

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

FINAL LICENCE FOR THE DEVELOPMENT OF WATER POWER

Long Spruce Site, Nelson River

Issued in accordance with the provisions of the Water Power Act, being Chapter W60 of the Continuing Consolidation of the Statutes of Manitoba, and of the Regulations in force thereunder to govern the mode of granting and administering Provincial water-power rights.

WHEREAS Manitoba Hydro, a corporation duly incorporated by Act of the Legislature of the Province of Manitoba and whose head office address is Box 815, Winnipeg, Manitoba, R3C 2P4 (hereinafter called "the Licensee") by Interim Licence dated July 31, 1973, Issued in accordance with the provisions of the Water Power Act (hereinafter called "the Act") and Regulations, was authorized to impound, divert and use the waters of the Nelson River at the Long Spruce site (hereinafter called "the site"), as described in a plan filed by the Licensee in the office of the Director of the Water Resources Branch (hereinafter called "the Director") at Winnipeg and noted by File No. 51-4-1037 (Manitoba Hydro Drawing No. 00194-E-00203), to develop electric power and energy from the said waters; to generate, transmit, distribute, sell and deliver the said electric power and energy and for that purpose to use and occupy certain lands of the Province described in the Interim Licence and herein; to construct, operate and maintain the undertaking, the location and description of which are shown upon plans filed by the Licensee in the office of the Director, at Winnipeg; and

WHEREAS under the authority of the said Interim Licence the Licensee completed its initial development at the Long Spruce site as of April 28, 1978 including the construction of three (3) turbines and all necessary machinery and equipment for the development, generation, transformation and transmission of electric power amounting to four hundred and five thousand (405,000) horsepower measured on the turbine shaft; and

WHEREAS the Licensee under authority of the said Interim Licence has installed an additional seven (7) turbines and has satisfactorily completed the undertaking consisting of ten (10) units having a total of one million three hundred and fifty thousand (1,350,000) horsepower measured on the turbine shaft; and

WHEREAS the Licensee has completed the works authorized under the Interim Licence within the time limits set forth in the said Interim Licence; and

WHEREAS the Licensee has done all things which in the opinion of the Director are required to be done prior to the issuance of a Final Licence for the Long Spruce development; and

WHEREAS the Licensee has fully complied with the requirements of the Water Power Act and Regulations insofar as it is required for the issue to the said Licensee of this Final Licence; and

WHEREAS the Director has determined that the date of completion of the initial development and fulfillment of the terms of the Interim Licence for the purpose of subsection 42(4) of the Water Power Regulation, M.R. 25/88R (hereinafter called "the Regulation") is November 28, 1978; and

WHEREAS the Licensee has on June 27, 1990 duly executed an acceptance of the terms and conditions of this Final Licence and has undertaken to observe and fulfil all the terms and conditions which under this Final Licence and under the Regulation and all amendments thereto as may be made from time to time, the said Licensee is required to observe or fulfil;

NOW THEREFORE, under authority of and subject to the provisions of the Act and the Regulation, this Final Licence is issued, authorizing the Licensee:

- (a) to divert, use or store waters of the Nelson River at and near the site for the development of electric power and energy from the said waters,
- (b) to occupy or use lands of the Province described below in order to generate, transmit, distribute, sell and deliver electric power and energy, and
- (c) to construct, operate and maintain the undertaking described in Section 2 of this Final Licence.

This Final Licence is subject to the provisions of the Act and Regulation and to any other Acts or Regulations now or hereinafter in force governing the administration of provincial water powers and lands required in connection with the development or use thereof. This Final Licence is also subject to the following terms and conditions:

1. The Licensee may divert and use continuously for the development of power at the site all the water of the Nelson River which may be flowing at the site from time to time during the term of this Final Licence. However, in accordance with Section 72 of the Regulation, this Final Licence is issued on the express condition that the Licensee shall
 - (a) divert, use or store the water authorized to be diverted, used, or stored by it in such a manner as not to interfere, in the opinion of the Minister, with the maximum advantageous development of the power and other resources of the river or stream upon which the works are located;

- (b) conform to and comply with any orders in respect of the control or regulation of the flow of the waters of such river or stream as may be made from time to time by the Minister or any person authorized by the Minister in that regard; and
 - (c) at no time cause or permit the surface level of the waters of such river or stream or of any storage reservoir operated by the Licensee to be raised or lowered beyond the limits which shall be fixed from time to time by the Minister or by a person authorized by the Minister in that regard.
2. The undertaking authorized to be maintained and operated by the Licensee under this Final Licence shall consist of the following:

A reinforced concrete powerhouse with ten (10) vertical shaft hydroelectric turbines, each of one hundred and thirty-five thousand (135,000) horsepower capacity; an adjoining reinforced concrete spillway with six (6) sluices and vertical lift gates capable of discharging three hundred and thirty-six thousand (336,000) cubic feet of water per second at a forebay level of 362.0 feet above mean sea level, Canadian Geodetic Datum; a main earth dam flanking these concrete structures; dykes extending from the extremities of the main earth dam; Henday HVDC Converter Station; transmission lines to transmit energy generated via AC collector system to both Radisson and Henday Converter Stations for conversion to DC for HVDC transmission; and all plant machinery and equipment requisite for the complete development and utilization of the power economically available at the said Long Spruce site, together with such other approved works as have been constructed for purposes of the undertaking, all as shown by plans and descriptions thereof filed in the office of the Director at Winnipeg and as described in Section 3 of this Final Licence.

3. The approved plans set out below have been filed by the Licensee in the office of the Director at Winnipeg and constitute part of the undertaking. This Final Licence applies to each part of the undertaking as described in the plans.

Manitoba Water Resources Branch File Number	Licensee's Drawing Number	Description
51-4-1037	00194-E-00203	Map showing severance line for Long Spruce power development
51-4-1038	00194-E-00204 (sheet 1)	Map showing lands required for flooding and other purposes for Long Spruce power development
51-4-1038	00194-E-00204 (sheet 2)	Map showing lands of the province covered by water required for main diverting works, power houses, etc.
51-4-1039	00194-E-00208 (sheets 1 to 4)	Map showing land required for rights-of-way and terminal stations for Long Spruce power development
51-4-1040	201-B-2031	Location of Project and Vicinity Map
51-4-3019	201-C-2420	C1 Location and Area Plan
51-4-3020	201-C-2421	C2 General Arrangement of Project
51-4-3021	201-C-2422	C3 Principal Structures, General Arrangement
51-4-3022	201-C-2423	C4 Earthfill Dams and Dykes, Cross Sections
51-4-3023	201-C-2424	C5 Retaining and Training Walls, Arrangements and Sections
51-4-3024	201-C-2425	C6 Service Bay Cross Sections
51-4-3025	201-C-2426	C7 Intake and Powerhouse Cross Section at CL of Unit
51-4-3026	201-C-2427	C8 Non-Overflow Dam Cross Sections
51-4-3027	201-C-2428	C9A C9B Powerhouse Plan at Draft Tube Floor
51-4-3028	201-C-2429	C10A C10B C10C Intake, Powerhouse, Non-Overflow Dam and Spillway Plan at Drainage and De-Watering Galleries
51-4-3029	201-C-2430	C11A C11B C11C Service Bay, Intakes, Powerhouse and Non-Overflow Dam Plan at CL Distributor and Service Gallery Elevation 286.00
51-4-3030	201-C-2431	C12A C12B C12C Service Bay, Intakes, Powerhouse and Non-Overflow Dam Plan at Generator Floor Elevation 305.50 and Maintenance Gallery Elevation 314.00
51-4-3031	201-C-2432	C13A C13B C13C Service Bay, Intakes, Powerhouse and Non-Overflow Dam Plan below Powerhouse Roof Elevation 350.00
51-4-3032	201-C-2433	C14A C14B C14C Service Bay, Intakes, Powerhouse and Non-Overflow Dam Plan at Intake Deck Elevation 368.00
51-4-3033	201-C-2434	C15A C15B C15C Service Bay, Intakes and Non-Overflow Dam Longitudinal Section at Intake Gates

Manitoba Water Resources Branch File Number	Licensee's Drawing Number	Description
51-4-3034	201-C-2435 C16A C16B C16C	Service Bay and Powerhouse Longitudinal Section at CL Units
51-4-3035	201-C-2436 C17A C17B C17C	Powerhouse Longitudinal Section at De-watering Gallery
51-4-3036	201-C-2437 C18A C18B C18C	Service Bay and Powerhouse Longitudinal Section at Service Gallery
51-4-3037	201-C-2438 C19	Spillway Plan
51-4-3038	201-C-2439 C20	Spillway Cross Section
51-4-3039	201-C-2440 C21	Spillway Downstream Elevation
51-4-3040	201-C-2441 C22	North and South Transition Structures Arrangement
51-4-3041	00201-C-50001 (sheets 1 to 3)	Main Dam South and South Bank Fill-arrangements and Details
51-4-3042	00201-C-50004	South Bank Permanent Roads Arrangements and Details
51-4-3043	00201-C-50006 (sheets 1 to 3)	Main Dam North Fill-arrangement and Details
51-4-3044	00201-C-50008	South Dyke Location of Axis Clearing Limits and Drainage Ditches
51-4-3045	00201-C-50009	North Dyke Location of Axis Clearing Limits and Drainage Ditches
51-4-3046	00201-C-50010	Long Spruce Road South Dyke Drainage Ditches Culvert Installation Details
51-4-3047	00201-C-50011 (sheets 1 to 3)	South Dyke Section Along Axis
51-4-3048	00201-C-50012	South Dyke Section Along Axis
51-4-3049	00201-C-50014 (sheets 1 to 4)	North Dyke Section Along Axis
51-4-3050	00201-C-50015	North Dyke Sections and Details

4. Lands of the Province which may be entered upon, used or occupied for the maintenance and operation of the undertaking shall be the following:

- (a) Lands of the Province not covered by water required for main diverting works, powerhouses, etc.

All those portions of Township 85 in Ranges 19 and 20, East of the Principal Meridian, not covered by water, as shown shaded and described under (1) of the notes on File No. 51-4-1038, sheet 1 of 2, (Manitoba Hydro Drawing No. 00194-E-00204, sheet 1 of 2) filed in the office of the Director at Winnipeg, such lands comprising a total of 690 acres.

- (b) **Lands of the Province covered by water required for main diverting works, powerhouses, etc.**

All those portions of Township 85 in Range 19 and 20, East of the Principal Meridian, covered by water, as described under (2) of the notes on File No. 51-4-1038, sheet 1 of 2, (Manitoba Hydro Drawing No. 00194-E-00204, sheet 1 of 2) and shown shaded on sheet 2 of 2 on said file, filed in the office of the Director at Winnipeg, such lands comprising a total of 178 acres.

- (c) **Lands of the Province required only to be flooded in connection with the storage or pondage of water**

All those portions of Township 85 in Ranges 19 and 20, East of the Principal Meridian, required only to be flooded, as shown shaded and described under (3) of the notes on File No. 51-4-1038, sheet 1 of 2, (Manitoba Hydro Drawing No. 00194-E-00204, sheet 1 of 2) filed in the office of the Director at Winnipeg, such area comprising 3401 acres.

- (d) **Lands of the Province required only for rights-of-way for water conduits, transmission lines, etc.**

All those portions of Townships 85 and 86 in Ranges 19, 20, 21 and 22, East of the Principal Meridian, required for rights-of-way as shown and described under (4) of the notes on File No. 51-4-1038, sheet 1 of 2, (Manitoba Hydro Drawing No. 00194-E-00204, sheet 1 of 2) and File No. 51-4-1039, sheets 1 to 4, (Manitoba Hydro Drawing No. 00194-E-00208, sheets 1 to 4) filed in the office of the Director at Winnipeg, such area comprising 4525 acres.

- (e) **Lands of the Province required for substations, distributing stations, terminal stations, etc.**

All those portions of Townships 85 and 86 in Ranges 19, 20, 21 and 22, East of the Principal Meridian, required for substations and terminal stations, as shown and described under (5) of the notes on File No. 51-4-1038, sheet 1 of 2, (Manitoba Hydro Drawing No. 00194-E-00204, sheet 1 of 2) and File No. 51-4-1039, sheets 1, 3 and 4, (Manitoba Hydro Drawing No. 00194-E-00208, sheets 1, 3 and 4) filed in the office of the Director at Winnipeg, such area comprising of 68 acres.

The total area of Lands of the Province entered upon, used or occupied for the maintenance and operation of the undertaking under the preceding five categories comprises 8862 acres.

5. The Licensee shall not raise the headwater of the development, as measured at the powerhouse, higher than 362.0 feet above mean sea level, Canadian Geodetic Datum. A higher elevation may be created only with written permission by the Director and in accordance with Section 72 of the Regulation.

6. In accordance with Section 45 of the Regulation, the term of this Final Licence shall be fifty (50) years from and after the 28th day of April, 1978, and this Final Licence shall thereafter be subject to renewal or extension in accordance with the provisions of the laws and Regulations relating thereto and then in force.
7. The Licensee shall, during the portion of the term of this Final Licence following the date of issuance thereof, pay annually in advance on the second day of January in each year an annual land rental in the amount of eight thousand eight hundred and sixty-two dollars (\$8,862.00) for the use, occupation and flooding of lands of the Province described in Section 4 hereof. In 1994 and every fifth year thereafter, the Minister may, at his sole option, by notice in writing to the Licensee on or before the thirty first day of October in that year, establish a new annual land rental rate to be effective in respect of the following year.
8. The Licensee shall pay annually, in arrears, a rental during the term of the Final Licence for the use of water for the development of power, determined in accordance with the principles set out in Section 48 of the Regulation and at a rate as prescribed in Subsection 48(8) of the Regulation in force or as may be amended in the future, and payable at the time and in the manner therein provided.

The Licensee shall, on or before the first day of March in each year following any calendar year for which water rental is payable, submit all data required by the Director for the determination of said water rental. The Director shall thereupon prepare and submit to the Licensee a statement of the water rental due. Payments shall be made within sixty (60) days of submission of the said statement; otherwise the penalties provided in Subsections (4) to (6) inclusive of Section 48 of the Regulation shall apply.

9. The Severance Line as defined in Section 1 of the Regulations shall be as shown on File No. 51-4-1037 (Manitoba Hydro Drawing No. 00194-E-00203, Revision 0) in the office of the Director.
10. The Licensee shall at the request of the Director cause additional surveys to be made and plans prepared by a Manitoba Land Surveyor showing in detail the lands required to be occupied for the purposes of the power development, the lands required for flooding purposes only, the lands required as rights-of-way for transmission lines, roads, railways, drains and other purposes, and revisions to the severance line. Such survey shall be limited to include only such areas for the said purposes as the Director may approve.
11. This Final Licence is issued upon the express condition that it shall be subject to the provisions of the Act and the Regulation and all amendments thereto as may be made from time to time.

12. All elevations mentioned herein are in feet above mean sea level, Canadian Geodetic Datum - Quadrangle Sheet No. 56094, Rev. - Original Edition, January 1963, also referred to as Geodetic Survey of Canada 1929 adjustment.

Issued at Winnipeg this 19th day of July, 1990, by the Honourable Minister of Natural Resources.

Original Signed By:
The Minister