

LAKE WINNIPEG REGULATION

FINAL LICENSE UNDER THE WATER POWER ACT

“Licensing, Governance, Moving Forward”

Written Submission
To The Manitoba Clean Environment Commission


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Executive Summary

In the summer of 2011, Manitoba Conservation and Water Stewardship (MCWS) requested the Clean Environment Commission (CEC) to review, with public participation, Manitoba Hydro's request for a final Water Power Licence under The Water Power Act (WPA). A Terms of Reference was prepared to guide CEC's review and public hearings.

The LRW interim licence, which had been issued in 1970 and amended in 1972, authorized Manitoba Hydro to construct and initially operate (test) the project after which a 50-year final licence would be issued. The project became operational in 1976 and continues to be operated under the interim licence.

The Manitoba Government's initial decisions to develop the LWR project had been based on two intended purposes – to alleviate shoreline flooding on Lake Winnipeg, and to enhance waterpower energy development on the Nelson River. Waterpower licensing under the WPA did not provide for mitigating LWR impacts. A three-year study and report by the Lake Winnipeg, Churchill and Nelson Rivers Study Board (LWCNRSB) was completed in 1975. The study and report's purpose was to examine the project's potential impacts, having been realized likely to be significant. The Report served as an initial base for future mitigation agreements and impacts attention.

In consideration of issues and concerns about the LWR project and for its review of a final Water Power Licence, LWR needs to be seen for what it is. It is a massive water control works project and a major component of MH's entire waterpower generation system. The system includes Churchill River Diversion (CRD), and it regulates water levels and river flows for the optimum production of hydroelectric energy by MH's largest waterpower projects on the Nelson River – Kettle, Longspruce, Limestone, and now Keeyask. The operation of LWR, either by itself or in combination with CRD, has caused very significant environmental and socioeconomic impacts. The LWR project has not been subject to environmental licensing.

Mitigation agreements and measures that have been put in place to date need to be continued and expanded. Issuance of the final Water Power Licence at this time should not in any way impede the opportunities for expansion of these future additional mitigation initiatives.

Moving forward past the final Water Power Licence should include:

- Licensing with terms and conditions under The Environment Act (EA) for the ongoing and future operation of LWR.
- Environmental management plans and systems, which include adaptive management, and input by affected interests.
- Governance and organizational structures to guide and facilitate the implementation of the environmental management systems.

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Request for CEC Hearings and Terms of Reference

By letter of July 5, 2011, the Minister of Conservation and Water Stewardship (MCWS), Hon. Bill Blakie, requested the Clean Environment Commission (CEC), to review Manitoba Hydro’s (MH) request for a final Water Power Licence for the Lake Winnipeg Regulation (LWR) project. The requested review was to include hearings and was presented somewhat broadly as an opportunity for public participation. A second letter (September 1, 2011) and Terms of Reference for the CEC hearings clarified the intent of the review to have it include a report related to MH’s performance under the Interim Water Power License within the scope/authority of the Water Power Act (WPA).

The Terms of Reference, among other things, presented the Province’s disposition that “The Environment Act does not apply to the Lake Winnipeg Regulation Project as it was completed before this legislation came into force”. Instructions to the CEC included hearing evidence regarding the effects and impacts of LWR since its inception, as well as commenting on provisions for future monitoring and research that might be beneficial to the project and Lake Winnipeg. The last statement in the Terms of Reference is that CEC’s report shall incorporate and reflect “The Principles and Guidelines for Sustainable Development as contained in Sustainable Development Strategy for Manitoba”.

The letters and Terms of Reference appear to offer an opportunity to “do it right”. The opportunities to “do it right” under the WPA and water power licences have been somewhat limited, particularly relative to that of licensing processes that are available under the Environment Act. Significant however, the existence and mandate of the CEC are provided for within the Environment Act and Regulations (EA), which were said to not be applicable to the LWR project. The inclusion of the CEC to lead this review, by itself, raises the expectation that it might be done at least differently, hopefully better.

The Interim Licences for the LWR Project

The Term “**LWR Interim Licence**”, which has often been mentioned somewhat loosely, actually reflects two interim licences.

The first licence, “**INTERIM LICENCE FOR THE REGULATION OF WATER LEVELS FOR WATER POWER PURPOSES, Lakes Winnipeg, Playgreen, and Kiskittogisu**”, was issued in November 1970.

The second licence, “**SUPPLEMENTARY INTERIM LICENCE FOR THE REGULATION OF WATER LEVELS FOR WATER POWER PURPOSES, Lakes Winnipeg, Playgreen, and Kiskittogisu**”, was issued in August 1972. This second licence authorized significant design and construction modifications, the main one being the inclusion of the Jenpeg control structure and some channel excavation modifications. This licence reflected revisions of ten of the original fifteen articles of the interim licence. Taken together, the Interim Licence and the Supplementary Interim Licence authorized, with terms and conditions, the construction and initial operation of the LWR project for the **regulation of water levels for waterpower purposes**.

The **waterpower development** aspects of the Jenpeg structure have been authorized by a separate, third interim licence (“**DEVELOPMENT OF WATER POWER, JENPEG SITE, West Channel of Nelson River**”). A final licence for Jenpeg’s **waterpower development** project is pending and is not part of the CEC hearings. The dual purpose of the Jenpeg’s structure for regulating lake water levels and for waterpower development is mentioned as it might have added licensing and operational complications for both projects.

LWR History: Project Conception, Decision, Development, Impacts Management

LWR Project Beginnings, 1966 – Flooding on Lake Winnipeg and growing demands for electricity were common themes during the 1950s and into the late 1960’s. A 1966 agreement between the governments of Manitoba and Canada committed MH to develop the hydroelectric potential of the Nelson River. That agreement included Kettle Generating Station, the Kettle to Winnipeg high voltage transmission system, CRD, and LWR. In September 1970 the Government of Manitoba announced its plans to develop the LWR project. The proposed project additionally had presented as an opportunity to reduce the recurring shoreline flooding on Lake Winnipeg. The Interim Licence for LWR was issued to MH in November 1970, two months following the announcement of the project. Design and construction of the project proceeded soon after. The LWR project became operational in 1976.

As circumstances developed later and framed against current standards, this planning, decision, and action process became a classic form of “D.A.D.”, a term commonly cited in the 1980s to indicate, “Decide, Announce, and Defend”.

Most of the studies that had been undertaken beforehand appeared to have explored hydroelectric potential, economic advantages, and engineering options almost exclusively. Little attention was directed at the project’s impacts on the environment and people. The Lake Winnipeg, Churchill, and Nelson Rivers Study Board (LWCNRSB) was put in place in August 1971 by the Manitoba and Canada governments jointly, upon the recognition of the significant environmental and social impacts of the LWR and CRD projects. The LWCNRSB report was prepared over a three-year period and was published in 1975.

The LWCNRSB study stands as an impressive effort over a very short time. The Study Report presents a fairly comprehensive, well-documented snapshot of the enormous extent of the project's predicted impacts. Nevertheless, the report was rushed; some aspects of the study needed to be set aside to focus on other aspects that might guide changes in the project's designs and construction as these processes were continuing. The baseline that the study provides for measuring the impacts that have eventually occurred serves to be somewhat minimal. Current statements in reference to this study in the defense and adequacy of past environmental impact assessments can be misleading. Nevertheless, the Study Report is a very informative and interesting document, a valuable page in the history of the LWR and CRD projects.

LWR Project Now, 2015 – Fast forward to Manitoba Hydro's July 2014 "Lake Winnipeg Regulation – A Document in Support of Manitoba Hydro's Request for a Final Licence under the Water Power Act". This report is a well-written, well-organized, and well-presented, informative document. It is also one that is very useful in understanding the scale and complexity of the LWR project components and their workings, as well as both their benefits and their impacts. It also serves to compare what had predicted about project impacts in 1975 to what has been observed forty years later.

It seems clear that any large project that controls water by dams, storage structures, diversions, and channel excavation, whether for flood protection or waterpower generation, can have significant consequences, both positive and negative. Some consequences might be predictable; others are not necessarily so.

For LWR, the three main areas of impacts have been Lake Winnipeg, the outlet lakes between Lake Winnipeg and the Jenpeg control structure, and the Nelson River below Jenpeg. The downstream impacts become even more complex as they relate to the interdependent operations and effects of LWR and CRD.

Lake Winnipeg obviously has a long history of problems, not all relating to the operation of LWR project. LWR operation for waterpower production within the licensed operation limits has provided some flood protection benefits; however, high risks of damage will continue to exist due to extreme hydrologic events, wind setup, wave action, and ice, the worst being when these occur in combination. Lowering the top operation limit for greater shoreline flooding protection might reduce only part of these risks, at the expense of downstream interests where the negative impacts would be greater. Flood plain zoning, water level development restrictions, and clear information and knowledge may be measures to consider in conjunction with flood risk reduction options. Lake Winnipeg will likely continue to be a subject of considerable attention beyond shoreline flooding and erosion, with protection and enhancement efforts having to consider contributing factors over a larger part of the watershed upstream.

With LWR, the area between Lake Winnipeg and the Jenpeg control structure experiences the greatest range of water level fluctuations. This is especially so related to operating under extreme conditions, rapidly changing conditions, and ice and freeze up conditions. These factors are clearly described in the Manitoba Hydro Report.

It is the areas downstream of Lake Winnipeg where the various water level and flow changes and impacts have affected people disproportionately, especially the indigenous people and their communities. These impacts had been predicted in the LWCNRSB Study Report, and have also been described in the Manitoba Hydro 2014 Report. A number of agreements and measures have been put in place to mitigate some of these impacts. Some of these measures include monitoring and best management practices, and are continuing. Still, the agreements and measures do not resolve all of the project's socioeconomic and environmental impacts. Some of the impacts appear to be continuing and some may be progressive; monitoring and adaptive management practices might need to be expanded. Recent CEC public hearing reports, specifically for Bipole III and the Keeyask Generation Project, have alluded to some of these observations.

The media attention and the criticism by the public and affected interests have been continuous and relentless. Most of the negative publicity has been directed at MH, but the Province has not been excluded as it has often been seen as the driving force behind the development of the LWR and CRD projects.

LWR Project Licensing – Regulatory Influences

(a) Water Rights Act (W80) and Regulation:

This Act (WRA), although amended from time to time, has existed since 1930. A special amendment in 1980 was made to clarify the Act's application to two separate classes of projects: water use and allocation projects, and **water control works** projects.

The WRA defines “**water control works**” as any works that (a) temporarily or permanently alter the flow or level of water, or (b) change the location or direction of flow of water.

The Act's definition of a “water control works” project quite accurately describes the LWR project. That description might help in appreciating how the LWR project differs from the description of a typical waterpower generation project, a possible factor in the project's longer and more difficult transition from an interim licence to a final licence under the Water Power Act.

(b) Manitoba Environment Act (E125) and Regulations:

The Environment Act and Regulations (EA) was established in 1988, more than twenty years after the LWR project was licensed, constructed, and operated under the authority of the LWR Interim Licence under the Water Power Act. MCWS and MH have maintained that LWR is not subject to the EA, as the project was completed before this legislation was in force.

MH's waterpower generation projects that have been constructed and operated since 1988 have required licences under both the Water Power Act and the Environment Act.

The EA's intent and purpose is to ensure that the environment is protected and maintained to sustain a high quality of life, including social and economic development, recreation, and leisure for Manitobans. The EA mandates environmental assessments and licensing of projects that might significantly affect the environment; it provides for use of effective environmental issues-review processes; and it provides for public consultation in environmental decision making by elected government. The EA also provide for the existence and the operation of the CEC for advising the Minister and facilitating public participation in environmental measures.

The EA provides for establishing three classes of developments. The LWR would be classified as a Class 3 Development. Section 12 (1) of the Act provides for **requiring a valid licence to construct, alter, or operate any Class 3 development unless exempted under the Act or Regulations.**

For existing developments, Section 12 (2) (b) provides that where no existing limits, terms, or conditions exist by licence or regulation, the Minister may require any person operating an existing Class 3 development to file an Environment Act Proposal. (The reference to existing limits, terms, or conditions surely applies to limits, terms, and conditions properly interpreted within the intent and spirit of the Environment Act. The limits, terms, and conditions of the LWR Interim Water Power Licence clearly fall short of that interpretation under the Environment Act.)

(c) The Water Power Act and Regulation (W60):

The Water Power Act and Regulation (WPA) have been in place since 1930. Under the WPA, waterpower is viewed as a resource in the form of electric energy produced from falling water. The Act provides that all rights to develop and use waterpower are vested in the Crown. The Act applies also to all lands needed for the development and operation of waterpower generation projects.

The WPA licensing process for a typical waterpower generation project (for example, Wusquatim) is a two-stage process comprising an interim licence and a final licence. The interim licence describes the details of the project's construction, its requested operating limits, and the land to be used and occupied for construction and operation purposes.

The interim licence also states that the licensee is entitled to a final licence upon fulfillment of the terms and conditions required by the interim licence and the Water Power Regulation. The interim licence describes in detail the rights, terms, and conditions that would be contained in the final licence including the project's hydrometric operating limits, the water rentals to be paid, the 50 year term of the final licence, the physical works that will have been constructed, and the severance lines agreed upon. The interim licence also normally stipulates the time frame in which the project construction is to be completed and the terms and conditions fulfilled.

The final licence is granted upon execution of all the requirements of and compliance with the terms and conditions of the interim licence. The final licence thus affirms that the waterpower project has been completed and that it is to be operated within the limits, terms, and conditions for the remainder of the fifty-year term of the licence.

The main focus of the WPA and licences is the **effective and efficient development of waterpower** based on the storage, control, and use of water in Manitoba's rivers and lakes. The WPA and licences have not been applied toward assessing or mitigating project impacts.

Water Power Licensing – Project Construction vs. Operation

Historically, a waterpower project's progression from an interim licence to a final licence under the Water Power Act was considered to be largely an administrative matter and more or less a formality, the project being a **typical waterpower generation project**. The time frame for progression of a typical waterpower generation project from an interim licence to a final licence has normally been five years. The LWR Interim Licence was issued in 1970, and the project has yet to receive a final licence.

LWR is **not a typical waterpower generation project**. The LWR project does not generate waterpower. Its physical components reflect largely a **water control works project that stores and diverts water for waterpower purposes**. The LWR project ultimately affects water levels and flows on rivers and lakes far more significantly, over a much larger area, and in a greater number of ways than does a typical waterpower generation project.

For licensing perspectives, it is useful to conceptually separate the LWR project into its two distinct and separate phases. The first phase was the **construction phase**, which comprised the project's designs, plans, surveys, construction, and land acquisition for construction. The construction phase of the LWR project has been completed some time ago, generally in compliance with the interim licences issued in 1970 and 1972.

The second phase of the LWR project is the **operation and maintenance phase**. The project's initial operations appear to have been more or less within the broad operating limits stipulated in the interim licence. However, LWR's detailed operations within those ranges have been responsive to a number of different and often conflicting objectives and operational constraints that became more apparent with time and experience. These objectives and constraints broadly include meeting hydroelectric energy demands efficiently while minimizing or mitigating a wide range of environmental and socioeconomic impacts. The contention that "the LWR project was completed before the EA came into force" is only partially correct, in that only the construction phase had been completed.

Manitoba Hydro's July 2014 Lake Winnipeg Regulation Report clearly describes the project's physical structure components and their purposes. The report also describes

MH's larger overall waterpower system's operational objectives and its operational planning and decision-making factors. The report then describes the various factors that have influenced LWR operations specifically (Pages 23 to 33). One would observe from the report that the **LWR operation phase has been ongoing and changing**, having to adapt (best management practices) to a number of dynamic and complicating factors (market conditions, wide ranging and fluctuating hydromantic conditions, wind, ice, freeze up conditions, impacts mitigation, etc.).

The current review and hearings relate, among other things, to MH's performance under the interim licences and indirectly to MCWS's issuance of a Final Water Power Licence for the LWR Project. Considering the dynamic and changing nature of LWR's operational phase, it might be appropriate to consider a final licence for the project only to confirm that it has been constructed as described in the interim licence, and that its initial operation has generally occurred within the broad limits of the interim licence. There's a significant difference between operating judiciously within the licensed operating limits and operating with complete freedom within those limits.

LWR Impacts Management Beyond Water Power Licensing

The LWR project, although "partially" licensed to date (interim licence only) under the WPA, has no waterpower generation components directly within the project. The LWR project's purpose is to **control water to be used for waterpower generation by existing and proposed waterpower generating stations downstream of the project**. The LWR project should be seen for what it is... a massive water control works project and a most significant component of Manitoba Hydro's entire operating system, which includes the Churchill River Diversion (CRD). It is clear that the operation of LWR either by itself or in combination with the CRD has far greater environmental and socioeconomic impacts than does any individual waterpower generation project.

It is therefore conceivable that the current review of MH's request for a final Water Power Licence for LWR might result in identifying a need to consider environmental adaptive management initiatives and governance systems for the ongoing and future operation of the project.

The WPA and licences should **not** be considered as a vehicle or base upon which to facilitate those types of environment management initiatives and systems. If a legislative base were determined to be required, the Environment Act licensing process would be the most appropriate and effective base.

Any final Water Power Licence for LWR at this time should not limit any separate and future environmental licensing and mitigation initiatives that might be considered by the Province for the ongoing and future operation of the project. While environmental licensing of the **construction** of the project now would be redundant, it would be prudent to leave that option open for the **operation** of the project.

One might expect that there would be no compelling legal impediment to some form of licensing under the Environment Act being applied for only the **operation** of a project of which the construction had been completed and approved under the authority of the Water Power Act. Need for any such action and any form it might take would be likely be influenced by the level of concerns expressed during the CEC hearings. A simple clause could be included in the final Water Power Licence to leave that option open.

Moving Forward – Adaptive Management, Governance

The current pause for a “second look” at the LWR Final Water Power licensing provides an opportunity to examine more effective and much needed options in conjunction with licensing. These options include **environmental management systems**, which include environmental protection plans, environmental management plans, and monitoring plans. They also include programs, activities, and organizational structures for implementing the plans.

The path to moving forward builds, in large part, upon the insight and work of the CEC over the past ten years approximately. The progression of improved licensing and attention to impacts management has been evident and impressive in the most recent CEC hearing reports, in particular, the reports for Wuskwatim Generation and Transmission, Bipole III, and Keeyask Generating Station. The three reports provide a blueprint for moving forward for LWR and possibly others...CRD, some individual projects, and the overall LWR-CRD-Nelson and Churchill rivers waterpower system.

Concerning the LWR projects and without repeating details, some sections of the Keeyask report are especially relevant, at least generically:

- 13.2 Environmental Protection Plans
- 13.3 Environmental Management Plans
- 13.4 Environmental Monitoring Plans
- 13.4.1 Specific Technical Monitoring Activities
- 13.5 Environmental Management Approach – (adaptive management cycle “Plan – Do – Adjust”)
- 15.1.2 Government of Manitoba (assessment guidelines, protocols)
- 15.2 Public Consultation
- 15.3 RCEA – Regional Cumulative Effects Assessment
- 15.4 Aboriginal World Views
- 15.5 Rebuilding the Relationship (especially significant)

The messages merit repeating and emphasizing. These are somewhat new concepts to many people. But they also need to be embraced and acted upon by the organizations involved. Facilitation of the planning and management processes requires a program units dedicated to this function and staffed with people trained, skilled, and experienced in leading and coordinating those processes. These people are not usually just found in a

traditional organization. Sometimes experts need to be brought in to conduct training workshops.

An important base on which to build and implement environment management systems would be their governance structures and operating principles. For LWR impacts management, a determining factor for developing these systems and structures might be the large size of the overall impact area and the differences in the types of impacts within the larger area.

Conceptually, some form of a two-level structure likely might be required. The top level might be a larger, permanent oversight, steering, management group...something like a board or commission, legally constituted. The second level might comprise task-oriented groups that have the responsibility to execute the specific monitoring, evaluating, and reporting activities. Representation on the management "Board" might involve appointment of representatives from MH, the Province, Canada, the local affected communities, and possibly from several separate interest groups. Costs and effectiveness would be factors in the "if, what, where, when, how, and why" of any such governance structure. All of this is highly conceptual; any further consideration of details would be very premature. The RCEA) that is underway might influence the options that might need to be considered. There does not appear to one governance model that fit most situations. Competent leadership and respectful operation procedures are key components of an effective governance structure; patience is a significant feature also.

LWR Operation Environment Act Licence – Why

The contents and structure of any form of EA licence for LWR might be something that needs some thought. MCWS would be in the best position to explore that possibility before it is arbitrarily dismissed. At minimum the EA licence would have to be linked legally to the Final Water Power Licence. Terms and conditions might be developed based on some of the things already being done, and also on additional things that might become more obvious following this CEC review. Existing information and analyses from previous reports and studies might be considered and used as much as is possible. Dam safety should be one new inclusion in the licence. MCWS would have to determine the process to be required for filing any EIS, including its contents, the timing, the role of the TAC, any further consultation, etc.

Of equal importance is what would the EA licence for LWR operation serve? Why might a licence be appropriate? How would it help? Some suggested purposes are as follows:

- To establish a clear, legitimate link between the regulator and the licensee, and to affirm that some of the necessary or prudent things presently being done are not just discretionary but instead would be mandatory in compliance with licence terms and conditions.

- To provide a legitimate base for best management practices, for the various environmental management plans deemed to be appropriate, and for the creation and operation of a governance systems for adaptive management.
- To establish public trust in respect to the regulator-licensee relationship and improve confidence in the Province's commitment to protect the interests of those affected by the project.
- To affirm the Province's commitment to regulate itself to at least the same standard that it might expect of the licensees ("The Crown is bound...by its Acts").
- To set a precedent and new standards for possible application to other projects regarding what might be appropriate and how it might be done.
- To establish a more complete base for the RCEA being prepared by MCWS and MH.

LWR operation has had extensive and serious environmental and socioeconomic impacts, some of which are progressive and continuing. Although agreements and many mitigation measures have been put in place, the project's operation merits licensing with terms and conditions under the Environment Act. An EA licence together with adaptive management and an effective governance structure would be seen as a step forward in "doing it right".

Going forward should also anticipate possible additional needs and opportunities that might be identified by important complementary initiatives that are proceeding concurrent with this review. Those initiatives are the RCEA by MCWS and MH jointly, and the Environment Act review by MCWS. These two initiatives may provide more information and offer a broader scope for considerations of options available for going forward, with possible application beyond LWR.

