

PROVINCE OF MANITOBA  
DEPARTMENT OF NATURAL RESOURCES  
WATER RESOURCES BRANCH

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FINAL LICENCE FOR THE DEVELOPMENT OF WATER POWER

Kettle Rapids 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.

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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 February 15, 1968 and by Supplementary Interim Licence dated May 11, 1972, 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 and near the Kettle Rapids 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. 51-5-1099 (Manitoba Hydro Drawing No. 00113-R-00209), 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 those licences and herein; to construct, operate and maintain the undertaking, the locations and descriptions 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 site as of May 29, 1971, including the construction of four (4) turbines and all necessary machinery and equipment for the development, generation, transformation and transmission of electric power amounting to five hundred and sixty thousand (560,000) horsepower measured on the turbine shaft; and

WHEREAS under the authority of the said Supplementary Interim Licence the Licensee completed the additional development at the site as of November 21, 1974, including the construction of eight (8) additional turbines and all necessary machinery and equipment for the development, generation, transformation and transmission of electric power amounting to one million one hundred and twenty thousand (1,120,000) horsepower measured on the turbine shaft, there being a combined total under the Interim and Supplementary Interim Licences of one million six hundred and eighty thousand (1,680,000) horsepower; and

WHEREAS the Licensee, by letter dated March 20, 1981, signed by J.F. Funnell, General Counsel and Secretary, notified the Director that it completed both the initial and supplementary power developments at the site as of November 21, 1974; and

WHEREAS the Licensee has completed the works authorized under both the Interim and Supplementary Interim Licences within the time limits set forth in the said Interim and Supplementary Interim Licences; 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 Kettle Rapids 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, based on information recorded at a meeting between officials of the Licensee and members of the Cabinet of the Government of Manitoba held in the Legislative Building on March 4, 1974 and verified by Order-in-Council No. 464 dated April 17, 1974, that the date of completion of the initial development and fulfilment of the terms of the Interim Licence and Supplementary Interim Licence for the purpose of subsection 42(4) of the Water Power Regulation, M.R. 25/88R (hereinafter called "the Regulation") is November 1, 1972; 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 the 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 powerhouse with twelve (12) vertical shaft hydro electric turbines, each of one hundred and forty thousand (140,000) horsepower capacity; an adjoining short concrete non-overflow dam section; a gated spillway; a main earth dam; a saddle dam across a ravine; an earth dam across the Butnau River; a Butnau River diversion channel; seven (7) closure and freeboard dykes; transmission lines; Radisson HVDC Converter Station; roads; and all plant machinery and equipment requisite for the complete development, generation, transformation and transmission of the power economically available at the site, together with such other approved works as have been constructed for the 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
51-5-1099	00113-R-00209 Rev. 0	Severance Line for Kettle Rapids Power Development
51-5-1100	00113-R-00208 Rev. 0 Sheets 1 - 4	Map showing Lands Required for Flooding and Other Purposes for Kettle Rapids Power Development
51-5-1101	00113-D-00208 Rev. 0 Sheet 5 of 5	Map showing Lands of the Province Covered by Water Required for Main Diverting Works, Powerhouses, etc.
51-5-1102	00113-D-00201	Riverbed Contours at Dam Axis No. 1
51-5-3005	Plate C-1	Vicinity Map
51-5-3006	Plate C-2	Area Plan
51-5-3007	Plate C-3	Principal Structures, General Arrangement Plan
51-5-3008	Plate C-4	Reservoir, Storage and Area
51-5-3009	Plate C-5	Tailwater, Stage-Discharge Curves
51-5-3010	Plate C-6	Earth Dam, Typical Sections
51-5-3011	Plate C-7	South Transition and Service Bay Cross Sections
51-5-3012	Plate C-8	Intake and Powerhouse Cross Section at Centreline of Unit
51-5-3013	Plate C-9	South Transition, Service Bay, Intake and Powerhouse Units 1 to 7, Deck and Roof Plan
51-5-3014	Plate C-10	Intake and Powerhouse Units 8 to 12, Deck and Roof Plan
51-5-3015	Plate C-11	Service Bay, Control Building, Powerhouse Units 1 to 7, Generator Floor E1. 400
51-5-3016	Plate C-12	Powerhouse Units 8 to 12, Generator Floor E1. 400
51-5-3017	Plate C-13	Service Bay, Powerhouse Units 1 to 7, Turbine Floor E1. 382 and E1. 388
51-5-3018	Plate C-14	Powerhouse Units 8 to 12, Turbine Floor E1. 382 and E1. 388
51-5-3019	Plate C-15 (2 Sheets)	Service Bay, Powerhouse Units 1 to 7, Plan at E1. 360 and Centreline of Distributor
51-5-3020	Plate C-16	Powerhouse Units 8 to 12, Plan at E1. 360 and Centreline of Distributor
51-5-3021	Plate C-17 (2 Sheets)	South Transition, Service Bay, Powerhouse Units 1 to 7, Drainage Gallery E1. 326 and Inspection Gallery E1. 320

Manitoba Water Resources Branch File Number	Licensee's Drawing Number	Description
51-5-3022	Plate C-18 (2 Sheets)	Powerhouse Units 8 to 12, Drainage Gallery E1. 326 and Inspection Gallery E1. 320
51-5-3023	Plate C-19 (3 Sheets)	South Transition, Service Bay Powerhouse Units 1 to 7, Longitudinal Section at Centreline of Units
51-5-3024	Plate C-20	Powerhouse Units 8 to 12, Longitudinal Section at Centreline of Units
51-5-3025	Plate C-21 (2 Sheets)	Service Bay and Powerhouse Units 1 to 7, Downstream Elevation
51-5-3026	Plate C-22	Powerhouse Units 8 to 12, Downstream Elevation
51-5-3027	Plate C-23 (2 Sheets)	Non-overflow dam, Spillway North Transition, Cross Section
51-5-3028	Plate C-24 (3 Sheets)	Non-overflow dam, Spillway and North Transition, Deck and Roof Plan
51-5-3029	Plate C-25 (2 Sheets)	Non-overflow Dam, Spillway and North Transition, Inspection and Drainage Gallery
51-5-3030	Plate C-26 (3 Sheets)	Non-overflow Dam, Spillway and North Transition, Downstream Elevation
51-5-3031	Plate C-27	Spillway, Stage-discharge Curves, Fully Open Gates
51-5-3032	Plate C-28	Spillway, Gate Opening - Discharge Curves, Reservoir E1. 458 or 463
51-5-3033	Plate C-29	Spillway, Stage-discharge Curves, Partially Open Gate
51-5-3034	6113-B-5000	Butnau River Diversion Channel Excavation
51-5-3035	6113-B-5001	Butnau River Diversion Railway Crossing Channel Excavation and Protection
51-5-3036	6113-C-5006	Saddle Dam Excavation
51-5-3037	6113-C-5007	Saddle Dam Fill Sheet 1 of 2
51-5-3038	6113-B-5008	Dyke 1 Excavation and Fill
51-5-3039	6113-C-5009	South Abutment Downstream Fill
51-5-3040	6113-C-5010 (Sheets 1 and 2)	South Abutment Upstream Fill
51-5-3041	6113-C-5011	Dykes 2 and 3 Excavation and Fill
51-5-3042	6113-C-5013	Butnau River Dam Excavation Sheet 1 of 3 (Plan)

Manitoba Water Resources Branch File Number	Licensee's Drawing Number	Description
51-5-3042	6113-C-5013	Butnau River Dam Excavation Sheet 2 of 3 (Cross Sections)
51-5-3042	6113-C-5013	Butnau River Dam Excavation Sheet 3 of 3 (Profile)
51-5-3043	6113-C-5014 (Sheets 1 and 2)	Butnau River Dam Fill
51-5-3044	6113-C-5016	Dyke 4 Excavation and Fill
51-5-3045	6113-C-5017	Dyke 5 Excavation and Fill
51-5-3046	6113-C-5018	Dyke 6 Excavation and Fill
51-5-3047	6113-C-5025 (Sheet 1 of 2)	Main Dam - North, Excavation and Grout Curtain
51-5-3047	6113-C-5025 (Sheet 2 of 2)	Main Dam - North, Excavation
51-5-3048	6113-C-5027 (Sheets 1 to 3)	Main Dam - North, Fill

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 parts of the following Townships not covered by water as shown shaded and described under (1) of the notes on File No. 51-5-1100 (Manitoba Hydro Drawing No. 00113-R-00208, Sheets 1 and 2) filed in the office of the Director at Winnipeg:

- (i) Township 84 of Range 16 East of the Principal Meridian;
- (ii) Township 84 of Range 17 East of the Principal Meridian;
- (iii) Township 85 of Range 17 East of the Principal Meridian;
- (iv) Township 85 of Range 18 East of the Principal Meridian;

such lands comprising a total of 952 acres.

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

All of those parts of the following Townships covered by water as shown shaded and described under (2) of the notes on File No. 51-5-1100 (Manitoba Hydro Drawing Nos. 00113-R-00208, Sheet 1 and 00113-D-00208, Sheet 5) filed in the office of the Director at Winnipeg:

- (i) Township 84 of Range 16 East of the Principal Meridian;
- (ii) Township 85 of Range 18 East of the Principal Meridian;

such lands comprising a total of 55 acres.

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

All those parts of the following Townships as shown shaded and described under (3) of the notes on File No. 51-5-1100 (Manitoba Hydro Drawing No. 00113-R-00208, Sheets 1 to 4) filed in the office of the Director at Winnipeg:

- (i) Township 86 of Range 13;
- (ii) Township 85 of Range 14 in Section 36;
- (iii) Townships 86 to 87, inclusive, of Range 14;
- (iv) Townships 85 to 87, inclusive, of Range 15;
- (v) Townships 84 to 86, inclusive, of Range 16;
- (vi) Townships 84 to 86, inclusive, of Range 17;
- (vii) Townships 84 and 85 of Range 18;

All of the above mentioned Ranges being situated East of the principal Meridian, such lands comprising a total of 54,526 acres.

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

All those portions of Township 84 of Range 17 East, and Townships 84 and 85 of Range 18 East of the Principal Meridian as shown shaded and described under (4) on File No. 51-5-1100 (Manitoba Hydro Drawing No. 00113-R-00208, Sheet 1) filed in the office of the Director at Winnipeg, such lands comprising a total of 829 acres.

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

All those portions of Township 85 of Range 18 East of the Principal Meridian as shown shaded and described under (5) of the notes on File No. 51-5-1100 (Manitoba Hydro Drawing No. 00113-R-00208, Sheet 1) filed in the office of the Director at Winnipeg, such lands comprising a total of 470 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 56,832 acres.

5. The Licensee shall not raise the headwater, as measured at the powerhouse, higher than 463.0 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 first day of November, 1972 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 fifty-six thousand, eight hundred and thirty-two dollars (\$56,832.00) 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 water 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 Regulation shall be as shown on File No. 51-5-1099 (Manitoba Hydro Drawing No. 00113-R-00209, Revision O) 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 19<sup>th</sup> day of July, 1990, by the Honourable Minister of Natural Resources.

Original Signed By:  
Minister