Manitoba

"The Day the Light came on in Winnipeg", in 1873, the Hon. R.H. Davis operated a "tremendous arc-light" to illuminate the front of his Davis House Hotel, on Main Street. The Winnipeg Gas Company was also incorporated in 1873. It was followed by the Manitoba Electric and Gas Light Company and the two merged in 1881. The City of Winnipeg enjoyed its first electric street lighting, by carbon-arc lamps, the following year in 1882.

During the ensuing twenty-year period, to 1902, no less than six separate companies within Manitoba entered into the electric street railway and electric power generation businesses. The Winnipeg Electric Street Railway Company was formed in 1892. In 1904 its name was changed to Winnipeg Electric Railway Company and, by 1906, five of the six companies previously referred to had either merged or become subsidiaries of Winnipeg Electric Railway Company. The sixth company was located in Brandon and did not become part of the system until much later.

The Day the Light Came On in Winnipeg, 1873.
Photo courtesy of Manitoba Hydro and Manitoba Archives.

Opening of Winnipeg Electric Street Railway-5th September, 1892. Photo courtesy Manitoba Hydro and Manitoba Archives.

The same year, 1906, the City of Winnipeg called for engineering studies to find a suitable site along the Winnipeg River for water power development. Pointe du Bois was selected and, in 191 1, the plant was pumping electric power over a 75 mile circuit to Winnipeg. By 1913 two new generators and a new double-circuit 69 kilovolt transmission line were added. This was the beginning of the Winnipeg Hydro as a publicly owned utility to serve electricity

Early Rural Electrification, Manitoba Power Commission. Photo courtesy of Manitoba Hydro.

Early Rural Electrification, Manitoba Power Commission. Photo courtesy of Manitoba Hydro.

customers in Winnipeg. By 1926, the Pointe du Bois plant capacity had been increased to 64,000 hp and by 1965 to 105,000 hp operating under a 43 foot head of water power. Winnipeg Hydro also constructed a steam turbine plant in the heart of the city which operates in conjunction with a central steam heating system which, by 1982, was supplying steam heating to 214 core-area commercial customers.

Meanwhile, three more companies associated with the Winnipeg Electric Railway Company, were formed between 1910 and 1920: Manitoba Power Company, Winnipeg River Railway Company and Winnipeg River Power Company. Later on they all joined the Winnipeg Electric Railway Company which, in 1924, renamed itself Winnipeg Electric Company. This organization had developed a 28,000 hp generating unit at Great Falls on the Winnipeg River which was increased to 186,000 hp in 1928. This site was 65 miles from Winnipeg and the transmission voltage was established at 110 kilovolts.

By 1931 the Northwestern Power Company, a subsidiary of the Winnipeg Electric Company, had developed its Seven Sisters plant, 55 miles from Winnipeg, while the Winnipeg Hydro had developed its Slave Falls generating station, 80 miles from Winnipeg.

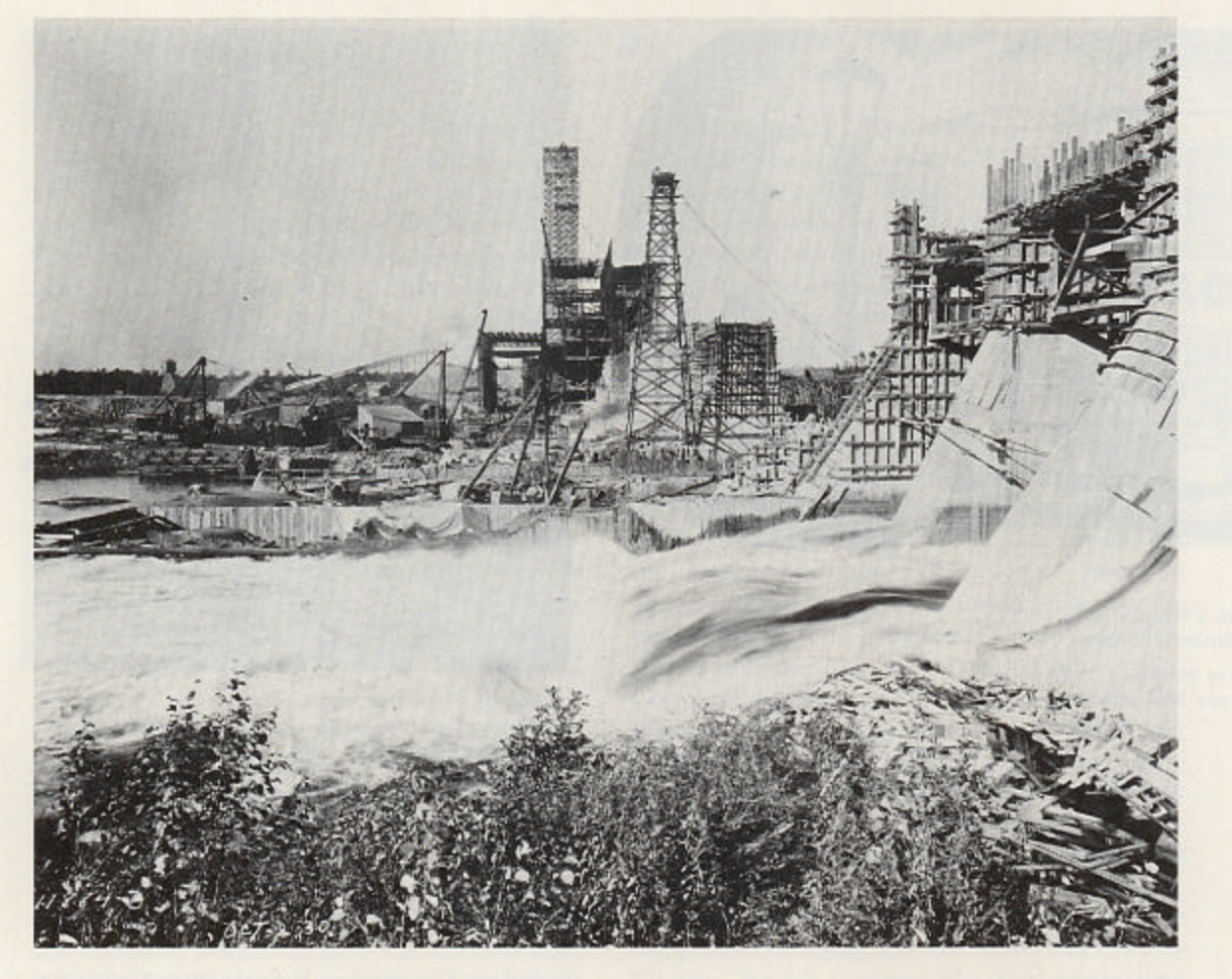
Back in 1919, the Manitoba Power Commission was established to extend service to rural towns and districts.

In 1953, the privately-owned Winnipeg Electric Company passed over to public ownership when The Manitoba Hydro-Electric Board, an agency of the Province, purchased the common shares. Three years later an agreement was concluded between the Winnipeg Hydro, The Manitoba Hydro-Electric Board and the Manitoba Power Commission. Competition within Winnipeg between the Winnipeg Electric Company and the Winnipeg Hydro was finally eliminated. Winnipeg Hydro took over all power distribution within the city while relinquishing to Manitoba Power Commission all its power distribution facilities outside of the city.

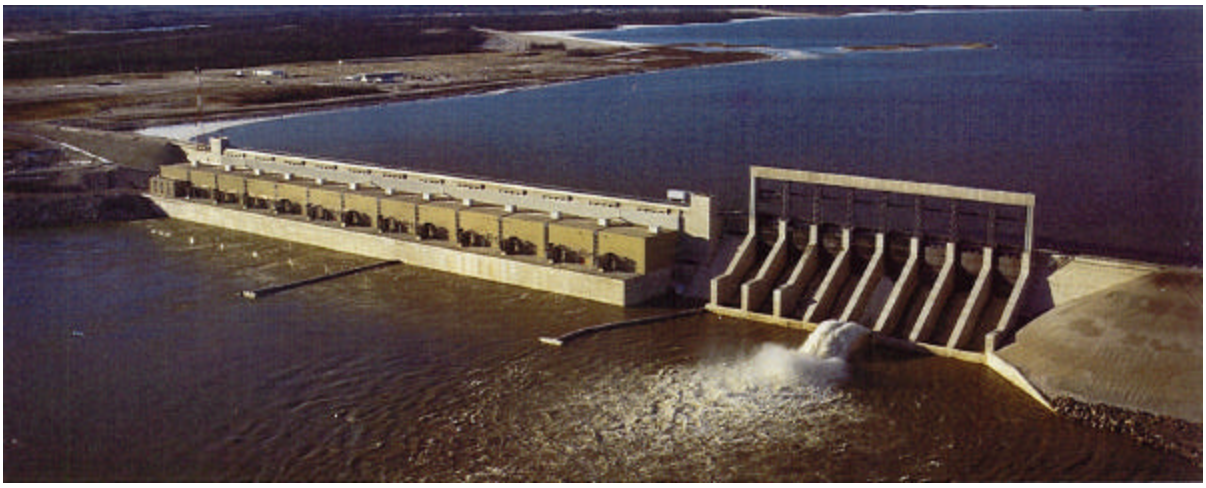
Within the Province at that time there were two provincial agencies: The Manitoba HydroElectric Board-responsible for generating power-and the Manitoba Power Commission-responsible for distribution of the power outside the City of Winnipeg as it existed at that time. The two provincial agencies were amalgamated by an Act of the Provincial Legislature in 1961.

To the extent that its largest hydraulic power potential lies far to the north of its main load centres, Manitoba is similar to Québec. Studies had shown that there was a potential approaching 7,000 megawatts of hydro-electric power available on the Nelson River comprising the most economic source of power for the Province. A system of generating stations was planned for staged development. Various schemes for transmitting the power 565 miles to the market in Winnipeg were examined. A high voltage DC (HVDC) system was selected. The first stage was rated 810 megawatts at 450 kilovolts dc and was placed in service in 1973. Some years later this was expanded to 1620 megawatts operating at - 450 kilovolts dc. Subsequent stages of this bipole system extended the capacity to 2620 megawatts by 1978. The Nelson River HVDC System was the third such installation in Canada and is by far the longest.

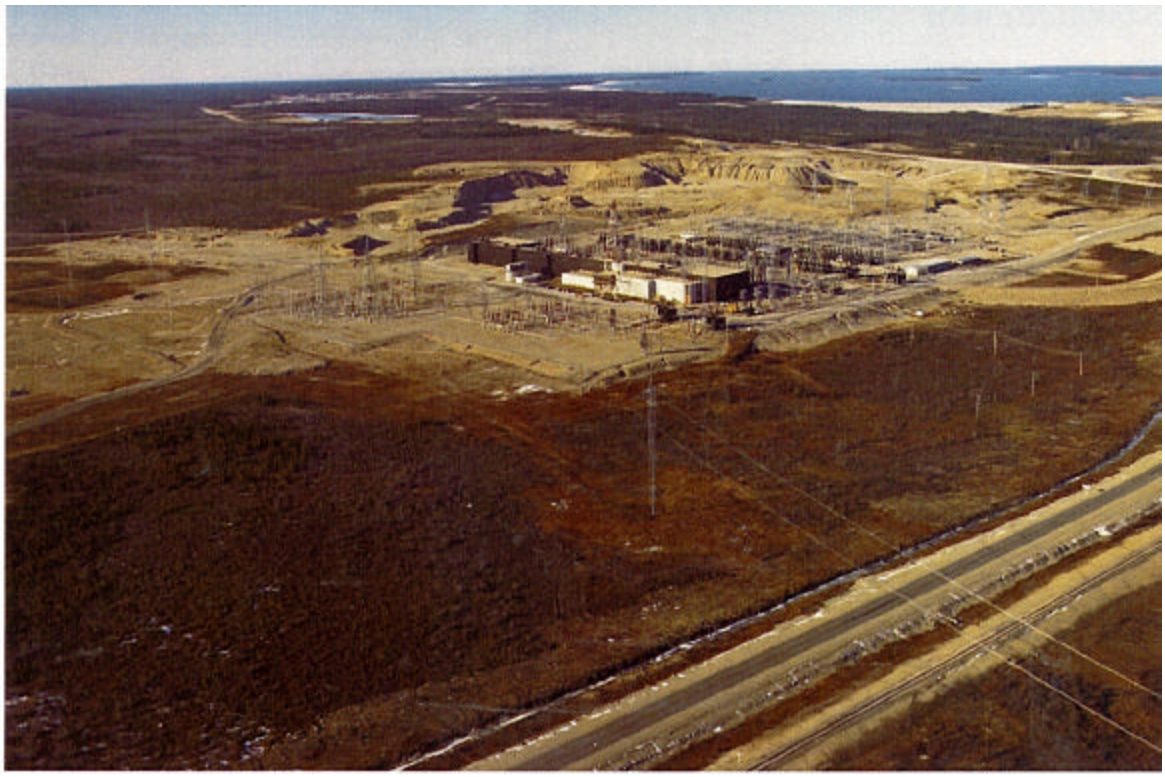
World Wide Web Resources as of March 2000:
Manitoba Hydro - www.hydro.mb.ca
IEEE Canada Millennium Web Site – Seven Sisters Generating Station



Construction of Seven Sisters project North West Power Corporation, 1930. Photo courtesy of Manitoba Hydro.



Kettle Generating Station on the Nelson River, 1980. Photo courtesy of Manitoba Hydro.



Radison Converster Station of the Nelson River HVDC System. Photo courtesy of Manitoba Hydro.

Two extra-high-voltage direct current transmissin lines, among the owrld's longest, follow a 900 kilometer route to express power through the interlake region. Photo courtesy fo Manitoba Hydro.

Saskatchewan

Electricity was brought to Regina in 1890 to power electric lights, the first lights on the Prairies in part of the Northwest Territories that was later to become the Province of Saskatchewan. Peter Lamont, a local businessman who already operated a bookstore and telephone system, installed a "high-speed steam engine that produced just 75 hp". The plant operated only during hours of darkness.

Within months the people of Moose Jaw and Prince Albert also were enjoying electric light. The Moose Jaw generator powered 350 light bulbs, each of 16 candle power, at a cost of $1.50 per month per light. The municipalities operated street lights only on nights when there was no moonlight.

Squaw Rapids Dam. Photo courtesy of Saskatchewan Power Corporation.

Seeking to improve the reliability of service, the municipalities of Regina, Moose jaw and Prince Albert began buying out the privately-owned companies and, by the time Saskatchewan was incorporated as a province in 1905, all of the central generating stations were municipally-owned. In the boom years preceding World War 1, municipally-

Commission staff at entrance of original office in Regina, 1930. Photo courtesy of Saskatchemwan Power.

owned generating stations came to life in twenty centres. There was no construction during the war years. Private entrepreneurs and municipalities alike frantically scrambled to meet the expanding demand during the post war period. By 1929 there were over 119 generating stations scattered across the Province serving only 20 percent of the population with almost as many rate schedules as there were plants while rural electrification was virtually non-existent.

After a two-year Royal Commission investigation the Saskatchewan Power- Resources Commission tabled a report in 1926 recommending that the government set up and regulate energy production and transmission. The Saskatchewan Power Commission was thus established in 1929. Drought and the depression devastated the Prairies throughout most of the 1930s resulting in deficit operations of the Commission until 1938. Activities during the years of the second war were restricted to meeting the power demands of military installations.

In the years immediately following World War 11, the

Poplar River Power Station at Coronah, the rewest electrical generating plant in the province. Photo courtesy of Saskatchewan Power Corporation.

Great Gus-a mammoth excavating dragline mining coal for the Poplar River Poower Station. Photo courtesy of Saskatchewan Power Corporation.

Commission purchased the Dominion Electric Power Company, the Prairie Power Company and the plant and transmission lines of Canadian Utilities Ltd. that were located within Saskatchewan. In 1949, the Commission became the government-owned Saskatchewan Power Corporation. In the same year, the Rural Electrification Act was passed with the intention of supplying electricity to all farms, villages and hamlets who wanted it. There followed an unprecedented mechanized expansion of the rural distribution system. By 1960, this program reached about 67,000 farms and all villages and hamlets in the populated half of the Province.

Discoveries of oil and gas in the early fifties provided fuel for generation and also created a new market for electrical power at compressor stations and oil well operations. Then high-grade lignite coal was found within the Province. Saskatchewan was ready to develop large-scale thermal generating plants. One-at Boundary Dam near Estevan-originally consisted of 132,000 kilowatts of generating capacity. Using high-grade lignite fuel the plant capacity was increased to 874,000 kilowatts. The other thermal station-the Queen Elizabeth plant near Saskatoon-also originally consisted of 132,000 kilowatts of generating capacity. This is a multi-fuel station capable of utilizing coal, bunker oil and natural gas for fuel. The capacity of this station was increased to 232,000 kilowatts by 1971.

Hydro-electric generation had to await the South Saskatchewan River Development which was undertaken to provide irrigation and control the flow of the main watercourse in the Province. In 1959 the Power Corporation began construction of the Squaw Rapids hydroelectric project, the Province's first major hydraulic generating station, with a present capability of 280,000 kilowatts. This was followed by the Coteau Creek hydro-electric plant, also on the South Saskatchewan River, completed in 1967.

Many early electric power companies across Canada had to compete initially with the gas interests. It should be noted that in the case of Saskatchewan the Power Corporation was an electrical utility first and added distribution of gas later.

World Wide Web Resources as of March 2000:
SaskPower - www.saskpower.com

Squaw Rapids Hydro-Electric Station, the first hydro power project on the Saskatchewan River System. Photo courtesy of Saskatchewan Power Corporation.

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