain grades, had lower maintenance and fuel costs, had a longer life expectancy and were much more reliable and efficient in severe winter weather. The elimination of the need to haul and store coal and water for locomotives, and increased locomotive and manpower utilization were also sources of the economies generated by electrical operation.

* * *

The Milwaukee Road's decision in 1973 to phase out its electrified operation in favor of fully dieselized service include the following: the age of the remaining electric locomotives; lack of versatility in operation, with branch lines

not electrified; and the heavy expense that would be involved in modernizing the present system and in electrifying the 212-mile gap between the two existing electrified segments.

# # #

2/20/73