

ELECTRIC LIGHT, ELECTRIC POWER, AND INTERURBAN SERVICE*

TO TRACE Neenah's source of electric energy, also the interurban service, both north and south of Neenah, we must start with the year 1882, when H. J. Rogers, of Appleton, purchased the Edison patent rights for the Fox River Valley, and with A. L. Smith, a banker of Appleton, built on the bank of the power canal in that city the first hydroelectric central station in the world. Mr. Rogers had a wire strung to his home, and the report is that it was almost like a dream when a crude lamp glowed with light. "In this first installation there were no voltmeters, or ammeters, no instruments of any kind, no lightning protection and no fuses. The copper wires were poorly insulated, and the slightest disturbance would short out the circuit. When this happened, all hands went out tracing wires, and service was suspended until the trouble was located." The Appleton Edison Light Company was incorporated in May, 1883, with an authorized capital of \$50,000, with A. L. Smith as President. Fortunately for this infant company, Mr. Smith was also President of the First National Bank of Appleton.

It was about this time that the idea of connecting up the cities in the Fox Valley with an electric interurban service was born. In January, 1886, the Appleton Electric Street Railway Company was incorporated. A plant was hastily thrown together. Rails were laid up and down Lawrence Street. The crude cars were controlled only at one end, so that at the end of a run, turntables had to be built to enable the motorman to turn his car around by hand. Again, there was no lightning protection. The plant shut down during electrical storms. By 1891, the novelty had worn off. The company was faced with raising more money to modernize plant and equipment or go into bankruptcy. The latter course was chosen. Subsequently, in the same year, Mr. Smith and C. A. Beveridge purchased the Street Railway Plant and property for \$30,000. Forming a new corporation, the Ap-

* Data for the above sketch taken from Chapter I of Forrest McDonald's book, "Let There Be Light."

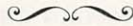
pleton Edison Electric Company, they purchased property of the defunct Street Railway Company and the Appleton Edison Light Company, which was also in financial difficulties. Had the Appleton Edison Company stayed with the lighting business instead of taking on the Street Railway burden, they would have made a "go" of it. In 1894 a rival concern, the Citizens' Electric Light & Power Company came into being. This concern began operations the next year, 1895. Both they and the Appleton Gas Company forced the Edison Company to cut its rates for light and power. At the same time its street railway department became a liability.

We now look to the south of Neenah for the next step. In 1894 a movement took shape in Oshkosh to run an interurban line from Oshkosh through Neenah and Menasha to Appleton, and ultimately to Green Bay. By this time the Appleton Edison Electric Company had drifted into financial distress, and President Smith agreed to sell this company to the newly-forming interurban company for \$80,000. Progress was blocked by the Neenah and Menasha Councils, who refused franchises to the proposed new line. This action on the part of the Twin City fathers, which delayed extension of the line to Appleton, was due to the fears of local merchants that an intercity line, with Oshkosh on one end and Appleton on the other, would be injurious to their business. Meanwhile, due to this delay, the Appleton Edison Electric Company went into bankruptcy. At the foreclosure sale, Smith again came to the front and bought the property of the defunct Appleton Edison Electric Company and formed the Appleton Electric Light and Power Company. In spite of persisting failure, Mr. Smith had a vision of the social usefulness of electric power. He then acquired the property of the Citizens' Electric Light and Power Company and was off to a new start, when, later that year, fire destroyed his generating plant.

Now we drop back to the year 1892, when a group of Milwaukee capitalists visualized an electric line along our Fox Valley waterway, from Fond du Lac on the south to Green Bay on the north. The Neenah and Menasha Electric Railway Company formed the nucleus of this new interurban company, which eventually became the Fox River Valley Electric Railway Company, operating for three years

and extending its lines northward to Appleton and Kaukauna. Fire destroyed its power plant in 1900. Emergency power was bought from the Appleton Electric Light and Power plant, and this incident led to the merger, in 1900, of both companies into the Wisconsin Traction Light, Heat and Power Company, which then served Neenah with its electric energy for both light and power purposes, as its successor does today. In 1927 the Wisconsin Traction Light, Heat and Power Company became the Wisconsin Michigan Power Company, serving our community's expanding needs for electric energy. One year later (1928) the auto and gasoline-driven buses caused the elimination of the interurban street car.

The interurban service south from Neenah to Oshkosh was instituted by the Citizens' Traction Company, of Oshkosh, and the Fond du Lac-Oshkosh line began operation in 1903. The Neenah-Oshkosh interurban service was discontinued in 1927.



Electric Light Comes to Neenah

THROUGH the courtesy of Alvin Staffeld, we quote from an address of Thomas Higgins at a convention of the Wisconsin Municipal Association in Manitowoc, June 18, 1937.

Mr. Higgins was a former resident and one-time Mayor of Neenah. During the early 1880's he built and operated a gas plant in Neenah, and was instrumental in bringing electric lighting to our city.

In the year 1878 my brother, Henry, and I, in association with J. D. Calton, a gas engineer of Defiance, Ohio, built gas works in Dixon, Illinois, a few miles from our boyhood home on the farm, and the next year we built similar works in Waterloo, Iowa, and in the Twin Cities of Neenah and Menasha, Wisconsin. Gas was used exclusively for lighting then, and the only competitor was the kerosene lamp and the candle.

The 2,000 candle arc electric light had been developed and was being used to a limited extent for lighting large stores and halls, and in one section of New York, several high towers had been built and several of the big arc lights on top of the towers gave the vicinity a moonlight appearance and the gas lamp on the corners was dispensed with.

There was, however, much talk of a so-called subdivided electric lamp to take the place of the gas jet, and I remember the names of three men, Sawyer, Mann and Swan, who were experimenting in the laboratory with a glass globe from which the

air was exhausted and a platinum wire in this vacuum globe was heated red hot by passing an electric current over it, and this gave a light globe equal to 16 candles, the measure of the ordinary gas jet. But this lamp was known to be impractical except as a laboratory experiment, but I watched the experiment with deep interest. Then in the year 1880, the newspapers reported that Thomas Edison, a comparatively unknown man, had developed a similar electric lamp in his laboratory in Menlo Park, New Jersey, but he used a carbon filament in place of the platinum wire, and this Edison claimed was inexpensive and practical and sure to take the place of the gas jet. The others ridiculed Edison's claim, and many denounced him as a faker, but he succeeded in getting capital interested and factories were established for the manufacturing of Edison dynamos and lamps, and gas stocks kept dropping, and I was very much concerned.

Then, in 1882, H. J. Rogers, of Appleton, bought an Edison Equipment for his paper mill on the Appleton Water Power, and ran copper wires to his home on the hill and lighted both his mill and his home with Edison incandescent lights, and in September, 1882, this mill and home being but six miles from my gas works in Neenah, I made many trips to Appleton with my horse and buggy to watch the experiment and to talk to Mr. Farewell, the manager of the Appleton Gas Works.

About that time a new company, called the Western Edison Company, opened an office in a basement on Monroe Street, Chicago, with Edison generators in the rear of the office. The manager was Frank Gorton, a son-in-law of General Anson Steiger, who was then President of the Western Union Telegraph Company, and a man named Jacobs was employed to travel and sell Edison Equipment, and he came to Neenah often, trying to sell to the big paper mills that I was then lighting with gas. Art Bowron, Editor of the *Neenah News*, said to me one day, "Tom, what's that man Jacobs up to that he comes here so often? Is he trying to put you out of business?" I spoke disparagingly of the thing and told him of the lights going out in the Plankinton House, and Art said, "I guess I'll give him a shot in the paper," and that evening the shot appeared in the paper, and next day my friend, Bowron, came to me with a telegram from Jacobs, reading: "You have the wrong pig by the ear. I'm coming up on the next train."

Jacobs came, and he and Art came to see me, and we had a friendly visit, Jacobs lauding the electric light, and he urged me very strongly to buy a Central Station Equipment for Neenah, as he was sure someone else would if I failed to do so. I promised to give the question serious consideration, and after that I made visits, from time to time, to the office of the Western Edison Company to talk with Frank Gorton and watched the operation of the dynamos.

In 1885 I changed the name of my company from Neenah & Menasha Gas Company to the Neenah & Menasha Gas & Electric Company, and I bought and installed an Edison Three Wire Central Station Equipment on the Neenah water power and a Vandepole Arc Machine for street lighting, and this was four years before either the White House or the streets of Washington were lighted by electricity. The Edison current was low tension, requiring large copper wires to carry the current, which made it impractical for use any great distance.

Then George Westinghouse developed the alternating current machine, developing a very high tension current to travel long distances on a small wire, and this high

tension current was changed to low tension by passage through a Stanley transformer on a pole near the building to be lighted.

The Edison people denounced this method of lighting as Man Killing Current, and caused a bill to be introduced in the New York Legislature for the purchase of a Westinghouse dynamo to be used for the execution of criminals, instead of hanging, and the Westinghouse Company fought the passage of this bill for some time, but Edison won, and the execution of criminals by hanging was changed to execution by a Westinghouse Electric Current, and that system has since been adopted in most, if not all, of the other states since then, and the question of danger from the high tension current has long since been forgotten.

About the year 1890, I sold the Edison Equipment and Bare Copper Mine to the Phillips Lumber Company, owned by John R. Davis, of Neenah, and it was installed by him in Phillips, Wisconsin, and I sold the Vandepole Arc Machine and lamps to a saw mill in Merrill, Wisconsin, and installed a Thompson Huston Arc and Alternating System to cover all of Neenah and Menasha, and, in 1893, I sold the whole gas and electric property to George S. Davis, of the Winnebago Paper Company, and he, a few years later, sold to John I. Beggs, who had already bought the Appleton Utilities, and he enlarged the Appleton properties and sent both gas and electricity to Neenah.



Human history is in essence a history of ideas.

HERBERT GEORGE WELLS