History of the Electrical Industry in Fergus and Elora

The roots of Centre Wellington Hydro and the provision of electrical power to Fergus and Elora reach back to the final decade of the nineteenth century.

In the summer of 1890, Abraham Groves, a notable Fergus physician and businessman, decided to install electrical generating equipment in his flour mill, situated in the old Watson tannery complex. These buildings still stand on the north bank of the Grand River, immediately upstream from the St. David Street bridge.

Dr. Groves and his brother had purchased the property five years earlier and had installed some second hand flour milling equipment and a steam engine in it. He soon found the flour business to be less profitable than he anticipated. He searched for other uses for the power plant. After considering a water pumping system for fire protection in downtown Fergus, he decided to build an electrical system.

During August of 1890 Dr. Groves secured commitments from a handful of St. Andrew Street merchants to purchase his power. The Doctor approached Fergus council to pay for electric streetlights on September 1st, with a proposal for 10 arc lights at a total cost to the municipality of about $600 per year, double the amount council wanted to pay.

Under the tenacious lobbying of Dr. Groves, council moved quickly. He gave council a more generous offer a week later, but reeve Robert Steele wanted to consider all possibilities. Council called a ratepayers meeting for September 15th to consider other proposals as well as that from Dr. Groves. By this point, Dr. Groves had pitched his streetlights to Elora and its council and some of its businessmen attended the meeting. Two other firms made presentations, but in the end the nod went to Groves and a direct current system to be built by his contractor, the Reliance Electric Co. of Watford.

Work on the generating equipment began immediately. The poles and wires started to go up during the latter part of October. Dr. Groves threw the main switch for the first time on November 29, 1890. At the outset, the system consisted of seven arc and three incandescent streetlights, and single arc lamps in each of 32 businesses. It was a Saturday night, and the sputtering but brilliant arc illumination dazzled the farmers in town for their weekly shopping.

Even before the start of service, council considered additional streetlights. As well, Dr. Groves received requests for domestic service, and decided to provide this on a separate system at a lower voltage. Though the transmission line to Elora was up, and a demonstration arc lamp lit up the market square nightly, Elora council held out for a better deal. At the end of January 1891 they signed a contract with Dr. Groves for four streetlights.

The Fergus Methodist Church was the first customer outside the downtown core in Fergus, with two arc lights and incandescent bulbs in the basement in service beginning in March 1891. Domestic customers signed on very slowly. The cost of the power, which ranged between 10 and 12 cents per kilowatt-hour - equal to the hourly wage of many working men - restricted electric light to the affluent.

Dr. Groves signed contracts with most of the Fergus and Elora churches during 1892. Elora's Commercial Hotel ranked as the biggest customer on the system, with sixty-five incandescent bulbs in service in July 1892.

The Fergus Electric Light and Power Co., as Dr. Groves styled the business, did not turn the streetlights on at the time of the full moon, unless the sky was overcast. Though periodically he promised all-night power, the entire system shut down at midnight as long as he operated it. In the dark winter months he would turn the power on again at 5 a.m.

Increasing demand forced periodic upgrades to the system. First was a back-up boiler and steam engine, added soon after the system commenced. In September 1900 the system shut down for a couple of days for installation of a new 7,100-pound dynamo, and for repairs to a leaky boiler. The generating equipment moved to a specially constructed metal-clad building in 1902, and a year later a new main engine went into service.

March 1905 saw a major shutdown when Dr. Groves converted the system to alternating current. Concurrently, he replaced the arc street lamps, 14 in Fergus and four in Elora, with a new enclosed type that eliminated the frequent adjustment required with the original ones. The alternating current system required much new wiring and the addition of distribution transformers. The work put the system out of service for three weeks. There was another promise of all-night service with the new equipment, but the public waited in vain.

A new larger boiler in 1910 proved to be the last major addition to the Groves system. With it came yet another promise of all-night service. As the system began its 20th year, the restricted hours of operation increasingly frustrated businessmen and caused embarrassment to Fergus council.

As early as 1895, the Elora Carpet Company installed its own generating and lighting system when Dr. Groves refused to provide all-night power for a second shift in the plant. The J. C. Mundell furniture factory and Monkland Mills in Fergus later had to buy their own generators for the same reason.

Elora council looked seriously at constructing its own generating plant in 1908, but balked at the estimated cost of more than $20,000. A year later, Elora industrialist T.E. Bissell considered bringing in power from the Ontario Hydro Electric Power Commission at his own expense, but elected to build a new dam and power plant instead. Bissell's plan established contact between Elora reeve A.J. Kerr and Adam Beck, the Ontario Hydro czar, that would bear fruit three years later.

The Fergus council of 1913 followed Elora's lead in discussions with Ontario Hydro, asking for quotations and an engineering study for the town in January of that year. An initial report, received in April 1913, called for a single substation for Elora and Fergus, with power to cost roughly half the rates charged by the Groves system.

Ontario Hydro engineer F.A. Gaby provided more detailed reports to both Fergus and Elora in July 1913. He estimated the cost at $16,000 for Fergus and $8,500 for Elora. These amounts included the

purchase of the Groves distribution system, which he valued at $2,900, but not the generating equipment.

Adam Beck addressed back-to-back ratepayers meetings on August. 28, 1913 in Fergus and Elora. Following Beck's enthusiastic reception by the public, and the absence of any visible opposition, both councils agreed to join the Ontario Hydro system. They scheduled plebiscites for the necessary debenture issue on November. 3, 1913.

The public support overwhelmed the councils, and Dr. Groves as well. Fergus voted 181 to 9 in favour, and Elora 198 to 6. Elora registered the largest turnout ever for a debenture vote. In the municipal elections a few weeks later, both Fergus and Elora elected two Hydro Electric commissioners for their local utilities. The reeves sat ex officio as the third member.

Fergus council met several times with the cantankerous Dr. Groves in the first weeks of 1914. Eventually he realized that he really had no option but to sell. He signed an agreement with Fergus council in February 1914.

Meanwhile, detailed negotiations continued with Ontario Hydro engineers. The plan for a single substation was discarded by April 1914. Potential cost savings would be more than offset by the administrative problems of having two utility commissions served by it, and by increased line losses due to longer low voltage runs.

Crews employed by Ontario Hydro started erecting new poles in May 1914, before either council made a final decision on sites for the substations. As work progressed, the engineers found that little of the Groves system could be utilized. The poles were either half rotted or substandard in size. Most of the old wire went to a recycler.

Gone too were the arc street lamps. In their place, the new system used 100-watt tungsten bulbs in reflectors. The original plan called for 125 of them in Fergus, but 15 more were quickly added. The Elora system totalled 80 street lamps. These gave illumination to virtually every intersection in the two municipalities. By July 1914 the new lights had been installed on St. Andrew Street, and they were spliced into the Groves system temporarily for power.

During the summer, dozens of home owners hired contractors to wire their houses for electric light. Work on the transmission line from Guelph seemed agonizingly slow, and was not finished until mid-October. The line consisted of wood poles 60 to 70 feet in length, with two cross arms. A single bare wire for lightning protection was on the top of the poles. The first cross arm carried the two-phase high voltage power, each of the three wires consisting of seven strands of aluminum wire. A smaller cross arm below carried two copper wires for the Ontario Hydro's internal telephone system.

The transmission line crossed the Grand River at Aboyne, then split to reach the Fergus and Elora substations, located at the corner of St. Andrew Street and Breadalbane Street in Fergus and on Mill Street near Metcalfe Street in Elora.

Adam Beck had planned to be in Fergus and Elora to flick the switch on October. 22nd, but last minute commitments prevented his appearance. The Elora superintendent, Joseph Wilson, threw the main breaker without ceremony. Fergus waited a week. The Fergus commissioners strung a special line to the bedroom of "Grandma" Foote, the town's oldest resident at 99. She reminisced briefly, then pushed a button that put the new system into service. Later that evening, Ontario Hydro personnel and local officials addressed a crowd gathered at the old town hall. The Groves system was now history, expiring one month shy of its 24th birthday.

The first years for the Hydro commissions of both towns saw an exponential growth in customers and consumption. The Groves system at the end had only about 150 commercial and domestic customers. This number doubled and then tripled with the good service and low rates from Ontario Hydro. The commissions originally charged 4.5 cents per kilowatt. Rapidly increasing consumption, fueled not only by electric lights but also by small appliances, soon brought this down to 2.25 cents. By 1916 it dropped further to 1.75 cents when major industrial users hooked on.

The Hydro Electric Commissions of Fergus and Elora served their municipalities, without major change in their structure or duties, for 85 years, until the amalgamation of the two municipalities effective January. 1, 1999. As they had been at the beginning in 1890, the electrical systems of the two towns were once again under a single management.