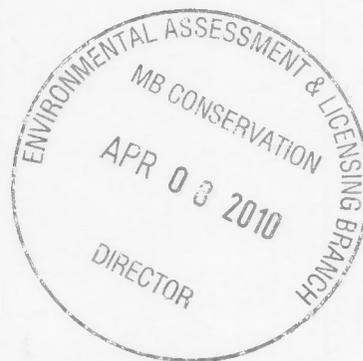




March 31, 2010

Honourable Bill Blaikie
Minister of Conservation and Climate Change
Room 330 Manitoba Legislative Building
450 Broadway
Winnipeg, Manitoba
R3C 0V8

Ms. Tracy Braun,
Director, Environmental Assessment and Licensing Branch
Manitoba Conservation
123 Main St. Suite 160
Winnipeg, Manitoba,
R3C 1A5



Dear Minister Blaikie, Ms. Braun:

RE: Manitoba Wildlands comments BipoleIII Scoping Document, Environment Act file # 5433

The BipoleIII Direct Current transmission project in Manitoba is the first direct current system to be built in Manitoba in decades. It is also the first transmission line of significant length to be designed, planned and reviewed in Manitoba in over 10 years (Wuskwatim transmission project designing and planning activity started pre 1999).

Scoping Document: A First Step in EA

The scoping process is crucial for the success of the whole Environmental Impact Assessment (EIA) process (Soderman, 2006). In addition, the scoping process itself is expected to outline the major effects and impacts for the preparation and quality of EIS reports (Soderman, 2006, International Association for Impact Assessment [IAIA], 1995). The Bipole III environmental assessment scoping document provides a statement of contents for the project's EIS. Manitoba Wildlands expects detail regarding research, or methods for processes, standards, decision making principles, construction and operation of Bipole III among other topics, to be thoroughly examined and explained in the EIS filed by Manitoba Hydro for this project. We assume the contents of the scoping document in place for public review are based on Manitoba Conservation expectations and direction.

Our efforts in research and review to provide comments are intended to assist both the proponent and the Manitoba Environmental Assessment and Licensing Branch. Our efforts and comments are provided in the public interest, and to increase certainty, quality of assessment, consultation, and technical and scientific content for the EIS. In turn Manitoba Wildlands efforts regarding this scoping document are intended to inform, strengthen, and support the project review, assessment, and licensing



process. We take these steps because major projects when government is in essence licensing itself or in this case a crown corporation, setting its own EA standards, and impacting significant areas of Manitoba's lands and waters, while spending or borrowing significant amounts of public funds *must have the very highest quality of planning, access to information, environmental impacts assessment, public reviews, and licensing processes.*

One significant aspect of scoping a project is the identification of the project area. We would suggest that Manitoba Hydro make sure that its project area scope does not arbitrarily leave out sensitive sites or issues. As per our comments above the utility needs to be conscious at all times that it is in a privileged but risky situation where it is allowed to define its own project area.

Manitoba Wildlands will provide suggestions about contents that would be useful to incorporate in the Bipole III EIS. Suggestions and questions as to standards, methods, criteria for transmission projects are also contained in the electronic version of our document. **Watch for Green References in our text to materials we are attaching. Green is also used to highlight materials we quote.** Indented writing refers to quoted material.

Manitoba Wildlands will also be providing recommendations for contents for the Bipole III EIS, and the Bipole III review/licensing process. **Please watch for BOLD text.**

It is our understanding the Bipole III scoping document itself will not be updated – though review of its content and recommendations or comments received should be applied to the next scoping document for a transmission project in Manitoba. Further it is our understanding that all public comments provided under the Environment Act in review of the scoping document will be: provided to the proponent by Manitoba Conservation; be used in the determination of next steps for the proposal EIS under the Act; and be included in the public registry (both online and stationary public registry files.) We expect the public registry file to be updated soon, as it recently took over two months for notification of updated public registry files on two other EIS reviews under the Act.

The Canadian Environmental Assessment Act website (<http://www.ceaa.gc.ca/default.asp?lang=En&n=C3BD5DA2-1>) lays out specific guidelines and suggestions on what should be contained in a scoping document. Manitoba Wildlands suggests the Manitoba Conservation examine these guidelines when developing future scoping documents.

Access to Information

Manitoba Hydro and Manitoba Conservation need to avoid the false assumption that if materials or information are posted on a web page they are available to all affected parties. Also there is a false assumption that posting materials on a web page is the same as notification. Steps to make sure all affected communities, governments, land owners are notified will be extremely important for the Bipole III project. Currently stationary public registry locations in Manitoba may not be sufficient for this project. Additional sites, complete files, all being updated consistently will be essential.



Manitoba Wildlands recommends that once the corridor is selected and the project area defined on that basis that the utility and Manitoba Conservation design a notification system that will work both during the next stages under the Environment Act, but will also be in place throughout the building of Bipole III. This plan should be posted to the public registry, on Manitoba Hydro web pages, and be advertised as soon as it is in place. Given the number of affected communities in northern and southern Manitoba we assume regular updates will go by mail to all communities.

The utility should be required to make public any report that may be needed by affected communities, landowners, municipal authorities and public participants to be able to participate in Bipole III processes.

Manitoba Wildlands recommends that Manitoba Conservation and Manitoba Hydro arrive at an access to information policy for this project that is more than minimum compliance, and more timely than has been the practice. In particular the community sessions and open houses, municipal meetings etc must be combined with ongoing access to information. Manitoba Hydro can on its own take steps beyond minimum compliance so that information that supports citizen engagement, and best decision making, is available as early as possible in the process.

The Bipole III EIS needs to describe the tools for access to information put in place for the entire review, licensing process, and construction period, starting from the selection of a corridor.

Manitoba will need to make sure that all public registry files and proposal/ project documents under the Environment Act for previous transmission systems in Manitoba are available in public registries. It would make sense to re-establish access to this information now.

We commend Manitoba Hydro for the electronic listserv that was put in place for the Wuskwatim generation and transmission projects from the time a referral from the minister to the Clean Environment Commission started the CEC proceedings. That was a first under the Environment Act in Manitoba, and needs to be in place, with improvements, for Bipole III.

Manitoba Wildlands recommends that an electronic list and other tools for all parties, including public participants and affected communities, regarding the Environment Act review, CEC proceedings, hearings etc be operational *before and during the hearings* for Bipole III. Significant time and resources can be saved by ensuring access to information by more than one medium during the reviews, CEC proceedings, and especially the hearings.

Manitoba Hydro and all parties would benefit from reviewing the pattern and trends in public participants' concerns about quality and access for information during recent Hydro project processes, in order to improve these practices.



Manitoba Wildlands recommends that the EIS for Bipole III include a review of past practices, and issues regarding access to information, with a resulting plan and practices. This discussion may well need to include the Manitoba government entities involved in all steps under the Environment Act. See our comment about access to information throughout the projects construction.

Transmission System Standards & Regulation

Currently guidelines, standards or regulations for transmission systems in Manitoba either do not exist or are not publicly available. Licences for transmission systems, and the record as to environmental assessment are the main public sources. Other areas of Canada, such as Ontario and British Columbia, publicly post guidelines and regulations regarding major transmission line construction.

For example: The Ontario Energy Board regularly updates and posts their *Transmission System Code*.

The purpose of the Ontario Energy Broad *Transmission System Code* is to set out:

- (a) the minimum conditions that a transmitter shall meet in designing, constructing, managing, maintaining and operating its transmission system;
- (b) the rules governing a transmitter's obligation to connect customers to its transmission system, and to provide transmission service to its customers;
- (c) the obligations between a transmitter and its customers and between a transmitter and its neighbouring Ontario transmitters;
- (d) the rules governing the economic evaluation of transmission system connections and expansions;
- (e) the minimum standards for facilities connected to a transmission system; and
- (f) through the connection agreement set out in Appendix 1, the obligations of a customer to the transmitter to whose transmission system the customer's facilities are connected.

Manitoba Wildlands recommends that guidelines for actions to build transmission lines - planning, design, EA, licensing, construction and operations - should be available through Manitoba Conservation, Environmental Assessment and Licensing Branch. These should be applied to all stages or reviews and decision making under The Environment Act and any other Act triggered by a new transmission line. Manitoba Conservation also needs to make available to the public its policies and procedures standards for a scoping document under the Environment Act.

Crown Lands: Designations, Parks and Protected Areas

The Bipole III EIS will need to identify all crown land designations in or partly in the selected corridor. This includes any crown land where a regulation, agreement, or order in council is in place. We assume the choice among three possible corridors/project areas will be made in advance of contents for the EIS being finalized and provided. As a result, the public policy, ecological, regulatory and community or stakeholder issues, and impacts with respect to crown land designations will need to be identified. As the west side natural regions of Manitoba continues to lack fulfillment of protected areas commitments, despite many areas of special interest designed by Manitoba Conservation being

available for those decisions, the EIS for Bipole III will need to address protected areas commitments, options, while avoiding impacts to any opportunity outstanding for establishment of new protected areas. It would be beneficial to decision making and the boreal forest regions for Manitoba Hydro to indicate which areas of special interest it supports for protected status. The utility could also nominate or identify alternative sites, and indicate which areas of special interest it supports.

Manitoba Wildlands recommends that Manitoba Conservation and Manitoba Hydro work together for decisions for new protected areas in the regions impacted by Bipole III, with establishment being in advance of any construction, ideally this year.

In addition, at any point in time Manitoba Conservation has plans for several new wildlife management areas in the province, and currently as many as 40 sites are under review for ecological reserve status, with as many as 20 rivers being reviewed for Canadian Heritage River status. Therefore the EIS will need to be informed about these potential decisions. The EIS will also need to include how Manitoba Hydro will avoid increasing risk of habitat impacts near *or* inside any existing protected areas – federal or provincial which are impacted by the selected corridor. The EIS will need to define buffers and explain the standards applied in each instance.

We would caution that the ‘no logging in parks’ amendments to Manitoba Acts last spring has left confusion and controversy including with respect to Grass River Park. Manitoba Hydro may wish to obtain a legal opinion about whether roads they may build that could benefit the forestry industry and contravene this new regulation.

First Nations affected by this proposal under the Environment Act may also be involved in lands selection for treaty land entitlement. While this information is considered confidential and is not made public by the Manitoba government, various departments of the Manitoba government review these land selections. Manitoba Hydro will need to be able to state in its Bipole III EIS that all lands selections have been taken into account, and avoided.

Manitoba Wildlands recommends that Manitoba Conservation provide Manitoba Hydro with the information its needs to fulfill public policy, and avoid contradiction to policies, commitments, reviews, and standards in place with regard to current and future parks, protected areas, crown land designations, and treaty land entitlement selections.

Manitoba Wildlands further recommends that the EIS for Bipole III contain the analysis done in the project area/ corridor to verify the steps taken or to be taken based on our comments and recommendation above.

Impacts: Construction & Operation

Please see our comments regarding cumulative impacts, and staged assessment of cumulative impacts during the operation of this transmission system and its corridors, roads, etc. These are intended to apply to impacts during operation that is cumulative impacts.



We would suggest that given the size, cost, and timelines for Bipole III it is time to clearly state in the EIS which impacts are from construction, and which are from operation. Depending on the proposal under the Environment Act the pattern in Manitoba goes to one extreme or the other: a focus on impacts from construction OR impacts from operation. We encourage Manitoba Conservation and Manitoba Hydro to set the bar high and include standards, impacts, and assessment for both in the Bipole III EIS.

This also means that Manitoba Conservation and Manitoba Government Services and Transportation may need to provide clear standards regarding road building, road categories, and road decommissioning for the EIS. A similar approach would be needed regarding any logging, clearing, or changes in drainage etc with respect to contents in the EIS. These standards and contents are needed for this EIS given the number of communities affected, the length of the transmission line, the potential significant impacts from the project - and the reality that an opportunity exists to put standards in place that will aid the entire project, and future projects.

Manitoba Wildlands recommends that Manitoba Conservation assemble the existing policies and procedures from relevant government departments in order to provide Manitoba Hydro with the requirements for a range of impacts from Bipole III that include logging, road building/ decommissioning, drainage and culvert installations, etc. We further recommend that these policies and procedures be posted, put in the public registry and included in the EIS so that it is clear what Manitoba Hydro is expected to fulfill, and which government departments are responsible for work permits, etc.

With the changes from climate change anticipated in habitat, weather, soil, and hydrology - not to mention species behaviour, ranges, etc - it is imperative this EIS has specific content about impacts during operation. We would suggest that a transmission system that traverses many natural regions (which are based on weather, soil, geology, etc) may well have varying impacts, and variations in technical operations. So now is the opportunity to consider how to avoid an EIS that assumes the entire transmission system is homogenous - with regards to impacts. An opportunity exists to consider soil, hydrology, weather and other biophysical elements on a regional basis in the EIS.

Impacts: Cumulative

Manitoba Wildlands sees that Manitoba Hydro will be including an entire chapter of the EIS to cumulative impacts assessment. We commend the utility, and look forward to reading this chapter.

The cumulative impact approaches outlined by Manitoba Hydro should be explained explicitly in the EIS on a performance basis. For Manitoba Conservation to act on cumulative impact assessment, Manitoba Wildlands recommends Manitoba Conservation and Manitoba Hydro take the overdue step of discussing regular reviews of cumulative impacts of the Bipole III project, with public component and transparency. The EIS can then reflect how this ongoing or living cumulative impact assessment will be conducted. We would suggest five year intervals for



these cumulative impact assessments – which must be based on operations and performance versus a policy / paper assessment.

In addition to guidelines outlined by the CEAA, it is worth noting that Canter and Kamath (1995) outline in a detailed list aspects of cumulative effects which should be considered. These include ecological, social, economic and cultural effects of the proposed development.

A Reference Guide for the Canadian Environmental Assessment Act – Addressing Cumulative Environmental Effects (prepared by the Federal Environmental Assessment Review Office) outlines detailed descriptions of what should be included in an EIS under the CEAA.

Manitoba Hydro Policies

In 1993, Manitoba Hydro adopted a sustainable development policy and 13 complementary guiding principles based on the principles and guidelines of sustainable development adopted by Manitoba's Round Table on Environment and Economy. These guidelines and principles are now enshrined in Manitoba's Sustainable Development Act. Manitoba Hydro states the crown corporation will apply these principles in all aspects of its operations to achieve environmentally sound and sustainable economic development. We do not know if Manitoba Hydro has ever had independent analysis of its performance regarding these principles and guidelines.

Manitoba Wildlands appreciates the crown corporation indicating it will hold to these standards and further encourages Manitoba Hydro to abide by and adopt best practices standards, such as those outlined in *Principles of Environmental Impact Assessment Best Practice* by IAIA.

Manitoba Wildlands would like Manitoba Hydro to adopt and make public guidelines, standards and policies for planning, construction, and maintenance of transmission lines. In addition, guidelines, standards and policies regarding other Manitoba Hydro projects; such as planning, construction, and maintenance of converter stations and generation stations, should be made public. See recommendation above.

The ideal approach would be for the utility and Manitoba Conservation to arrive at transmission system standards, including for reporting in relation to cumulative impact assessments, operations, environmental management plans, green house gas (GHG) emissions, etc. These standards could be applied to both existing, and future transmission systems in Manitoba. For next transmission system projects (including those which are part of a new generation project) the joint standards could be written into the licence.

Does Manitoba Hydro commission independent review of its EIS products? What safeguards does Manitoba Hydro put in place to make sure the technical analysis, advice, and products it files under The Environment Act have had adequate review before filing?

Manitoba Policy and Regulatory Framework

The Manitoba Conservation Environmental Assessment Scoping Document for Bipole III states;

Federal legislation includes the *Canadian Environmental Assessment Act, Species at Risk Act, Migratory Birds Convention Act, Fisheries Act, Navigable Waters Protection Act and Explosives Act*. Provincial legislation includes *The Environment Act, The Endangered Species Act, The Water Protection Act, The Heritage Resources Act, The Sustainable Development Act and The Dangerous Goods Handling and Transportation Act*. There are also various municipal by-laws, agreements and other regulatory and policy structures and instruments that could influence or apply to the proposed Project and the environmental assessment process. The EIS will contain a comprehensive annotated list of applicable legislation, regulations, policies and guidelines.

Manitoba Wildlands would expect to see the following Acts and Policies included in the EIS:

- The Sustainable Development Act;
- The Forestry Act (see 2009 amendments);
- The Parks Act, The Ecological Reserves Act;
- The Wildlife Act;
- The Climate Change and Emissions Reductions Act;
- The Crown Lands Act;
- The Planning Act

We have attached here our 2009 listing of Manitoba lands and waters policies as an aid to identify the sets of policies and programs which the Bipole III project may well need to fulfill or avoid impacting. While a few months out of date the listing provides a set of tools and a caution as to the importance of avoiding damage to or contradiction of existing public policy when undertaking a significant public works project.

The scoping document is vague regarding Manitoba's policy and regulatory framework. We recommend the Bipole III EIS be more specific and clear about the policies, existing agreements, and regulatory framework which the proponent need to fulfill or take into account for this project.

Policy and Strategic EA

While our organization's primary focus in reviewing this scoping document is to assist in arriving at steps for assessing impacts from the design, construction and operation of the Bipole III project under the Environment Act, we would observe that the larger, or more costly, or more public a project the greater the likelihood that a policy and strategic EA is also needed.

It is overdue for Manitoba to have a mechanism for policy and strategic EA under the Environment Act that would be conducted either before or right after filing the proposal under the Act. This mechanism could assist in building the Guidelines or Scoping for the project EA. Such a mechanism



would identify the policies, program, commitments, and government mandates inherent in making a decision to proceed with the project. It could also mean that alternatives are explored at the beginning of the process. All acts, agreements, policies, and other kinds of commitments relevant to the project would be identified at this stage.

If the utility has conducted an in house exercise akin to a policy or strategic EA then the EIS should contain a record of the process, elements used, and questions asked.

From the Australian Government Environmental Assessment Website:

Strategic assessments allow for a 'whole of government' approach to assessing environmental impacts under a policy, plan or program. They allow government to work closely in the early stages of planning to ensure environmental issues, including matters of national environmental significance, are considered from the start.

Manitoba Wildlands recommends that Manitoba Conservation and Manitoba Hydro identify contents needed in the Bipole III EIS to provide the essential elements of a policy and strategic EA. Manitoba Wildlands further recommends that Manitoba Conservation and Manitoba Hydro design tools so that advance policy and strategic EA becomes part of the process with all Manitoba Hydro proposals under the Environment Act.

Social Responsibility, Social Licence to Operate

Manitoba Hydro is a public utility, which provides energy to the citizens of Manitoba, and incurs public debts which the citizens of Manitoba are liable for. Revenues to the utility are from its shareholders' energy consumption, and from export of energy. International and continental discussions about corporate social responsibility apply to all sectors, and should be evident in the operations of a public utility, even more than in the private sector. While a new term, 'social licence to operate' is becoming more common, and refers to the steps a company or utility needs to take to maintain trust, and the best possible relationship with its shareholders, and public, clients, etc. This term then applies to Manitoba Hydro operations, its new projects, and all the steps it takes with Manitobans to prepare for a new transmission project. All social responsibility standards and guidelines are inherently about community and our natural world environment.

Manitoba Wildlands recommends that the Bipole III EIS contain a thorough discussion of Manitoba Hydro's support for, and monitoring of its social responsibility standards, and actions. In particular we recommend that Manitoba Hydro explain how it is maintaining its 'social licence to operate' in preparing for Bipole III.

ISO 2600 Guidance Standard on Social Responsibility

ISO 26000 is a new forthcoming, international standard on social responsibility. We are providing some short elements from the standards document. All quotes are from the ISO web site, and current ISO 2600 documentation.



Manitoba Wildlands recommends that the EIS for Bipole III indicate whether Manitoba Hydro agrees with and supports the contents of ISO 2600 Standard on Social Responsibility. If it does not an explanation should be provided. If it does then the EIS should include the ways the utility is applying the ISO Standard 2600 to the Bipole III planning and decision making process.

The standard will provide harmonized, globally relevant guidance for private and public sector organizations of all types based on international consensus among expert representatives of the main stakeholder groups. The standard is meant to encourage the implementation of best practice in social responsibility worldwide.

Principles of Social Responsibility

Definitions from the ISO/DIS 26 000:

Accountability: Responsibility of an organization for its decisions and activities, and state of being answerable to its governing bodies, legal authorities and, more broadly, its other stakeholders regarding these decisions and activities.

Transparency: Openness about decisions and activities that affect society, the economy and the environment and willingness to communicate these in a clear, accurate, timely, honest and complete manner.

Ethical Behaviour: An organization's behaviour should be based on the ethics of honesty, equity and integrity. These ethics imply a concern for people, animals and the environment and a commitment to address stakeholders' interests.

Respect for Stakeholder Interests: An organization should respect, consider and respond to the interests of its stakeholders.

Respect for the Rule of Law: An organization should accept that respect for the rule of law is mandatory.

Respect for International Norms of Behaviour: An organization should respect international norms of behaviour, while adhering to the principle of respect for the rule of law.

Respect for Human Rights: An organization should respect human rights and recognize both their importance and their universality

Social responsibility involves an understanding of the broader expectations of society. A fundamental principle of social responsibility is respect for the rule of law and compliance with legally binding obligations. Social responsibility, however, also entails actions beyond legal compliance and the recognition of obligations to others that are not legally binding. These obligations arise out of widely shared ethical and other values.

Social responsibility has the organization as its focus and concerns the responsibilities of an organization to society and the environment.

Indigenous peoples enjoy collective rights, and individuals belonging to indigenous peoples share universal human rights, in particular the right to equal treatment and opportunity. The collective rights include: self determination (which means the right to determine their identity,



their political status and the way they want to develop); access to and management of traditional land, water and resources; maintaining and enjoying their customs, culture, language and traditional knowledge free from discrimination; and managing their cultural and intellectual property.

An organization should recognize and respect the rights of indigenous peoples when carrying out its decisions and activities.

The Environment and Social Responsibility:

Definitions from the ISO/DIS 26 000:

Principles: 6.5.2.1

Environmental Responsibility: In addition to complying with law and regulations, an organization should assume responsibility for the environmental burdens caused by its activities, products and services in rural or urban areas and the broader environment. It should act to improve its own performance, as well as the performance of others within its control or sphere of influence.

The Precautionary Approach: This is drawn from the Rio Declaration on Environment and Development [119] and subsequent declarations and agreements [109][131][94], which advance the concept that where there are threats of serious or irreversible damage to the environment or human health, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation or damage to human health.

Environmental Risk Management An organization should implement programmes using a risk-based and sustainability perspective to avoid, assess, and reduce environmental risks and impacts from activities, products and services. An organization should develop and implement awareness-raising activities and emergency response procedures to reduce and mitigate environmental, health and safety burdens caused by accidents and to communicate information about environmental incidents to appropriate authorities and local communities.

Polluter Pays: An organization should bear the cost of pollution caused by its activities, products and services according to either the extent of the environmental burden to society and the remedial action required, or the degree to which the pollution exceeds an acceptable level (see Principle 16 of the Rio Declaration [119]). An organization should use the polluter pays principle to internalize the cost of pollution and quantify the economic and environmental benefits of preventing pollution in preference to mitigating its impacts.

Principles: 6.5.5.1

Climate Change Mitigation and Adaptation: It is recognized that greenhouse gas (GHG) emissions from human activities, such as carbon dioxide (CO₂) and methane (CH₄), are the very likely cause of global climate change, which is having significant impacts on the natural and human environment [16]. Among the trends observed and anticipated are: rising temperatures, changes in rainfall patterns, more frequent occurrences of extreme weather events, rising sea levels, and changes to ecosystems, agriculture and fisheries.



Manitoba Wildlands recommends that the proponent indicate whether Manitoba Hydro supports and applies these ISO standards in its operations. As a public utility which espouses corporate social responsibility Manitoba Hydro needs to inform its shareholders whether these principles of social responsibility, including with environmental principles, are integrated into its project planning. In addition we recommend that the proponent include in its EIS clear statements as to its approach to social responsibility for this project.

Manitoba Conservation may well benefit from placing standards of this sort in future scoping documents, and EIS Guidelines for projects under the Environment Act. A simple expectation for a proponent to indicate which ISO standards it uses would be a start; for the department to state a requirement for proponents to identify any ISO or CSA standards or certification it holds would be an important second step.

Manitoba Hydro's Continental Social Responsibilities & Accountability

Manitoba Hydro website states:

In 2007–08 export sales totalled \$625 million with 82 per cent derived from the U.S. market and 18 per cent from sales to Canadian markets.

Because Manitoba Hydro exports power internationally and is a member of various electricity generating and transmitting continental organizations, Manitoba Wildlands assumes Manitoba Hydro follows international guidelines, standards, or requirements in the planning, construction, and operation of generation stations, spillways, converter stations and transmission systems.

Manitoba Wildlands recommends Manitoba Hydro create guidelines or requirements related to its membership in continental energy organization publicly available. Manitoba Hydro then needs to outline which standards, agreements and reporting requirements under the US Federal Energy Regulatory Commission (FERC), the Mid-Continent Area Power Pool (MAPP), and Midwest Independent Transmission System Operator (Midwest ISO) affect the Bipole III project design, construction, operation (including interconnections).

Further Manitoba Wildlands recommends the EIS for the Bipole III project identify these, as per above, while indicating what is required by Manitoba Hydro's membership in these continental organizations, and what the impact on the project would be.

For example, the **Midwest ISO Transmission Planning Business Practice Manual** states:

The Midwest ISO regional Transmission Planning process has as its goal the development of a comprehensive expansion plan that meets both reliability and economic expansion needs. The planning process identifies solutions to reliability issues that arise from the expected dispatch of Network Resources.



FERC Order Planning Principles

- (I) Coordination
- (II) Openness
- (III) Transparency
- (IV) Information Exchange
- (V) Comparability
- (VI) Dispute Resolution
- (VII) Regional Participation
- (VIII) Economic Planning Studies
- (IX) Cost Allocation for New Projects

Best Practices, National & International

The *Principles of Environmental Impact Assessment Best Practice*, published by the International Association for Impact Assessment, outlines Basic Best Practice, Operating Principles and Objectives of an Environmental Impact Assessment including:

- Ensuring that environmental considerations are explicitly addressed and incorporated into the development decision making process;
- Anticipating and avoiding, minimizing or offsetting the adverse significant biophysical, social and other relevant effects of development proposals;
- Protecting the productivity and capacity of natural systems and the ecological processes which maintain their functions; and
- Promoting development that is sustainable and optimizes resource use and management opportunities.

Currently, the environmental assessment scoping document for Bipole III does not discuss how Best Practices will be addressed in the Bipole III EIS. Manitoba Wildlands would like to know if Manitoba Hydro agrees with the principles outlined in *Principles of Environmental Impact Assessment Best Practice*. Does Manitoba Conservation agree with these principles? Will Manitoba Hydro apply these principles to the Bipole III EIS?

Manitoba Wildlands recommends the EIS for Bipole III respond to the Midwest ISO Principles (see above), indicating how the Bipole III project will uphold these Principles. We further recommend that Manitoba Hydro indicate in the EIS which sets of EIA standards, criteria, methods etc the utility applies to transmission line planning, design, and operation. Then the EIS can include identification of how Manitoba Hydro will be transparent about, and uphold the principles, standards, or criteria it subscribes to, for this project.

Environmental Management Systems and Plans

Environmental management plans for Bipole III should be public early in the review and licensing process. They should be part of the EIS, for review and comment. To date environmental management plans for significant public works in Manitoba have often been absent during the processes under the



Environment Act, and then once licences are issued the plans are never made available, never filed in the public registry etc. (Please see our comments regarding cumulative assessment, and staged cumulative assessment reviews during the life of the Bipole III project).

These plans form an essential part of the project EIS, and an essential part of the information for communities, land owners, municipalities - all stakeholders - to use to understand Bipole III impacts. Given the time line on construction, and then operation for this project we hope that adaptive management systems plans will also be part of the EIS filing.

Manitoba Wildlands recommends that environmental management plans for the elements of the Bipole III project be part of the EIS filing. We further recommend that Manitoba Conservation ensure that these plans, and their updates, over the life of the project remain part of the public registry.

Manitoba Standards

Because Manitoba Conservation does not have mandated standards for planning, construction and operation of transmission lines Manitoba Wildlands assumes that the current standards for the Bipole III transmission project will be equal to or exceed the standards for the most recently approved transmission line in Manitoba, the Wuskwatim transmission project (License No. 2700).

Manitoba Wildlands would like to highlight that there are currently no formal environmental assessment process or requirements under our Environment Act. There are also no recommended Best Practices in Manitoba for developments such as this.

This compares to Ontario and British Columbia, which explicitly state Best Practices and regulate policies and procedures for projects such as transmission line development. If Manitoba is to become a national and international leader in the energy sector, we must have public requirements for environmental impact assessments, environmental standards and Best Practices, with more strict and applicable requirements under the Sustainable Development Act, The Environment Act, etc.

Manitoba Wildlands would like Manitoba Conservation to confirm the following: Are the standards for this project the same as those licensed for the Wuskwatum Transmission project? What did Manitoba Conservation use to arrive at scoping document content? What review and updated approaches to planning, design, data collection, biophysical information, environmental plans, mitigation etc. have Manitoba Conservation and Manitoba Hydro incorporated since The North Central Project and Wuskwatim transmission projects? Has Manitoba Conservation kept up to date in terms of changes, improvements, and new challenges in transmission line design, construction, and operation in relation to EA, impacts and recent scientific information? Are new elements evident in the Manitoba Conservation scoping document?



Sustainability – CERES Expectations

We are providing below another example of tools available for Manitoba Hydro, and Manitoba Conservation to consider in shaping the EIS for Bipole III. CERES was formed after the Valdez oil spill twenty years ago by business interests that wished to avoid such events and the social and environmental impacts that result. Clearly Manitoba Conservation, as is evident in our earlier comments, can encourage and invite proponents to clearly state which organizations, standards, principles and methods they apply to their project planning, construction, and operations. In particular the CERES sustainability expectations, best practices and tools for sustainability focus on governance, stakeholder engagement disclosure and performance would potentially assist all parties.

Manitoba Wildlands wants to know whether our utility supports these CERES standards, and uses the tools to continually improve its operations. In particular CERES has been a leader in both corporate governance and stakeholder engagement systems.

Manitoba Wildlands recommends that Manitoba Conservation consider how best to include in EIS contents clear indications of the standards, principles, and methods they ascribe to, and use in the EIS and planning for new projects. In particular we recommend that this EIS include Manitoba Hydro's statements to this effect.

21st Century Corporation: The Ceres Roadmap for Sustainability

<http://www.ceres.org/Page.aspx?pid=1211>

“Ceres has released the *21st Century Corporation: The Ceres Roadmap to Sustainability* as a vision and practical roadmap for integrating sustainability into the DNA of business—from the boardroom to the copy room. This Roadmap is designed to provide a comprehensive platform for sustainable business strategy and for accelerating best practices and performance.”

What is in The Ceres Roadmap?

“The Roadmap sets out 20 expectations for sustainability that companies should start implementing now to be considered sustainable going forward. These expectations are laid out in four broad areas that are key for corporate sustainability: governance, stakeholder engagement, disclosure, and performance. **All of the expectations presented in the Roadmap need to be addressed.** The full report has more than 200 company best practice examples across 20 sectors. Many companies have started this journey — from heavy industry to consumer products — and the Roadmap includes a full range of examples to demonstrate what is possible now and where companies need to go in the future.”

“The report features more than 250 resources and tools from a wide range of global experts, organizations and thought leaders. There is increasing interest from mainstream investors to understand and evaluate sustainability risks and opportunities in their investment decisions. The best performing companies of the 21st century will be those that recognize the opportunities presented....These companies will be best positioned to thrive in the coming low-carbon, resource-constrained global economy of the 21st century.”



Climate Change: Effect of Climate on Project, Effect of Project on Climate

We note that the CSA/ISO standard 14064 has relevance to this proposal under our Environment Act.

It is also good to see that Manitoba Hydro participated in establishing CSA Canada's advice / white paper regarding education of engineers in Canada regarding climate change. Given 220 engineers in Manitoba who responded to the CSA survey used to inform the committee we assume other Manitoba Hydro engineers beyond their committee member participated.

CSA /ISO 14064

ISO 14064 objectives are:

"[to] enhance environmental integrity by promoting consistency, transparency and credibility in GHG quantification, monitoring, reporting and verification"

Climate Change and Infrastructure Engineering: Moving Towards a New Curriculum, prepared by the Canadian Standards Associates, 2007 aims to upgrade current engineering training with respect to Climate Change. The study also asked 220 Manitoba engineers a range of climate change and infrastructure engineering questions. It is our hope that those engineers already trained and working on project such as Bipole III are acquiring climate change engineering expertise quickly.

Manitoba Wildlands recommends that Manitoba Hydro include in the EIS information as to the approach to project planning, engineering, and all stages of construction and operation of Bipole III in relation to climate change. We also recommend that Manitoba Conservation begin to consider how to make sure that scoping of effects and impacts from projects on climate are thoroughly scoped in advance of EIS preparation for projects under our Environment Act.

This EIS needs to provide clear information as to:

- the project baseline scenario for carbon in situ
- the carbon inventory for the project area
- the carbon budget for the project
- the emissions inventory for elements of the project
- monitoring regarding restoration of carbon during the life of the project
- further loss of carbon during the life of the project, reporting
- overall carbon footprint of the Bipole III transmission system.

In particular Manitobans are entitled to know what the intent of the project is with regards to sequestered carbon and emissions. Will Bipole III have a large carbon footprint compared to other transmission systems? Will Manitoba Hydro be reviewing recent transmission systems, especially in boreal forest regions in Canada, to identify scenarios to reduce carbon loss, and emissions? Does Manitoba Hydro have a plan for a no net loss of carbon for this transmission project? Does Manitoba Conservation intend to fulfill its mandate regarding climate change when directing EA under our Environment Act for public works, including those which have significant impacts and public costs? Will the recommendations of Manitoba's Climate Change Task Force regarding Manitoba Hydro be fulfilled in this EIS? Will Manitoba Hydro voluntarily make this the first project built by the utility for



Manitobans where full carbon accounting is in place?

What elements of the project and project area will be analyzed for GHG emissions and carbon loss? Will a carbon inventory be put in place for baseline scenario data for the project area prior to any impacts? What are Manitoba Hydro's carbon mitigation intentions for this extensive project - which will have carbon losses during construction, and operation? How will carbon loss and emissions be measured and reported?

How will green house gas emission and carbon loss be calculated? Using which registry? Is Manitoba Hydro ready for a 25,000 tonne threshold for reporting during construction and then operation of the project? Will Manitoba Hydro comply with the Western Climate Initiative standards for reporting emissions? Is Manitoba Conservation preparing for updating and clarification of GHGs inventory and reporting for Canada and Canada, including for Manitoba Hydro projects? Will Manitoba's new peatlands conservation policy be reflected in the outcome for this project? (We note the recent announcement, and the multi year time line for this project.)

Manitoba Wildlands recommends that Manitoba Conservation and Manitoba Hydro use the Bipole III project as a demonstration of methods for carbon and green house gas planning, reporting, and mitigating to fulfill public policy and commitments made by the Manitoba government.

Climate Change: Policies, Assumptions

The scoping document does not expect information as to how the bipole III EIS will address this project's contribution and mitigation regarding the effects of the project on climate, carbon stocks, etc. The EIS should include references to how the project will support *The Manitoba Climate Change Strategy* (2008), and the *Manitoba Climate Change and Emission Reduction Act*. In addition, we would suggest that the EIS should also respond to recommendations in the Manitoba Climate Change Task Force report – where specific to Manitoba Hydro. See questions above. It is also necessary for the EIS to address any agreements, or requirements Manitoba is part of with US States, or electricity/transmission consortiums regarding or affecting climate change. Among other reasons, energy on this DC line is likely to be exported to the US.

Manitoba Wildlands recommends that the Bipole III transmission project be designed, and planned, as a showcase for how Manitoba Hydro and Manitoba Conservation will verify carbon stocks inventory, set a project carbon budget, report emissions during construction, and mitigate carbon loss with the aim of reporting in a transparent manner all steps to achieve a no net loss of carbon goal for the project.

We would observe that when the utility has several projects being constructed, and planned it is overdue for Manitoba Hydro to clearly indicate how it will deal with its emissions in *Manitoba*. (See commitments made during the press conference to table the new climate Act in the Manitoba

legislature. These commitments were that all emissions reductions under the Bill, and the new Climate Strategy would be achieved *inside Manitoba*).

Manitoba Wildlands recommend that the EIS specifically address our recommendation above, while addressing the coming 25,000 tonne reporting requirement for GHGs in Canada, for each project or installation. The context for this recommendation is the current lack of public data about Manitoba Hydro emissions, including for annual emissions from each reservoir, during construction of projects, during operation of projects, and especially during high water years which produce extra methane. We would further recommend that Manitoba Hydro conduct a survey of electrical utilities – especially those publicly owned – to share expertise in this matter, and in order to provide relevant contents in the EIS.

Justification and Alternatives to Bipole III from Scoping Document

The Manitoba Hydro website states:

Studies have concluded that new transmission capabilities would improve system reliability and reduce our dependency on Dorsey Station and the existing HVDC Interlake corridor. The Bipole III Transmission Reliability Project will establish a second converter station (Riel Reliability Improvement Initiative) in southern Manitoba, to provide a second major point of power injection into the transmission system.

Bipole III will reduce the existing Bipoles I & II line losses and provide additional transmission line capacity from north to south.

Current justification for the Bipole III development is to improve reliability and security in electricity access through the Manitoba grid. While Bipole III would still be vulnerable to severe weather, fire, sabotage and other unpredictable events, we suggest the EIS state clearly the history of bi poles in the province, the risks, and the justification for Bipole III. Given that confusion exists in the media, and with Manitobans, about the various significant transmission lines being planned or discussed by Manitoba Hydro it is important for this EIS to provide clear, understandable information about current, future and intended transmission projects.

Manitoba Wildlands recommends detailed information about justification for Bipole III, that includes all justifications be included in the EIS.

The current justification language also does not acknowledge the need to increase DC capacity and service within the system. The Manitoba Hydro website states: “Manitoba Hydro's Integrated Resource Plan indicates a requirement for Conawapa in 2021 to meet domestic load, with the majority of the power available for export until needed by Manitobans.” It can therefore be assumed that Bipole III is not purely to improve reliability and security in the grid. So the EIS needs to discuss how the energy moving on Bipole III will be used: who by, in the province or as export, through which connections to customers etc.



This leads to the question of why Bipole III is designed, or limited to 500kv. The first 735-kV transmission lines in Canada were built by Hydro-Québec in 1965 – since then nine transmission lines in the 700-800 kv range—in Canada, United States, Brazil, Venezuela, Russia, South Africa, South Korea, and India, and two lines in the 1000-1200 kV range in Russia and Japan have been developed (Lings, 2005). Given Manitoba Hydro plans to expand their services within the next twenty years, why is Bipole III currently limited to 500 kV?

Manitoba Wildlands recommends that the Bipole III EIS include a specific discussion as to why Bipole III is limited to 500 kv and what steps to consider alternative Kv the utility has taken.

Manitoba Wildlands has observed Manitoba Hydro open the discussion of the bipole III route to the public, and include three separate options into the process. These corridor options must include 15 – 20% of the province. The EIS will need to include the reasoning for the corridor selected, with thorough details as to proportion of the province, proportion of crown land, private land, water, infrastructure/ townsites, homes, natural intact lands etc.

There has been a great amount of public discussion regarding the potential of running part of Bipole III through Lake Winnipeg (under water). The justification for development of Bipole III states on page one of the scoping document that “The existing transmission system is vulnerable to the risk of catastrophic outage of either or both Bipoles I and II in the Interlake corridor and/or the Dorsey Station due to severe weather, fire, sabotage and other unpredictable events.” The development of bipole III transmission line under Lake Winnipeg would not only avoid these issues, but also other potentially unforeseen problems.

While this option would come with its own set of challenges to scope, discussion of this option is of value, as many of the risks identified by the utility would not exist under water.

Manitoba Wildlands recommends that a status report regarding Manitoba Hydro’s consideration of this alternative (underwater transmission) be included in the EIS. In particular the technical work and reports commissioned to consider the ingredients in underwater transmission systems in Lake Winnipeg should be filed, or made public as soon as possible, with the EIS containing a discussion of the steps in consideration of this alternative taken by the utility.

Caribou

Woodland caribou are listed as a threatened species under the Manitoba Species at Risk Act and the Federal Species at Risk Act (SARA)(western population). Section 68. (1) of SARA states:

“No person shall destroy any part of the critical habitat of a listed endangered species or a listed threatened species that is in a province or territory and that is not part of federal lands.”

Manitoba Wildlands would therefore like to know if any of the proposed Bipole III routes cross critical habitat inhabited by woodland caribou. We request that Manitoba Hydro also compile information about each of the sub species of caribou that may be impacted by the Bipole III project, starting with woodland caribou. The information must be included in the EIS so a thorough review and assessment is feasible. In particular Manitoba Conservation needs to provide Manitoba Hydro with historic data as to all sub species of caribou in the project area in order to support an accurate and appropriate assessment.

Now that woodland caribou in Manitoba are listed under both the federal act (SARA) and the provincial act (MESA) the Bipole III EIS will need to include up to date and historic information about woodland caribou in the project area. Any wintering or calving areas (past and current) with any overlap with the project area should be included in the EIS contents and assessment.

We would caution the proponent regarding other species to avoid the pitfall shown in recent project EIS under our Environment Act, where limited data sets that do not provide adequate species information for assessment are used to:

- indicate there are few of a species present
- indicate that there are no significant risks or impacts to the species

Manitoba Hydro holds or has access to consider data about species in the project area, corridor options. But more will be needed to be able to fulfill biophysical and species information for the EIS. It will also be important to make sure reports, and analysis are provided with the EIS, rather than interpretations of non disclosed reports.

Linear Disturbance & Transmission Corridors

Creation of linear corridors and transmission lines is of great concern in regard to wildlife and forest management. Not only does the construction of transmission lines causes great disturbance to the surrounding ecosystem, but also transforms the system so that the current forest-wildlife interactions no long exist.

Numerous studies have been done on this topic, with particular interest in Woodland Caribou. Nellemann et al. (2001) demonstrated that woodland caribou show diminished use of habitat within 2.5 km of power lines. Linear corridors may also fragment caribou range. In Alberta, gravel roads with moderate vehicular traffic acted as a semi-permeable barrier to caribou movements. Finally, Caribou may be at higher risk of predation in the vicinity of linear corridor. Wolves appear to capitalise on corridors as travel routes, increasing access to caribou range and ability to hunt caribou. (James & Stuart-Smith 2000). It has also been verified that humans use transmission corridors to ease access while hunting. Finally, concern based on conservation biology shows that edges of habitat, such as those existing along corridors, can increase of predation and decrease diversity in a ecosystem (Yahner, 1988, Erinc Bayne 2004).



Manitoba Wildlands would like to know what will be done to avoid or mitigate the impacts described above. We suggest presentations posted in the archives of EnergyManitoba.org, especially by Dr. James Schaeffer, and Dr. Erin Bayne, as they pertain to linear disturbance and caribou, and a variety of birds species. Scientific analysis of impacts from linear disturbance in our boreal forests support the need for the proponent to clearly identified the impacts on species from this transmission corridor, and system of roads. Clear acknowledgement of impacts is the best basis for environmental management planning, and mitigation.

Species and Biodiversity

Previous studies of environmental assessments have concluded that review of impacts on biodiversity is generally lacking or weak in environmental assessments products (Soderman, 2006). The Convention on Biological Diversity (CBD, 1992) defines the concept of biodiversity as including levels of biodiversity (genetic, species/community and ecosystem/habitats) and ecosystem structure and function (CBD, 1992). It should be noted that Manitoba has participated in national biodiversity strategies since 1992, and supported various species accords among the provinces in Canada.

Therefore, in accordance with the CBD and Millennium Assessment (MA, 2003), an EIA must define all biodiversity components and their use for society and provide information regarding how a proposed development will effect or change these ecosystem components (Soderman, 2006).

How will Manitoba Hydro's development of Bipole III across Manitoba specifically impact biodiversity? Manitoba Conservation should require a detailed list of potential biodiversity issues, impacts, policies and regulations associated with the selected route/corridor.

First Nations & Affected Aboriginal Communities

While the scoping document addresses the acquisition and use of ATK in the planning of Bipole III, more information as to methods for discussing impacts and mitigation of the development with affected communities will be needed in the EIS.

The following questions must be addressed in the EIS: What mechanisms will there be in place to compensate First Nations for impacts of this development? The Bipole III scoping document states on pages 6 and 7, *Southern/Public Component*:

The goals for the public consultation process are to

- Provide timely, accurate and relevant project information to potentially affected stakeholders, interested parties and the general public;
- Provide meaningful and on-going opportunities for public and stakeholder input to the SSEA and EIS;
- Obtain information and feedback from potentially affected stakeholders to assist in site selection and environmental assessment, and development of appropriate mitigation measures; and



- Record what was heard and demonstrate how it was considered in the project site selection and environmental assessment.

It is evident that First Nations are not stakeholders.

Manitoba Wildlands recommends that the EIS contain clear identification of methods for consultation with affected communities, and affected lands owners. Then the specifics of mitigation, negotiations and mitigation methods will need to be described.

Manitoba Wildlands further recommends the Manitoba government, Manitoba Conservation consultation guidelines for Aboriginal communities be provided in the EIS – ideally filed in the public registry immediately – with the EIS containing a description of consultation protocols for affected First Nation and Aboriginal communities. Specific risks and impacts, and steps that could be taken with consent of affected communities will need to be clearly stated in the EIS. For clarification purposes Manitoba Wildlands also recommends that Manitoba Conservation and Manitoba Hydro consider steps necessary so information regarding the selected routes, and steps for consultation reach the affected communities. That information should include full access to public registry information. (see our earlier recommendation regarding land designations and land selections.)

Landowners, and Affected Communities

Bipole III potentially affects dozens of communities. Many private land holdings are also affected. Municipalities, conservation districts, and some planning districts in southern Manitoba will be involved. There are drainage issues, bridges, culverts, road and traffic issues in southern Manitoba. The EIS will need to be fairly clear about the steps Manitoba Hydro is taking with the range of communities and lands holders through the several regions where the project corridor would be located.

CEC Wuskwatim Recommendations – EA in Manitoba

We are providing here the primary recommendation from the Clean Environment Commission report regarding the EA for project licences.

7.8 The practice of environmental assessment in Manitoba be enhanced by requiring higher standards of performance. In this regard, the Government of Manitoba should:

- enact environmental assessment legislation,
- provide guidance for proponents, consultants and practitioners,
- establish protocols for best professional practice that includes cumulative-effects assessment.

The process should include use of traditional scientific knowledge, selection of appropriate Valued Environmental Components (VECs), establishment of baseline conditions, and establishment of



thresholds in the conduct of environmental assessments. The protocols should reduce uncertainty, enhance effectiveness and improve predictability of future environmental assessments.

Manitoba Wildlands recommends that Manitoba Conservation ensure that the proponent for Bipole III fulfill the intent of the text above, and any other recommendations that will assist in requiring higher standards for EA in Manitoba, and for this project. In particular we recommend that Manitoba Conservation conduct an internal process about the current lack of environmental assessment legislation and regulation in Manitoba. The result of that review should be available to the CEC and the proponent in advance of the hearings for Bipole III.

Manitoba Wildlands is attaching our work product that is a response to the Clean Environment Commission recommendations after the Wuskwatim hearings to show which our organization spoke to, supported, etc. Certain of these are relevant at this juncture and in support of our recommendation above for Bipole III.

Closing Comments

Manitoba Wildlands is submitting this letter as a set of comments regarding the scoping document for the bi pole III EIS. We note that we expect a variety of issues, topics and contents to be in the EIS, which are not present in the scoping document. Our comments at this time are not complete. Rather we undertook research to assist in raising the standards for this and future EIS/ reviews under the Environment Act. As we have stated in past public correspondence the lack of environmental assessment regulation, and other standards in Manitoba hampers all parties, and can add risk or uncertainty to decision making. In particular public ownership of our utility is essential to Manitoba society. It is in the context that we urge a thorough review and discussion about the suggestions and recommendations provided here. We are of course available to answer questions.

We are providing a list of organizational websites and specific reports and publications accessed during our research. The attachments here are listed below.

- Manitoba Wildlands Lands and Water Policies Listing 1999 – 2009.
- Manitoba Wildlands Analysis of Recommendations - Report on Public Hearings - Wuskwatim Generation and Transmission Projects
- Manitoba Wildlands BiPole III Comment Letter References and Materials
- Principles of Environmental Impact Assessment Best Practice by the International Association for Impact Assessment (IAIA).
- Questionnaire Checklist for Cumulative Impacts by L. W. Canter and J. Kamath, 1995.
- Treatment of Biodiversity Issues in Impact Assessment of Electricity Power Transmission Lines: A Finnish Case Review. By Tarja Soderman. October 2005.
- CERES Roadmap for Sustainability – Summery Document.

The Clean Environment Commission panel who heard nine weeks of hearings content regarding: Wuskwatim Transmission, Wuskwatim Generation, and Wuskwatim Needs for and Alternatives to

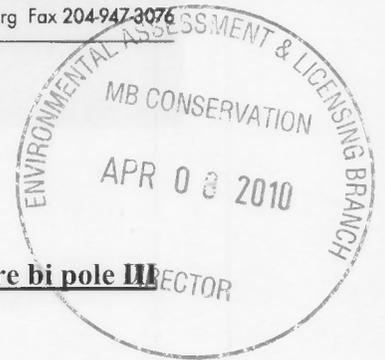


undertook a daunting task. Their report contains many recommendations relevant for Bipole III and other Hydro proposals under the Environment Act. We urge the parties to take a close look at this time.

We assume that this letter, and its attachments will be posted in all public registry files, on line and stationary, regarding Bipole III.

Yours truly,

Gaile Whelan Enns,
Director, Manitoba Wildlands



BiPole III Comment Letter References and Materials

Links Identified as Relevant to contents of Manitoba Wildlands comments re bi pole III scoping document, March 2010.

*** Quote or Reference Inside Comments Letter.*

****International Standards Organization - ISO standards**

http://www.lsd.lt/typo_new/fileadmin/Failai/N172_ISO_DIS_26000_E_.pdf

High Voltage Direct Current (HVDC) Transmission Systems Technology Review Paper

http://www2.internetcad.com/pub/energy/technology_abb.pdf

****Guide to Risk Assessments and Public Health Assessments**

http://www.eoearth.org/article/Guide_to_Risk_Assessments_and_Public_Health_Assessments

Life cycle assessment

http://www.eoearth.org/article/Life_cycle_assessment

Restructured Rivers: Hydropower in the Era of Competitive Markets

http://www.centrehelios.org/en/Studies_and_Reports_by_Philip_Raphals

Market-Based Transmission Expansion Planning

<http://motor.ece.iit.edu/papers/01350848.pdf>

****International Association for Impact Assessment**

<http://www.iaia.org/publications/>

Social Problems, Community Trauma and Hydro Project Impacts

<http://www2.brandonu.ca/Library/cjns/15.2/loney.pdf>

Electrical power systems quality

<http://books.google.ca/books?hl=en&lr=&id=Y4IvvSJq1bMC&oi=fnd&pg=PA1&dq=Buildin+g+DC+Electric+Transmission+Systems+&ots=44sVcG9pQw&sig=-xdNPMwoAljyZmS5KSC1tHPvM4#v=onepage&q=&f=false>

Wuskwatim Transmission and Generation Station Archives: Presenters / Presentations

http://www.energymanitoba.org/wusk_archives/presenters.htm



A Compendium of Electric Reliability Frameworks Across Canada

<http://www.neb.gc.ca/clf-nsi/rnrgynfmitn/rnrgyrprt/lctrcy/cmpndmlctrcribltycnd2004-eng.pdf>

Mid-Continent Area Power Pool Website Links and Pages

<http://www.mapp.org/DesktopDefault.aspx>

Reliability Performance Project: Manitoba Hydro and SASK Power both inside doc

<http://www.mapp.org/ReturnBinary.aspx?Params=584e5b5f4558560000000253>

Transmission and Distribution World

http://tdworld.com/news/power_minnesota_power_joins/

Midwest ISO's system Planning Reserve 2010/2011 Margin

http://www.midwestmarket.org/publish/Document/4dfde8_124a04ca493_-7f5f0a48324a/Planning%20Year%202010%20Findings_final.pdf?action=download&_property=Attachment

Midwest Independent System Operator: 2009 Long-Term Assessment Reliability Report

http://www.midwestmarket.org/publish/Document/2c2ca5_12511ba6cdc_-7fab0a48324a/2009%20Long-Term%20Assessment%209-02-09.pdf?action=download&_property=Attachment

Midwest Independent Transmission System Operator 2009-2010 Winter Reliability Assessment Midwest ISO Market Footprint

http://www.midwestmarket.org/publish/Document/2c2ca5_12511ba6cdc_-7fbc0a48324a/2009-2010%20Winter%20Assessment_FINAL_v3.pdf?action=download&_property=Attachment

Department of Energy US - reporting requirements via Mid-Continent Area Power Pool and MISO

http://www.midwestmarket.org/publish/Document/66d196_115dc8fa4a2_-7e9c0a48324a/EIA%20411%20definitions.pdf?action=download&_property=Attachment

****Planning Standards MISO**

http://www.midwestmarket.org/publish/Document/6b6059_1239ec7b046_-7fd90a48324a

<http://www.midwestmarket.org/page/Expansion%20Planning>

Contains various MISO transmission planning and transmission expansion manuals, and protocols



****International Organization of Standards: Guidance on Social Responsibility**

http://isotc.iso.org/livelink/livelink/fetch/-8929321/8929339/8929348/3935837/ISO_DIS_26000_Guidance_on_Social_Responsibility.pdf?nodeid=8385026&vernum=-2

****Australian Government. Department of Environmental Assessment**

<http://www.environment.gov.au/epbc/assessments/index.html>
(contains one perspective and process for strategic assessments)

****The Ceres Roadmap for Sustainability**

<http://www.ceres.org/ceresroadmap>

Considering Aboriginal traditional knowledge in environmental assessments conducted under the *Canadian Environmental Assessment Act -- Interim Principles*

<http://www.ccaa.gc.ca/default.asp?lang=En&n=4A795E76-1>

PDF References and Materials Used for Manitoba Wildlands Comments Re bi pole III March 2010

****Overview of Transmission Lines Above 700 kV**

Raymond Lings, July 2005

Guidelines for Development Near Overhead Transmission Lines in BC

BC Hydro

****Treatment of biodiversity issues in impact assessment of electricity power transmission**

lines: A Finnish case review.

Soderman. 2006.

Multi-Jurisdictional Environmental Impact Assessment: Canadian Experiences

Fitzpatrick and Sinclair, 2008.

****A Reference Guide for the Canadian Environmental Assessment Act: Addressing**

Cumulative Effects by the Federal Environmental Assessment Review Office. 1994.

****Canadian Environmental Assessment Act: An Overview by Canadian Environmental**

Assessment Agency

Executive Summary on Energy Efficiency by the International Energy Agency



Transmission investment and expansion planning in a restructured electricity market
by F.F Wu, F.L. Zheng and F.S. Wen

Guide to Environmental Assessment Requirements for Electricity Projects by Ministry of the
Environment Environmental Assessment and Approvals Branch

**Guide for Social Responsibility by International Organization for Standardization (ISO).

High Voltage Direct Current (HVDC) Transmission Systems Technology Review Paper

**Principles of Environmental Impact Assessment Best Practice by the International
Association for Impact Assessment (IAIA) 1996.

Biodiversity in Impact Assessment by the International Association for Impact Assessment
(IAIA) . 2005

Class Environmental Assessment For Minor Transmission Facilities Pursuant to the
Environmental Assessment Act, Ontario, Canada

2009 Long-Term Assessment Reliability Report Midwest Independent System Operator

Overview of Transmission Lines Above 700 kV
Raymond Lings

Environmental Assessment in Canada: Encouraging decisions for sustainability
by A. J. Sinclair and M. Doelle

Conceptualizing learning for sustainability through environmental assessment: Critical
reflection on 15 years of research by A. J. Sinclair, A. Diduck and P. Fitzpatrick

Framework for the Transmission Lines Standard by Alberta Electric System Operator

**Ontario Energy Board Transmission System Code. October, 2009.

Market-Based Transmission Expansion Planning by M. O. Buygi, G. Balzer, H. M. Shanchei,
and M. Shahidehpour

**Manitoba Wildlands Lands and Waters Policies 1999-2009

**Questionnaire Checklist for Cumulative Impacts
by L. W. Canter and J. Kamath, 1995.

Manitoba Wildlands 2010