meters electricity was billed to homes at $1 or $2 per home. By the turn of the century Bastian water-type meters that measured electricity used on a unit basis were installed. Customers were billed at 10c a unit measured by the evaporation of water in the meter.

Diversion of electricity is as old as the industry itself. Customers soon discovered that by dropping small slugs of ice the size of a nickel thru a small opening in the top of the Bastian meter, the ice cut the oil film, sank into the water, then melting and increasing the volume of water. Some 900 of these meters were still in service in 1915 and were junked when the Wausau Street Railway Company took over the Merrill company that year. The changeover from dc to ac current occurred at the same time.

The period from 1912 to 1916 saw great strides in the improvements to electric service in Merrill. Following the flood of 1912 the dam was completely rebuilt with the old wooden dam being used as a coffer dam during construction. No outside engineers were employed to supervise the construction of this project. The work was done by local talent directly from blue prints prepared by Jacobson & De Guere of Wisconsin Rapids. Iron for the 8 foot steel verticle gates was delivered to the dam site in rough form and the gates were built on the spot. The need for drill presses and other tools was satisfied at the site by the men designing and making their own. The gates at Merrill are the only verticle type on Public Service property today.

During winter months the gates were frozen shut. In the early spring all company employees, including street car conductors and the entire office force, held an ice chopping bee to free the gates for raising.

In 1915 the Wausau Street Railway company absorbed the Merrill Electric Railway and Lighting Company, the firm name being changed to Wisconsin Valley Electric Company immediately thereafter. Mr. King retired and H. G. Tank was made Manager of the Merrill district, a job he still holds. Mr. Tank had been working for the Wausau Street Railroad Company since 1908 serving in various capacities. He had managed the Mosinee operations just prior to coming to Merrill. He was well qualified to take over the proposed Merrill Modernization program.

One of the first projects the Wisconsin Valley Electric Company undertook following the acquisition of the property in 1916 was to change the system from direct current to alternating current. It was necessary to rebuild completely the city distributing system. Poles were removed from streets and placed in alleys or rear lot lines wherever possible. Linemen worked under greatly improved working conditions. Trucks were available for hauling material and tools, safety equipment was provided and methods of dealing with the public refined.

In those "good ole days" so often talked about but to which no one really wants to return, linemen in Merrill carried all their tools and equipment on their persons. According to Ralph Savaske, old time river man and one of the Company's early linemen, now retired, wire was coiled and hung down their backs from the front of their caps, a ladder was swung over one shoulder, a coil of rope hung from the other and both hands were more than full with tools. Sockets, fuses, switches and small insulators, etc., were stuffed in the workmen's pockets. Later when two workmen went out on the same job they would carry their equipment in a wicker clothesbasket swung between them. Larger pieces of equipment were hauled by wheelbarrow. The story is told of one workman (Ralph Savaske—the human truck, they called him) using a wheelbarrow to haul a 25 hp motor from the old railroad depot to the garage, a distance of two miles. Permission to cross a customer's premises or leases to dig post holes were unheard of courtesies of those days.

A hi-line was built from Wausau to Merrill in 1917, on a 60 foot right-of-way purchased earlier by the Wausau Street Railway Company for a proposed interurban line between the two cities that failed to develop. A decided improvement in stability of electric service resulted. Further interconnections with other transmission systems and power plants came following the acquisition of the property of Wisconsin Public Service Corporation in 1933 until today Merrill is no longer dependent on the vagaries of an isolated generating plant.

Contrary to the general practice of installing arc street lights on pulleys or placing them on ornamental posts, at Merrill they were hung on a permanent fixture in the center of the street, necessitating some arrangement for trimming the lamps. The boys at Merrill rigged up an ordinary ladder on the back end of the first gasoline truck the company owned by means of a hinge and climbed up this rather shaky ladder to trim the lamps. In 1930 a completely new ornamental street lighting system was installed.

The Street railway company began construction of the street car line in 1889 and in the spring of 1890 it was placed into operation. The only other street railway systems in the United States were in Appleton, Wisconsin and Boston, Massachusetts. The cars were purchased second hand from the Boston company.

Railroad L type rails were used, set on regular railroad ties and bonded together with copper wire. A single trolley was strung overhead. During the first two months of operation several horses were electrocuted, ~~presumably from broken or~~ imperfect bonds. Fearful that human beings would share the same fate a double trolley system was figured out and installed—the first of its kind in America. The only other double trolley system ever developed in America was in Cincinnati, Ohio.

The cars boasted the newest type of trolley, a single wheel at the end of a pole running on the under side of the copper wire. The Appleton system utilized a double wheel arrangement perched atop the wire, much in the same fashion that a barn door hanger rests on the door rail.

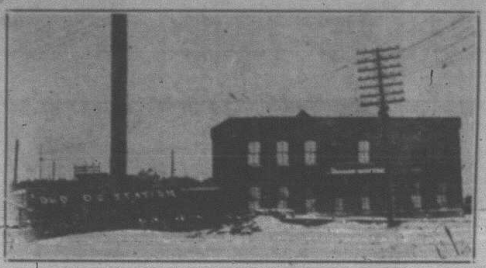
So crude were the cars themselves that the electric motors were protected from the water, dirt and mud of the street only by canvas curtains and a sheet iron pan underneath, secured by hay wire. Service interruptions were many due to burned out motors. Armatures at the rate of 4 or 5 a week were re-wound right in the car barns.

Passengers were protected from the elements, but the conductor standing on a platform at the ends of the car was exposed to wind, rain and snow without even a windshield.

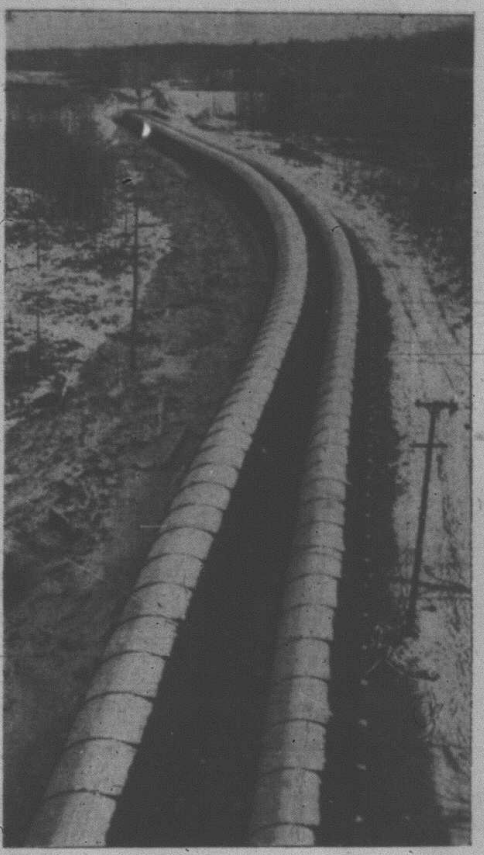
Barring service interruptions, the one double motor car and the three single motor cars gave the people of Merrill good service. Passengers were picked up any place along the route, service being from 6 A. M. to 11 P. M. Conductors were accorded the privilege of running cars after 11 P. M. and collecting fares in addition to the 5c fare placed by the company. Anything collected over and above the 5c fare belonged by agreement with the company to the conductor. It was customary to charge 10c a ride after the last official run, but conductors were often able to strike a special bargain, profitable for themselves, with late party groups. Passengers riding before 7 o'clock in the morning were presumably on their way to work and were given a token that would permit them to ride home from work in the evening.

During the winter cars were run all night during storms to keep the streets plowed and open for the next day's business. Failure to keep the car tracks clear of snow at night meant mustering all electric company employees next day into a hand shoveling brigade to clear the right-of-way.

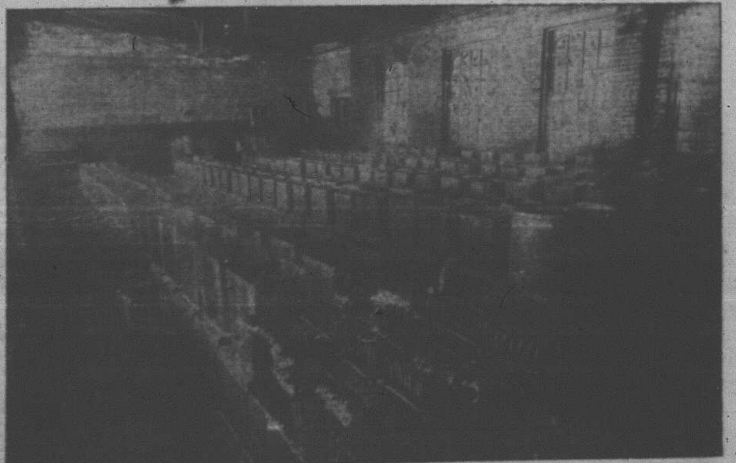
The 2.7 miles of track with two switches adequately served the city of Merrill with the exception of the Sixth Ward. After months of clamoring for services the citizens of the Sixth Ward entered a float in the Fourth of July parade. A solid wheeled lumber wagon was secured from the Lumber Company and rebuilt to represent a street car. The float had a bell and a conductor and passengers boarded it along the parade route. The car was drawn by a team of mules. Every clank of the bell caused a surge in the motive power. A large banner told of the need for car service in the Sixth



OLD POWER HOUSE—The power house used by the Merrill Railway & Lighting Co., was dismantled after the Wis. Valley Electric Company purchased the local utility.



Pentstocks at Grandfather carry water from intake at end of 2,000-foot canal and 1,200-foot channel to lower plant. They are 1,315 feet long. Drop is 94 feet.



These storage batteries were used to operate the street car and the lighting system in the early days, the first such system in the country to prove a success. Power built up during the day was used to carry the heavier load at night, when the lights were turned on.