

THE TASK BEFORE THE CEC

Terms of Reference were issued by the Minister of Conservation and Water Stewardship on December 5, 2011 requesting the Clean Environment Commission (the “CEC”) to review and evaluate Manitoba Hydro’s Environmental Impact Statement on its Bipole III Transmission Line Project (“the Project”) and its public consultation summary. As part of its assessment of the Project, the CEC was also asked to hold public hearings to obtain input from stakeholders and the public.

On August 23, 2011, the Terms of Reference were clarified by the Minister of Conservation and Water Stewardship in a letter to the CEC wherein he stated: “In response to your specific question about a Needs For and Alternatives To (NFAAT) review, the Terms of Reference, which were issued in December 2011, do not include instruction for the CEC to conduct an NFAAT.”

Numerous Information Requests, from stakeholders, Participants, and the Technical Advisory Committee, were answered over the course of the spring and summer of 2012. In addition, supplemental information was filed in both 2012 and in 2013 to further add to the materials filed in the EIS.

The CEC is now to provide a report outlining the Commission’s review and recommendations on whether a licence should be issued to Manitoba Hydro for the Bipole III Project, taking into account the entirety of the evidence which is now before it.

If the Project is recommended, the CEC is also to propose the measures it suggests to mitigate and manage any residual effects and to outline what future monitoring is recommended.

This task is one of great importance to all Manitobans and has not been taken lightly by any of the parties.

NEED AND RELIABILITY

Reliability is Manitoba Hydro's primary concern and that concern underlies the whole proceeding. It is the reason this Project has been advanced. Manitoba Hydro is the only utility in the world that is dependent upon one corridor and one station for 70% of its northern hydro generation. The loss of this supply would necessitate rotating blackouts for extended periods. Our customers and regulator would consider Manitoba Hydro negligent if steps are not taken to address this significant supply risk should a catastrophic event occur. The North American Electric Reliability Corporation (NERC) is encouraging industry to design more robust systems to minimize impact of catastrophic events.

It is not possible to guarantee to Manitobans that any transmission system built can withstand every force of nature and that all outages of various causes can be avoided. However, with the construction and operation of this Project as proposed for 2017, reliability will be significantly enhanced through redundancy and increased physical separation of its facilities. The risk of serious outages in the future will be significantly reduced and the anticipated increased needs of Manitoba for domestic load will be better met.

None of the Participants or public presenters has argued that the need for reliability is not a grave concern. No party seriously challenged the assertion that there would be a catastrophic impact to both Manitobans and their economy should the Dorsey Converter Station ("Dorsey") fail – limiting the supply of energy up to three years, or should the two existing Bipole lines simultaneously go down – limiting the supply of energy for six to eight weeks. The 6 to 8 week estimate is based upon Manitoba Hydro's experience in line restoration over many decades.

The Bipole III Transmission Line Project is the best solution to improve reliability of the Manitoba Hydro system and the security of electricity supply. It is the culmination of work done over many years, using its expertise and experience in constructing, operating and maintaining over 18,000 kilometres of Alternating Current (AC) transmission lines and over 1,800 kilometres of Direct Current (DC) transmission lines over the past 60 years, as well as the construction and operation of three converter stations. Manitoba Hydro had an obligation to be prudent and rigorous in the planning and advancement of this Project, and it did so.

It is an important Project that needs to go forward at this time to ensure a safe and reliable source of electricity for years to come. The clear evidence before the Commission is that there will be a deficiency of 1,500 megawatts for domestic load by 2017, should Dorsey or the two existing Bipole lines be severely affected by an event.

Despite all of the evidence and the documentation that has been filed, the urgency for the Project may still not be well understood. It likely won't be truly understood until there is a significant outage at Dorsey, or until the two existing Bipole lines are damaged in the same event. This is not dissimilar to the Floodway, which was not well understood by some, nor appreciated, until the flood of 1997.

By direction of the Minister, alternatives to the Project were outside the scope of this hearing. However, the Bipole III Coalition ("the Coalition") provided a two-pronged proposal for consideration which suggests new technology be used (underground cables), new routes be selected through lands not yet assessed environmentally nor discussed with the public through consultation, and significant changes be made to the configuration of the backbone of Manitoba Hydro's electrical system.

The Coalition proposal recommended that Manitoba Hydro initially relocate the converter station for a new Bipole II from Dorsey to the Riel site by:

- installing new converters;
- constructing a new direct current (dc) line tapped off the Bipole II line north of Dorsey or by constructing underground cables from Dorsey to Riel; and
- deferring the Bipole III Project until 2025, with the southern converter station in the vicinity of LaVerendrye station.

This relocation proposal had previously been assessed by Manitoba Hydro, but was deemed unacceptable. As set out in the rebuttal evidence filed by Manitoba Hydro on March 5, 2013, Manitoba Hydro determined that the Coalition proposal does not address the critical need for improved reliability in the event of a corridor loss.

In particular, the Coalition proposal itself:

- fails to address the risk of a weather, or other, event causing the simultaneous loss, at any time of the year, of both Bipole I and II lines located in the Interlake corridor;
- only deems it appropriate to consider the shoulder and off-peak months for corridor outage, ignoring studies that indicate wide front winds and wind and ice storms can occur at any time of the year;
- fails to understand that load shedding of hundreds of megawatts, for weeks on end, is not acceptable to the customers of Manitoba Hydro and, instead, recommends that Manitoba Hydro shed load of 800 megawatts should an outage occur;
- fails to take into account that Manitoba Hydro's DC system is already fully loaded when it suggests that it could manage ice accretion by increasing the loading;
- does not address concerns with ice build up on sky wires and insulators which could also cause outages, though this risk was acknowledged;
- ignores the risk studies that Manitoba Hydro has done that demonstrate the high risk of a corridor outage at any time of the year;
- does not ever address the supply deficit for the corridor outage and requires further investment after 2025 that costs at least \$1.2 billion more than the Manitoba Hydro Bipole III plan;
- relies on unachievable levels of imports in the event of a severe outage and underestimates the risks in relying upon such imports when the Corporation only has 700 megawatts of firm import capability;
- underestimates the time and effort required for Bipole I and II line restoration in the event of a severe outage;
- fails to provide for adequate spare capacity to avoid extended outages (both anticipated and unforeseen) during the relocation of the new Bipole II from Dorsey to Riel without Bipole III being in service to provide that extra capacity;
- minimizes the risk and complexity of separating the controls and other technical concerns while separating a heavily utilized Bipole I and II;
- proposes an incomplete Bipole I and II paralleling scheme;

- does not properly address the reliability and technical issues that would have to be resolved in the AC and DC systems if LaVerendrye were to be used as the Bipole III southern converter station instead of Riel;
- ignores the increased risk of failure caused by the necessity of leaving underground cables in the ground for two to three years prior to being energized; and
- overlooks the fact that the existing converter equipment at Dorsey cannot be maintained as a backup as it will no longer be technically compatible with the updated converter equipment at the Henday Converter Station designed to work with the new Riel converter.

It was also determined that the LaVerendrye proposal, in the long run, is more costly and would result in considerable delays in the delivery of enhanced reliability. For example:

- a new 500kV AC line must be built from LaVerendrye to Riel and several 230 kV lines must also be constructed to protect against the increased risks of the loss of that line; remedies would have to be studied and developed for a multitude of technical issues, as acknowledged by Messrs. Derry, Woodford and Lawson, such as:
 - the multi-infeed effects and dc performance of the proposed three bipole system;
 - short circuit levels at Dorsey;
 - resonance on the dc side of the system;
 - design of a complete 500 kV ring around Winnipeg; and
 - heavy transmission loading across Winnipeg from west to east and the impact of further power injections at LaVerendrye;
- a minimum of 65 kilometres of underground cables must be purchased and transported from abroad at a cost of at least \$400 million (in 2012 dollars) more than for overhead lines, and significant investigations into licensing, transportation, storage, handling and installation would be required;¹
- the useful life of an underground cable (approximately 40 years) is less than half the useful life of an overhead line (approximately 100 years), resulting in additional costs in the order of \$422 million in 2012 dollars for underground cable replacement.

¹ If the shortest route is not selected due to its inappropriateness, or if Mr. Woodford's proposal for further underground cable is accepted, significantly more cable must be purchased, transported and installed;

Not even discussed in the Coalition proposal are the needs for further public engagement, extensive environmental assessment and additional licensing processes due to the new routes proposed outside of the study area. In addition, the new underground technology being introduced would have a significantly different potential impact on the environment than overhead lines. These would be both costly and time-consuming, and would certainly delay implementation of the reliability solutions sought by several years.

Exhibits MH 115 and MH 116 – Manitoba Hydro Rebuttal

Evidence of Ed Tymofichuk, October 1, Page 92, Pages 101 – 104, and Page 142, and October 29, Page 2029

Evidence of Gerald Neufeld, October 1, Page 103

Evidence of the Coalition, March 5, Page 6268, Pages 6273 – 6275, Page 6282, Page 6310, Page 6314

For the above reasons, Manitoba Hydro is of the strongest view that the CEC should not pursue the proposal of the Bipole III Coalition any further.

THE ENVIRONMENTAL ASSESSMENT CARRIED OUT BY MANITOBA HYDRO

The Chairman, in his opening remarks, stated that “the challenge for the proponent ... is to assure that the record is complete, and that the panel, as well as the public, understand the conclusions set out in the Environmental Impact Statement.”

Transcript, October 1, Page 10

In Manitoba Hydro’s Opening Statement, it acknowledged that responsibility and stated:

“Our purpose as a proponent ... will be to demonstrate that, in fact, we have done our work in planning and assessing this project, that we have done our work responsibly and professionally....”

Transcript, October 1, Page 18

Because the Project crossed five eco-zones and seven eco-regions, and as the depth and diversity socially and biophysically from north to south was tremendous – from terrain to wildlife to people, Manitoba Hydro felt a generalized route selection process was not sufficient.

Evidence of Pat McGarry, October 5, Page 996

There are a myriad of issues to account for in routing a transmission system of this magnitude and with such distinctly different components. Manitoba Hydro embarked upon a comprehensive, multi-stage environmental assessment process starting in the fall of 2008 and engaged the services of numerous 20 biophysical and socioeconomic experts to assist it in evaluating the Project and balancing the multitude of interests (often competing), while still meeting the need for reliability and technical feasibility. The work was done thoroughly, responsibly and professionally, and the route chosen has the least impact on the west side of the Province.

Evidence of Ed Tymofichuk, October 1, Pages 142 – 143

Evidence of Gerald Neufeld, October 1, Page 153

Manitoba Hydro then brought together the people who were involved in the planning, assessment, and analysis, and those involved in making the predictions as to impact, to testify before this Commission and to answer any and all questions relating to their areas of expertise, to

ensure there was a good understanding of the conclusions set out in the Environmental Impact Statement (“EIS”) and the supplemental Environmental Assessment filed January 28, 2013 (“EA”).

The CEC was then asked by Manitoba Hydro, in its Opening Statement, to keep five questions in mind as it listened to the testimony provided by the proponents and the participants. If the answer to each question was “yes”, the CEC could then recommend to the Minister that the Project be licensed.

Transcript, October 1, Pages 20 - 21

Have those questions been answered to the satisfaction of the CEC, such that a licence can now be recommended? Manitoba Hydro believes that they have. It believes that the record is complete, and that its conclusions are understood, appropriate and supportable.

1. DID MANITOBA HYDRO ENGAGE THE PUBLIC AND DID WE RESPOND IN A CONSTRUCTIVE AND PRACTICAL WAY TO WHAT WE HEARD?

Manitoba Hydro engaged in an extensive environmental assessment consultation process (“EACP”) which had three main goals:

- i) Providing timely and relevant information on the Project to the public and stakeholders;
- ii) Providing an opportunity for receiving feedback from the public and stakeholders; and
- iii) Incorporating that feedback into Project decision-making.

Evidence of Trevor Joyal, October 2, Page 309

At its simplest, it was Manitoba Hydro’s intention to make a better project.

Evidence of Pat McGarry, October 3, Pages 651 - 652

Due to the scope and breadth of the Project, and recognizing both the unique rights and interests of Aboriginal peoples and the challenges associated with engaging with many northern and Aboriginal communities, such as travel constraints, the EACP was divided into a public consultation process and northern and Aboriginal engagement process. The Aboriginal engagement process was not intended to deal with rights-based issues, as that is the responsibility of the Province. Rather, it was intended to deal with the concerns and potential impacts of the Project.

Evidence of Deirdre Zebrowski, October 3, Page 453

Evidence of Deirdre Zebrowski, October 29, Pages 2042 - 2043

Having received the direction from the Government of Manitoba to build the Project on the west side of Province in September of 2007, both engagement processes then commenced in 2008. They utilized a four round approach which occurred simultaneously. Briefly, those four rounds could be described as follows:

- i) **Round 1** (fall of 2008):
 - Providing broad Project information and identifying preliminary issues;
- ii) **Round 2** (spring of 2009):
 - Describing the site selection and environmental assessment process and determining constraints and opportunities for routing in the larger study area;
- iii) **Round 3** (fall of 2009):
 - Examining alternate routing options within 4.8 kilometre (or three mile) wide corridors;
- iv) **Round 4** (summer of 2010):
 - Presenting the preliminary preferred route within a 66 metre wide corridor.

Evidence of Trevor Joyal, October 2, Pages 310 - 311

Evidence of Deirdre Zebrowski, October 3, Page 453

A variety of notification and engagement mechanisms were utilized throughout the EACP. Advertisements were placed on television, on the radio, in local and provincial newspapers, and on posters placed in strategic community locations. 19,000 postcards were sent out at the start of Round 4, and property owners within a half mile of the Preliminary Preferred Route were invited to any of the 42 Landowner Information Centers which had been established. 244 meetings were held in total during those four rounds with communities, municipalities, First Nations, Northern Affairs Community Councils (“NACCs”) and Aboriginal organizations. 137 community and regional Open Houses were held, some of which were added due to requests from the public. Manitoba Hydro also created a Project-specific website, a toll-free Project information line, and email address, all of which were kept open and up to date to ensure the public had continual access to Project information. They continue to be available to any interested party.

Evidence of Trevor Joyal, October 2, Pages 310 – 319; Pages 632 – 633; Pages 658 - 660

Direct mail outs were not provided to landowners in Rounds 1 through 3 as the Project study area at that stage was extremely large and would have required contacting thousands of individuals, most of whom are not now affected by the Final Preferred Route (“FPR”). Even in

Round 3, there were still three routes, over 1,300 kilometres long and 4.8 kilometres wide. Broad notification methods were deemed more appropriate.

Evidence of Trevor Joyal, October 3, Page 629

Evidence of Pat McGarry, October 3, Page 629

In addition to the engagement described above, the Aboriginal engagement process included a sharing of Aboriginal Traditional Knowledge (“ATK”). This was accomplished through workshops, through meetings arranged as part of existing processes and contractual obligations, and through self-directed studies. 49 invitations were sent out to First Nations, NACCs and the Manitoba Métis Federation (“MMF”). 19 chose to participate in workshops, while eight, including the MMF, chose to do self-directed studies.

Exhibit MH – 52

Evidence of Virginia Petch, October 30, Page 2410

Over the course of the four rounds, there was participation from 26 First Nations, the Manitoba Métis Foundation, 23 Northern Affairs Communities, and five Aboriginal or regional organizations.

Evidence of Deirdre Zebrowski, October 3, Pages 453 - 461

Manitoba Hydro funded eight self-directed ATK studies carried out by Fox Lake Cree Nation (“FLCN”), Tataskweyak Cree Nation (“TCN”), Opaskwayak Cree Nation (“OCN”), Sapotaweyak Cree Nation, Wuskwi Sipiik First Nation, Swan Lake First Nation (“SLFN”), Long Plain First Nation and the MMF.

Evidence of Deirdre Zebrowski, October 3, Pages 462 - 472

Funding was granted to the Southern Chiefs Organization in Round 3 for a two day gathering to share information on the Project with both Treaty 2 and Treaty 4 First Nations, which would have included Pine Creek First Nation and Wuskwi Sipiik First Nation.

Evidence of Deirdre Zebrowski, October 3, Page 624

Engagement with Pine Creek First Nation on matters of particular interest to it was ongoing and continued up to and including resumption of the hearing in March of 2013. Meetings and open

houses were held with PCFN as early as Round 1, an ATK workshop was arranged and held in the community, and 17 key person interviews took place with individuals identified by the community itself.

Evidence of Deirdre Zebrowski, October 3, Pages 895 – 896; Page 898; Page 902

Answer to Undertaking, October 29, Page 2023

Although PCFN did express concerns about the ATK workshop, it acknowledged that the community was in a state of flux at the time and was not in a position to adequately respond to requests from Manitoba Hydro for more information.

Evidence of Warren Mills, March 6, Page 6486

Manitoba Hydro worked closely with FLCN further on the impacts of the Project pursuant to the Impact Settlement Agreement signed by the parties and, as a result, two background papers with the parties' perspectives were filed.

Evidence of Deirdre Zebrowski, October 3, Pages 473 - 474

Manitoba Hydro also demonstrated its willingness to continue discussions on Project impacts throughout the process and provided numerous examples including its work with TCN.

Evidence of Deirdre Zebrowski, October 3, Pages 463 - 477

Communications were exchanged with Peguis First Nation ("PFN") about funding for a self-directed ATK study. Manitoba Hydro was of the view that PFN was not within the Project Study Area and, as such, funding was not provided. Further, land required for the Riel Station had already been purchased and is not on Crown leased land. Thus, it does not affect PFN's future selection of Treaty Land Entitlement. Manitoba Hydro did, though, indicate that it was more than willing to meet to discuss any routing concerns it may have. No response to that invitation was ever received. Six months to one year later, PFN requested financial support for a land use and occupancy study, the results of which could possibly be applicable to the Project. Manitoba Hydro did provide some modest financial support for this undertaking and asked that the results be shared with it if it was shown that the results were indeed applicable to the Project or any other Manitoba Hydro initiative. No response was received.

Evidence of Deirdre Zebrowski, October 4, Pages 874 - 876

Manitoba Hydro also provided funding to WSN to complete a self-directed ATK Study. At the time of filing the EIS, WSN had provided Manitoba Hydro with some maps but not its final ATK Study Report. Manitoba Hydro remains committed to working with communities, including WSN, to discuss issues of concern and how they might be addressed through the Environmental Protection Plan.

Evidence of Deirdre Zebrowski, October 3, Pages 470 - 471, 479 - 482

ATK Technical Report # 2, Page 19

With respect to the engagement of MMF, MMF chose to do a traditional land use and knowledge study to identify any Métis rights and interests that had a potential to be affected by the Project. It was provided with \$500,000 to do that study. The MMF developed a community engagement process through this work and used three different methodologies/mechanisms to gather information. That report was received by Manitoba Hydro on September 1, 2011.

Evidence of Deirdre Zebrowski, October 3, Pages 465 - 466

Evidence of David Chartrand, Nov. 14, Pages 4756 - 4759

Two specific meetings were held with the Winnipeg office of the MMF as part of the EACP process. Regional and Community Open Houses were held across the study area where representatives from MMF Locals could attend if desired. However, Manitoba Hydro was specifically directed by the Winnipeg home office of the MMF to deal with them and not with the locals, so meetings with the MMF Locals were not arranged.

Evidence of Deirdre Zebrowski, October 4, Pages 672 - 676

There has also been a Manitoba Hydro/Manitoba Métis Federation relationship task force in existence since 2004, negotiated by the President of the MMF, David Chartrand, whose purpose was to be a forum by which the two organizations could communicate with each other on a variety of topics including Manitoba Hydro projects such as this one.

Evidence of David Chartrand, Nov. 14, Pages 4756 - 4759

Manitoba Hydro also engaged with resource users in the vicinity of the Final Preferred Route. It did so through the application of its Trappers Notification/Compensation Policy to affected commercial trappers, and through communication with those trappers, trapping associations and other stakeholders whose commercial trapping activities may be affected by the Project. Manitoba Hydro notified lodge and outfitting operators at the onset of Round 4 to ensure these operators were aware of and had opportunity for input to the assessment of the Project. During the recent route adjustment EACP in December 2012 outfitters were asked again for their input, and were also encouraged to participate in the CEC process itself.

Evidence of Vince Kuzdak, October 30, Page 2343

Evidence of Paul Turenne, March 11, Page 6485

After the filing of the EIS, Manitoba Hydro continued to have ongoing engagement with Aboriginal communities, organizations and NACCs. Some of the items that have been discussed include the Access Management Plan, Environmental Protection Plan, employment and business opportunities, and so on.

Evidence of Deirdre Zebrowski, October 30, Page

Evidence of James Matthewson, November 8, Page 4049, Pages 4069 – 4071, Pages 4077 – 4080, Pages 4091 – 4094, Pages 4116 – 4117, Pages 4130 – 4131, Pages 4143 – 4145, Pages 4157 – 4164, Pages 4170 – 4172, and Page 4174

During the preparation of the Supplemental EA relating to the routing concerns expressed by Manitoba Conservation and Water Stewardship's Environmental Assessment Branch, Manitoba Hydro undertook a second engagement process with the public in general and with stakeholders, First Nations, NACCs, landowners and the MMF. Once again, a variety of notification methods and consultation activities were used to ensure local communities, interest groups, stakeholders, First Nations, NACCs, landowners and the MMF were informed of, and could participate in, these EACP activities. In total, 216 direct letters were mailed, 197 individuals signed into 12 venues where 27 comment sheets and eight Landowner Information Centre forms were submitted. Within a few days of letters being sent out to those First Nations communities directly affected by the routing revisions, telephone follow-up was also carried out. Manitoba Hydro

held community engagement activities with 16 First Nation and NACC communities. Manitoba Hydro attempted to engage with the MMF but was unable to come to a mutually acceptable format of engagement.

Evidence of Trevor Joyal, March 4, Pages 5946 - 5961

Evidence of Trevor Joyal, March 6, Page 6382

Manitoba Hydro also continued in its efforts to engage with the MMF with respect to the most recent route alternatives being investigated. The unfortunate results of those efforts are contained in the two proposals and letters between legal counsel attached to the Supplemental EA filed on January 28, 2013.

Exhibit MH 109

Manitoba Hydro has demonstrated that its public and Aboriginal engagement process was thorough, thoughtful, effective, and professional. The adaptive process and inclusive nature of the engagement program allowed all stakeholders the opportunity to participate at various stages throughout the route selection process.

DID IT THEN RESPOND TO WHAT WAS HEARD IN A CONSTRUCTIVE AND PRACTICAL WAY?

There are numerous examples demonstrating that it did, proving the value of its public consultation process.

57 individual requests for route changes came out of the Round 4 consultations. Of the 57 requests, 23 adjustments were made to the preliminary preferred route. In addition, a route change in the Tourond area was undertaken to address concerns expressed in that area post-EIS submission. This involved an alternative route review and an additional engagement process with landowners and the general public.

Evidence of Trevor Joyal, October 2, Pages 329 - 331

Evidence of Pat McGarry, October 2, Pages 383 – 384

During the engagement process, Manitoba Hydro was requested by SLFN to provide further support for them to complete work in the areas of botanical surveys and archaeology. This

support was in addition to the financial support provided to complete a traditional knowledge study. The work completed has identified the location of rare botanical species that are of importance to that First Nation and a number of previously unknown archaeological sites. Efforts will now be made through the Environmental Protection Plan to protect them and a commitment has been made to ensure community members are present when precise tower location is being determined to avoid particular areas of concern.

Evidence of Deirdre Zebrowski, October 3, Pages 467 – 469

Evidence of Pat McGarry, March 6, Pages 6416 - 6419

Manitoba Hydro is also continuing discussions with SLFN regarding routing through an area of cultural and heritage interest to SLFN.

Evidence of Pat McGarry, March 6, Pages 6419-6420

As a result of discussions with TCN, and the funding by Manitoba Hydro for two reports, two of three route changes proposed by TCN were incorporated into Final Preferred Route.

Evidence of Deirdre Zebrowski, October 3, Pages 469 – 470

Information about the use of traditional berry picking areas and medicinal plant gathering was obtained during the EACP process from First Nations such as Pine Creek First Nation (“PCFN”). This information led directly to the identification of an additional Valued Environmental Component (“VEC”) by the expert on terrestrial ecosystems and vegetation, which was then incorporated into the review of domestic resource use. That input further led Manitoba Hydro to carry out additional review of certain segments such as B3 in Section 8, to give the vegetation VEC a higher rating, and to choose an alternative route. Further, Manitoba Hydro heard concerns about the spraying of blueberries with herbicides and has committed not to do so.

Evidence of Trevor Joyal, October 3, Page 616

Evidence of Pat McGarry, October 4, Pages 687 – 690

Evidence of Kevin Szwaluk, October 29, Page 2264

Evidence of Glenn Penner, March 12, Pages 6784 - 6786

More recently, during the course of this hearing, concerns were heard from Pine Creek First Nation (“PCFN”) about flooding and other water issues. Such concerns had not been identified previously by Manitoba Hydro’s expert, but Manitoba Hydro reacted by having its engineers conduct studies on the flooding problem and what, if any, the Project would have on it. Further, they provided presentations to both the community and the CEC. It was ultimately determined that the change in runoff from the Project would be undetectable.

Evidence of Kristina Koenig, Nov. 7, Pages 3752 - 3770

PCFN’s concerns with respect to other cultural and heritage resources will not be ignored and will be taken into account, and addressed, through the construction process and environmental monitoring.

Evidence of James Matthewson, November 8, Page 4154

Moose, in the EIS, was not identified as a VEC of concern. Moose concerns were not cited by the MMF in its report dated August of 2011. Further Game Hunting Areas closures did not occur until July of 2011. At the time it first came to the attention of Manitoba Hydro, it had already completed Round 4 of the EACP process and was already finalizing the EIS for filing in the fall of 2011.

Evidence of Deirdre Zebrowski, October 3, Page 479

Evidence of Pat McGarry, October 4, Pages 668 – 669

Manitoba Hydro has demonstrated its responsiveness to those more recent concerns. Manitoba Hydro asked its experts to carry out further study and field work on moose in Game Hunting Area (“GHA”) 14 and GHAs 19A/14A and filed two reports prior to resumption of the hearing in March. At the direction of MCWS, alternate routes have been examined in those areas arising out of concerns for moose and analysis done to determine if changes would benefit moose populations in the future.

Exhibit MH 107 and 109

Numerous concerns expressed about diagonal lines on agricultural land were also taken into account and altered the Final Preferred Route.

Evidence of Trevor Joyal, October 3, Page 616

Additional concerns were brought forward to Manitoba Hydro in its recent consultation process about increased wildlife access and the particular impact that may have on moose. As seen in the original letter of commitment dated October 29, 2012, and the associated table, and the letter to Manitoba Conservation and Water Stewardship in February of 2013, mitigation measures to address this concern have been contemplated and enhanced over time, such as allowing vegetation management to allow wildlife corridors (or higher tree growth) to exist in specific small segments under the Transmission Line, thereby reducing lines of site for hunters and reducing the use of the Right-of-Ways by wolves.

Exhibits MH 63 and MH 108

Manitoba Hydro also responded to community feedback that major transmission line projects do not provide concrete benefits to communities by creating a Community Development Initiative. Approximately 60 towns, villages, municipalities, First Nations and NACCs are potentially eligible to share in funding of approximately \$4 to \$5 million per year for a ten year period. That Initiative will be finalized if a licence is received and reviewed at the end of the ten years.

Evidence of Deirdre Zebrowski, October 3, Page 482

With respect to biophysical components, by way of example, feedback received with respect to the importance of certain bird types was incorporated into the selection of the VECs. There are over 400 bird species in Manitoba alone and this had to be narrowed down considerably. Concerns with respect to items such as bird collisions were incorporated into the mitigation measures through the use of bird diverters, the establishment of buffers in sensitive areas, and restrictions on construction (where possible).

**Evidence of Robert Berger, October 29, Page 2226, Page 2241,
Pages 2246 – 2247, and Pages 2254 - 2256**

In the area of invertebrates, amphibians and reptiles, information with respect to garter snake hibernacula was received directly from the ATK workshop in Barrows and with respect to frogs from the Pelican Rapids ATK workshop. This was incorporated into the technical report and used in the determination and assessment of VECs.

Evidence of Kurt Mazur, October 29, Page 2276

ATK was incorporated into the wildlife biologist's work on mammals. By way of example, information obtained from interviews and workshops provided areas where the American Marten is found, which helped validate some of the assumptions made with respect to high quality habitat.

Evidence of Doug Schindler, October 30, Page 2325

It was also learned from the ATK workshops and self-directed studies that there were 156 occurrences of environmentally sensitive sites important to communities in the 4.8 kilometre wide corridor studied. That information became particularly important in the development of appropriate mitigation measures. That information also informed the decision of route selection in a number of instances, including on one of the routes analyzed in the latter route revision process.

Evidence of Virginia Petch, October 30, Page 245

Evidence of Pat McGarry, October 4, Page 687 and March 4, Page 5917

Manitoba Hydro has also heard about the interest from Aboriginal persons to benefit from the Project in terms of employment and business opportunities. As described, there are numerous opportunities being explored for employment with Manitoba Hydro, particularly in its apprenticeship programs. Hiring preferences have been incorporated into both the Burntwood Nelson Agreement and the Transmission Line Agreement. Ongoing discussions are taking place with various Aboriginal groups to contract out certain work, including but not limited to work related to clearing and camp operations.

Evidence of Glenn Penner, October 5, Page 1018, and March 12, Pages 6790 - 6791

Evidence of Rob Elder, October 5, Pages 1019 - 1020

In summary, Manitoba did respond in a constructive and practical way. Despite the wealth and volume of the information provided through the various sources, Manitoba Hydro was able to make good use of the information gathered to determine the appropriate VECs to be studied, to

make the best possible routing choices, and to select the most effective mitigation measures so as to minimize the impact on the environment.

2. DID MANITOBA HYDRO IDENTIFY THE CORRECT VALUED ENVIRONMENTAL COMPONENTS (“VECS”) AND THE RIGHT ISSUES?

Manitoba Hydro had the monumental task of trying to balance the needs of numerous stakeholders with a wide variety of environmental considerations when coming up with a Final Preferred Route. It was not able to look at route planning from a singular perspective, as others with particular special interests have done.

Manitoba Hydro followed a set of general guidelines for routing, including identification of routing opportunities and the establishment of avoidance criteria, so as to minimize the impact of the Project on the environment.

Evidence of Pat McGarry, October 2, Pages 337 - 343

Manitoba Hydro took advantage of routing opportunities, compatible with environmental protection. By way of example, it:

- used existing linear corridors or sites, where possible, for the sake of VECs such as the boreal woodland caribou in the Wabowden area;
- used existing road allowances, where possible;
- routed on the half mile line, where possible (approximately 32% of the route in agricultural Manitoba); and
- used land already purchased by Manitoba Hydro, where available, such as at the proposed site for the new Riel Converter Station.

Evidence of Jim Nielsen, October 30, Page 2477 – 2480

Evidence of Pat McGarry, October 2, Page 343

Manitoba Hydro also utilized the principle of avoidance – avoid where possible – to further protect the environment and minimize the impact of the Project. It avoided such things as:

- communities and heavily populated areas;
- reserves and Treaty Land Entitlement selections;
- water crossings; and

- Provincial parks, designated protected areas, areas of special interest and wildlife management areas.

Evidence of Pat McGarry, October 2, Pages 340 - 343

This approach is a reasonable and practical one, as the impacts of routing through those areas could be devastating.

In farming and rural areas, the route selected avoided such key things as:

- communities;
- airports;
- dwellings;
- farm buildings;
- farm yards;
- intensive livestock operations;
- row crop and intensive annual cropped areas;
- lands under irrigation or pivots; and
- encumbered land such as Treaty Land Entitlement selections.

Evidence of Pat McGarry, October 4, Pages 745 – 746

Evidence of Jim Nielsen, October 30, Pages 2469 – 2472, Page 2489

Based upon direct feedback from farmers, in-field placement and diagonals were also avoided to stay away from houses, barns and farm yards.

Evidence of Jim Nielsen, October 30, Page 2477 – 2480

Through this type of route selection process, opportunities for routing with minimal negative impact were maximized and constraints were avoided to the degree possible. The Project was able to avoid key VECs, such as the majority of boreal woodland caribou ranges, and only took out of production approximately 17.8 hectares of arable land. Further, only 60 square kilometers of undisturbed Crown land was used, so as to minimize the impact on harvesters.

Evidence of Cam Osler, October 29, Page 2190

Answer to Undertaking given at Page 2489 on October 30

Manitoba Hydro assembled a large team of highly qualified experts from all areas of environmental study and asked them to come together as a team to review the five eco-zones and seven eco-regions in depth and to determine the appropriate VECs.

The experts conducted field studies, carried out literature reviews, did habitat modeling, reviewed the input and information gathered from the EACP and ATK workshops, all in order to determine the appropriate VECs.

Evidence of Cam Osler, October 29, Page 2194

Not all environmental elements can be studied. In assessing the environmental impact on a project, you must find pathways for its effects on a VEC.

Evidence of Cam Osler, October 29, Page 2171 – 2172, Page 2196

There are hundreds of possible VECs but this team, using its combined expertise and experience, was able to narrow it down to 67 VECs within 28 different categories (46 bio-physical and 21 socio-economic).

Evidence of Cam Osler, October 29, Pages 2188 - 2189

The tremendous scope of this task can be demonstrated by looking at a few examples, starting first with the bio-physical.

As described earlier, there are over 400 bird species. Birds are ecologically and socially important and a strong component of the biodiversity in Manitoba. Those species had to be placed in six major groupings and distilled to the most vital by examining their domestic, cultural, recreational and community importance, their population status, and whether they were a species at risk – threatened or endangered.

Evidence of Robert Berger, October 29, Pages 2230 – 2231; Page 3326

When examining terrestrial ecosystems and vegetation in 2010, there were a number of eco-regions, 21 vegetation cover types, and 457 plant taxa identified. Over 29 locations for species of concern were observed and over 80 species of plants of traditional value found.

Evidence of Kevin Szwaluk, October 29, Page 2267

Mammals were studied by a wildlife biologist and his team and a number of different factors were considered:

- Mammals of importance to people for reasons such as hunting, trapping, cultural significance;
- Mammals considered of importance under current law, such as protected or critical habitats, or rare or endangered species;
- Keystone species that are critical in maintaining the structure of an ecological community impacting other species (such as beaver);
- Umbrella species that reflect the broad habitat requirements for many species (such as moose); and
- Indicator species that are indicators of a particular habitat niche (such as elk).

Evidence of Doug Schindler, October 30, Pages 2303 – 2304; Page 3325

From that analysis, a list of VEC species was developed, namely caribou, moose, American marten, beaver, elk, wolverine and grey wolf as a linkage species.

Evidence of Doug Schindler, October 30, Pages 2304 – 2305

Moose were selected as a VEC due to their importance for rights-based hunting and recreational hunting. They are particularly important to First Nations and Métis for personal community sustenance.

Evidence of Doug Schindler, October 31, Page 2639

Literature reviews were undertaken, government and historical data were reviewed including fur production records, field data was collected, and habitat modeling, surveys and monitoring were carried out, all to ensure the proper VECs were identified and the most appropriate route selected. Monitoring was carried out with the assistance of local trappers.

Evidence of Doug Schindler, October 30, Pages 2312 – 2314; Pages 2317 - 2319

The effects on the VEC species were examined, taking into account such concerns as overharvesting, habitat loss, alteration or fragmentation, proximity to linear developments, and sensory disturbance.

Evidence of Doug Schindler, October 30, Pages 2312 – 2314

A Socio-Economic Impact Assessment was also carried out to determine the appropriate VECs related to this Project. Such an assessment examines the effect of the Project on people in the vicinity who are part of the existing socio-economic environment. It was recognized that changes in both physical and bio-physical environment can affect the well-being of people, lands and the resources they use, and can affect their ways of life.

Evidence of Elizabeth Hicks, October 30, Page 2356

21 socio-economic VECs were selected by the team, falling under the following categories:

- Land Use - 6;
- Resource Use – 7;
- Economy - 1;
- Services - 2;
- Personal, Family and Community Life - 3; and
- Culture and Heritage - 2.

Evidence of Elizabeth Hicks, October 30, Pages 2356 – 2357

Chapter 8 of the EIS

Through the study of those VECs and the primary concerns surrounding them, additional areas to avoid were:

- Significant historical and cultural sites and burial grounds; and
- Key areas of concern for certain species both spatially and temporally such as habitats, nesting sites, calving areas, food sources, nesting, calving and denning periods.

In order to ensure that the right issues in agricultural Manitoba were identified and addressed, an agricultural specialist was retained. Information on soil types was gathered, both existing and new aerial photography was accumulated and assessed, the route was flown and driven several

times to ground truth and determine key impediments, and the lines were developed over one and a half years of intensive work.

Evidence of Jim Nielsen, October 30, Pages 2467 – 2468

Extensive areas of similar soil types and high value cropland led to an initial selection of the shortest routes south of Winnipeg to minimize distance over these agricultural areas. While this makes sense from an agricultural perspective it is not always possible due to other considerations such as subdivisions and density of land development closer to Winnipeg.

Evidence of Jim Nielsen, October 30, Pages 2474 – 2476

Evidence of Pat McGarry, October 4, Page 766

Self-supporting structures were recommended to allow for farming operations to continue after tower placement, at an additional cost four to six times greater than guyed towers. This is much more difficult under guyed towers.

Evidence of Jim Nielsen, October 30, Pages 2481

In routing through agricultural areas, Manitoba Hydro used the relevant constraints and followed the general guidelines for routing.

EIS, Chapter 4, Pages 4-21 – 4-22

Evidence of Robert Berrien, November 19, Pages 5338 - 5339

Culture was selected as a single VEC, defined as a repertoire of behaviours and themes that identify the identity of a social group. It is described as a VEC in the EIS as it is an expression of the relationship between humans and the natural environment. The approach taken with respect to culture paralleled the methods and indicators identified by the UNESCO framework.

Evidence of Virginia Petch, October 30, Pages 2426 - 2427

Heritage resources were considered a VEC because they are a non-renewable resource. They are valuable for their archaeological, paleontological, cultural, pre-historic, historic, natural, scientific or aesthetic features. As of 2010, there were 5,012 registered heritage sites alone in the Project study area, including centennial farms, commemorative plaques, municipal and provincial sites, and archaeological sites.

Evidence of Virginia Petch, October 30, Pages 2435 - 2436

The importance of culture and heritage resources was also seen in the assessment of the route revisions requested by MCWS. Their existence and importance affected Manitoba Hydro's assessment of the Alternate Final Preferred Route in one section and their preference between the Final Preferred Route and Alternate Final Preferred Route.

Evidence of Pat McGarry, March 4, Pages 466

Where there was a pathway to potential health effects, and where concerns were expressed, Manitoba Hydro conducted further assessment, including electric and magnetic fields and noise. A human health impact assessment was not considered appropriate or necessary based upon the nature of the Project and its potential effects on health. Precedents provided by the Participant's expert were not at all comparable or applicable – for example, one of the assessments looked into concerns with chemical carcinogens found in liquid hydrocarbons, while another dealt with effects from an aluminum smelter operation.

Evidence of Dr. Lee, November 15, Pages 5102 - 5106

Through this extensive Site Selection and Environmental Assessment approach, and with the assistance of experienced professional experts, Manitoba Hydro was able to recognize the key issues in routing and was able to identify the most crucial VECs potentially impacted by the Project.

3. ARE MANITOBA HYDRO'S CONCLUSIONS REGARDING THE SIGNIFICANCE OF IMPACTS SOUND?

The Project itself and the route chosen were designed to achieve reliability without significant adverse effects. The route and site selection process allowed for early integration of potential environmental and socio-economic issues and provided considerable opportunities to avoid adverse effects where feasible, and allows the assessment to focus on areas where there are concerns regarding potential for measurable cumulative effects on VECs.

Exhibit 59, Slide 10 and 14

Evidence of Cam Osler, October 29, Page 2192

The assessment considers pathways of effect of each Project component on each VEC.

Evidence of Cam Osler, October 29, Page 2196

MH-59, slide 33

When the VECs have been identified and the pathways of effect determined, the next step is to consider the direction and nature of the effect on the VEC. Is it positive, negative or negligible in direction? How large is it? What is its geographical extent? Of what duration is it?

Evidence of Cam Osler, October 29, Page 2196

The VECs for the Project were screened in this fashion by the team of experts to determine the direction of their effects. This screening process looked at duration, magnitude and geographical extent of effects on each VEC in detail. Where there were potentially significant residual effects additional criteria were considered (i.e., frequency, reversibility and ecological and societal importance).

Evidence of Cam Osler, October 29, Page 2199

For those VEC's affected by the Project, the assessment was VEC focused, looking at whatever is affecting the VEC. The VECs sustainability and sensitivity were examined. For example, is it a threatened species? Are the people affected vulnerable?

Evidence of Cam Osler, October 29, Page 2196 - 2197

Where there was a potential adverse effect on a VEC that could not be avoided through route selection, mitigation measures proposed and discussed by Manitoba Hydro staff and specialists were applied to minimize or eliminate potential adverse effects.

Evidence of Cam Osler, October 29, Page 2196

Where there was a measurable adverse effect that could not be addressed through mitigation measures, and where appropriate, compensation has been offered. Two such examples are the Landowners Compensation Policy and the Trappers Notification and Compensation Policy.

Evidence of Cam Osler, October 29, Page 2198

A formal policy has not been established for outfitters. This is not intended to minimize the legitimacy and importance of the businesses being operated. However, as compared to landowners and trappers numbering in the hundreds, there are only two outfitters which have come forward with potential claims. Years of history, and considerable records, exist with respect to the income earned and the impacts on both of those groups (i.e. landowners and trappers), such that a fair, reasonable and consistent policy can and was established. To the contrary, the claims of the outfitters have not yet been established and contain many uncertainties still need to be considered. Many, if not all, of the potential impacts on outfitters can be mitigated. Manitoba Hydro has said it will entertain their claims if, and when, they do occur. It is not in any way rejecting their position and Manitoba Hydro will review each such claim on a case by case basis as they arise.

Evidence of Pat McGarry, March 12, Page 6800 - 6805

Exhibit WPG 17

The residual effects significance evaluation was undertaken after consideration of mitigation. Regulatory significance can potentially occur where there is still a residual adverse effect after mitigation. Determining the regulatory significance of the residual effects required specialist opinions on the effect (e.g., magnitude, duration, geographic extent) and the probability of the effect actually occurring, the degree of certainty in our present knowledge of the subject and the expected results of mitigation measures, continued follow-up monitoring and, in some cases, the

development and implementation of follow up adaptive management plans to address uncertainties.

Manitoba Hydro's conclusions as to significance were based upon the extensive work done by numerous experts, all of whom prepared detailed technical reports, and most of whom attended at the hearing to be questioned on their work.

Once residual Project effects were identified, a cumulative effects assessment was carried out. During this hearing the matter of CEA framework and approach has received considerable attention. Appendix A of this Argument accordingly provides a summary regarding the CEA approach and clarifications on various specific issues. An overview of relevant points is provided below.

The cumulative effects assessment ("CEA") for the Project reflects current good practice and follows a method in alignment with the *Cumulative Effects Assessment Practitioners Guide* ("the Guide") prepared by the Cumulative Effects Assessment Working Groups for the Canadian Environmental Assessment Agency.

Evidence of George Hegmann, March 12, Pages 69 - 70

Evidence of Cam Osler, November 22, Page 5818

Appendix A

The CEA prepared in support of the Bipole III Project regulatory EIS filing follows a "project centric" approach, within which also lies the concept of the "residual effects trigger" as discussed in this hearing. CEA was conducted only for those VECs for which the Project results in a likely measureable adverse residual effect. This approach examined potential effects by the proposed Project on selected VECs, and through a cause-effect analysis evaluated significance of Project residual effects. This approach did not assess VECs unless they are affected by the Project, and also did not assess VECs where such effects of the Project are not adverse or measureable, and reflects understanding that Project contribution is critical to allow one to make judgment on the Project's effects and hence its acceptability. The Guide and the Canadian Environmental Assessment Act ("CEAA") support this as a fundamental basis of assessment. This approach was the practice adopted in the 2009 New Nuclear-Darlington project CEA, and

in the CEAs used by BC Hydro in all of its recent northern transmission line project assessments. As such, the Bipole III CEA using this approach reflects current and best practice and is not deficient in regards to VEC selection and assessment of effects.

Evidence of C. Osler, February 22, Pages 5818-5823; 5861-5863

Evidence of G. Hegmann, Feb 18 Rebuttal, Page 2

Evidence of G. Hegmann, March 12, Pages 71-76

Appendix A

The words “cumulative effects assessment” have often been used interchangeably to mean two different things. A regional or strategic planning CEA has nothing to do directly with any one project application for regulatory review. Notwithstanding the potential benefits of having available a regional or strategic planning CEA in order to set context and (potentially) thresholds for overall effects on certain VECs in the region, the lack of such regional CEA studies does not in itself constitute deficiency in a CEA project assessment. Examples of where such regional or strategic CEA have been prepared, such as the oil sands region, confirm that such CEAs are supported by government responsible for overall resource and regional planning in the affected area. Dr. Noble and Dr. Gunn agreed that "regional strategic environmental assessment is ultimately the responsibility of government". To date, no such overall regional or strategic CEA has been prepared by government for the various regions affected by the Bipole III Project.

On this matter, the Bipole III CEA also complies fully with the Scoping Document (Section 8), i.e., it is based on CEAA guidelines as well as best and current practices in that it is required only to take into consideration any relevant regional and strategic environmental assessments available at the time the Bipole III EIS was prepared (and no such assessments were in fact available).

Evidence of G. Hegmann, March 12, Pages 6857-6859, 6887-6893

Evidence of Dr. Noble & Dr. Gunn, November 15, Pages 4963-4964

Evidence of C. Osler, November 22, Pages 5006-5007

Chapter 8 considered the cumulative effects of past and current projects when assessing the effects of the Project on each VEC. Chapter 9 built on the assessment in Chapter 8 by including a focus on future projects/activities where there is spatial or temporal overlap with residual adverse effects from the Project.

Exhibit 59, slides 17, 34, 46 to 56

All VECs with measurable adverse residual effects of the Project were carried forward for further analysis and consideration. Of the 67 biophysical and socio-economic VECs considered in the EIS effects assessment (Chapter 8), 64 VECs were considered in the cumulative effects assessment (Chapter 9). Two of the initial 67 VECs examined in Chapter 8 of the EIS were not examined in Chapter 9 due to the absence of a detectable adverse residual effect from the Project (Dakota Skipper and Groundwater Quality), and only one was not examined due to a residual positive effect (Economic Opportunities).

The CEA in Chapter 9 then screened VECs based on the geographic extent, magnitude and duration of effects in order to focus on key VECs where there was potential for non-negligible cumulative adverse effects. The CEA carried out in Chapter 9 for the remaining 64 VECs resulted in more detailed analysis of four VECs which were subject to further detailed analysis and consideration: Caribou (Wabowden herd), Community Services, Travel and Transportation and Public Safety (Gillam). Two further VECs were subject to more extensive consideration in the February 28 Supplemental Assessment Report: Moose (in GHA 14 [Moose Meadows] and GHA 19A and 14A) and Culture (in area of GHA 19A and 14A).

Response to CEC/MH-VI-347

Exhibit MH 59, Slides 7, 8, 16, 17, 33, 34, and 46 - 56

Evidence of Cam Osler, October 29, Pages 2172 – 2177, 2182 – 2184, Page 2191, Pages 2196 – 2197, Page 2199, and Pages 2206 – 2214

Evidence of Cam Osler, November 22, Pages 5861 – 5867

Evidence of George Hegmann, March 12, Pages 113 - 116

In carrying out the cumulative effects assessment, the Corporation:

- Determined if the Project would have an effect on the VEC;
- If a negative effect was demonstrated, determined if the incremental effects acted cumulatively with the effects of other actions (past, present and sufficiently known future ones);
- Determined if the combination of Project effects with other effects was going to cause a significant change now or in the future in the characteristics of the VEC after mitigation; and
- Tested whether the Project was incrementally responsible for the adverse effect and to what degree.

The cumulative effects assessment is not an assessment of past or future projects. Rather, it is the description of the overall, or cumulative, effects on the VEC and the extent to which Project is expected to be incrementally responsible for adverse effects. It examines potential overlaps of those effects with those from the Project on each VEC.

The assessment considers VEC context in light of effects from all sources - as addressed in detail in Appendix A to this Argument.

Three VECs with potentially significant effects were identified related to effects during the construction phase of the Keewatinoow Converter Station:

- Public safety in the Gillam area as a result of potential worker interaction;
- Traffic concerns to and from Gillam; and
- Community services such as hospitals and policing in the Gillam area.

Evidence of Elizabeth Hicks, October 29, Page 2386

Given the concerns identified, the proposed mitigation measures were revisited for those specific VECs. Additional work was done with both subject matter experts and members of the communities in and near the Gillam area and enhancements to the mitigation measures were proposed. Project plans and mitigation measures designed to minimize those effects include:

- The establishment of both start up camp and a main camp several kilometers away from the Town of Gillam, equipped with:
 - lodging and meals free of charge;

- a separate ambulance service;
 - fire truck;
 - first aid building (in the case of the main camp);
 - a shuttle bus;
 - lounge and recreational facilities; and
 - access gates to allow for tracking and monitoring.
- Cultural awareness training of Hydro staff and contractors;
 - Strictly enforced rules and security with respect to discipline, impaired driving and intoxication;
 - Ongoing awareness initiatives regarding safe driving practices;
 - Traffic signage on the access road and a traffic monitoring program; and
 - Regular communication between Manitoba Hydro and the RCMP.

Evidence of Elizabeth Hicks, October 30, Pages 2380 - 2383

Residual adverse effects were also identified with respect to boreal woodland caribou. Thresholds for disturbance were reviewed that are available and provided in the National Recovery Strategy for Boreal Woodland Caribou in Canada. Caribou are a threatened species under both Provincial and Federal legislation and there are now in place both a national caribou recovery strategy and a Provincial one. Manitoba Hydro participates on three regional caribou committees and embarked upon a research project to contribute to caribou conservation in the future.

Evidence of Jim Rettie, October 31, Pages 2578 – 2579

Evidence of Mr. Schindler, MH-73

Evidence of Mr. Schindler, October 31, Pages 2623-2624

Manitoba Hydro convened an expert panel to conduct a formal risk assessment of the potential threat to woodland caribou from the Project. The assessment categories included forage loss and degradation, range fragmentation, predation, pathogens and direct mortality from humans.

Evidence of Jim Rettie, October 31, Page 2557 and Pages 2579 - 2580

Recommendations from the panel included a collaring and monitoring program to identify critical local range components, and a monitoring of local populations to determine the effects of linear disturbances on predation.

Evidence of Jim Rettie, October 31, Pages 2580 - 2582

The recommendations of the panel were implemented – a collaring and telemetry study was conducted, aerial surveys were carried out, habitat modeling took place, and new range maps created. The results of this detailed analysis were then used in the route selection to avoid the majority of ranges and habitats and to develop mitigation measures.

Evidence of Jim Rettie, October 31, Pages 2582 – 2588; Page 2591

Evidence of Doug Schindler, October 31, Page 2593

The majority of potential residual adverse effects on boreal woodland caribou were mitigated through this extensive study and analysis, and through the use of the pre-project monitoring, mainly through avoidance and the paralleling of existing infrastructure. There is not expected to be a decline in population as a consequence of increased predation due to the Bipole III Project.

Evidence of Jim Rettie, October 31, Page 2635

The AFPR changes in the Wabowden area reduced scientific uncertainty and concern regarding the potential residual effects of the Project on the Wabowden boreal woodland caribou evaluation range and increased the confidence in the prediction of residual effects and the overall assessment of significance for the boreal woodland caribou VEC

Exhibit MH-113

Evidence of Doug Schindler, March 4, 2013 pages 5983-5988

The use of thresholds is challenging as there are not many currently in existence. Not using thresholds does not necessarily represent a deficiency, so long as efforts are demonstrated to identify and apply if available.

Evidence of George Hegmann, February 18 Rebuttal, Pages 2

During the course of the hearing, and as new information became available, moose became more prominent as a VEC, necessitating further work and study, and a further cumulative effects

assessment. It had been determined at the time the EIS was drafted that the potential residual effects on moose of the Project, as a linear development, were not significant.

Evidence of Doug Schindler, October 30, Page 2312 – 2314

Due to additional information being provided by the Province and further concerns being brought forward on the decline of the moose population in certain Game Hunting Areas (GHAs) along the proposed route, there was a re-consideration of the route by Manitoba Conservation and Water Stewardship (MCWS) in GHA14 and in GHA19A/14A. Further field studies and review work were done by Manitoba Hydro to conduct an environmental assessment on the route alterations proposed by MCWS and to determine what, if any, effect the Project would have on the environment in those regions.

The February 2013 Supplemental Assessment concluded that with either the AFPR or the FPR for the HVdc transmission line component of the Project and mitigation as described in Chapter 6, the cumulative effects of the Project in combination with other past, current and future projects are not expected to result in any significant residual adverse effects on moose.

With respect to moose:

- In GHA 14, the AFPR crosses a larger amount of higher value moose habitat than the FPR, but does not change the significance evaluation from the EIS, as such either segment is viable.
- In GHA 19A/14A the AFPR has potentially significant issues (with respect to culture), so enhanced mitigation was proposed to allow re-adoption of the FPR while reducing or eliminating access issues to moose habitat.

Exhibit MH-113

March 4, 2013, page 5988-6037

The proposed AFPR change in the GHAs 19A and 14A areas will move the HVdc line construction and ongoing operation into a culturally sensitive area that is avoided by the FPR, and result in potentially significant adverse residual effects on the culture of Camperville, Pine Creek First Nation and Duck Bay. Aside from avoiding this area through routing the HVdc

transmission line elsewhere (as was achieved with the FPR in the original EIS), Manitoba Hydro is not currently aware of mitigation measures likely to alleviate adequately these expected adverse residual effects on culture from the AFPR route change in the GHA 19A/14A area. Overall, the assessment concludes that the residual adverse effect of the AFPR in this area on culture is “not significant”; however, uncertainty is noted as to whether the ongoing adverse effect will remain moderate in magnitude and medium term in duration. The assessment of the FPR in this area had concluded that the residual adverse effects of the FPR on culture is not potentially significant.

Exhibit MH-112

Evidence of Virginia Petch, March 4, 2013 page 5972-5982

4. GIVEN THAT THE ROUTE BY THE ELECTORAL DECISION OF THE PEOPLE OF MANITOBA IS TO BE A WEST ROUTE, HAS MANITOBA HYDRO SUCCESSFULLY BALANCED ALL OF THE COMPETING RESTRAINTS OF SUCH A ROUTE?

It was acknowledged by Manitoba Hydro that one of the most common themes received during the consultation process pertained to the decision to route Bipole III on the west side of the Province, rather than on the east side.

Evidence of Pat McGarry, October 3, Pages 653 – 654

However, Manitoba Hydro cannot address that concern, based upon the decision reached by the Government of Manitoba in that regard in September of 2007.

Manitoba Hydro was then faced with the challenge of routing around, and in some cases, through areas of importance to particular groups, such as:

- Treaty Land Entitlement and reserve lands;
- Lands used for harvesting and domestic resources;
- Other lands of cultural and heritage importance;
- Intensive agricultural areas;
- Protected regions, Provincial Parks and Wildlife Management Areas;
- Critical habitats; and
- Regions already heavily developed with hydro, forestry and other projects.

Selecting a route on the western side of the Province was exceedingly challenging, given all of the impediments and the numerous competing interests, and given the distance the route had to cover – almost 1400 kilometers. As even Mr. Berrien conceded:

“You guys had a huge job. I mean, it went up from all the way up in the shield all the way down into the Assiniboine flats and clay. It was a huge profile of land for sure.”

Evidence of Robert Berrien, November 19, Page 5343

Focus was on the VECs relevant to the area being assessed. Where the VEC was not relevant to the section being evaluated, it was given a low or zero rating in the route selection matrix.

Evidence of Pat McGarry, October 4, Page 780

The task of balancing those interests, which were often at odds with each other, was a monumental one. During the evidence provided by Mr. McGarry and Mr. Dyck, they were able to demonstrate and depict visually the competing interests in one small section of the route through the display of the bottle neck map found in Chapter 8. The overlap in concerns and issues was staggering.

The extensive Site Selection and Environmental Assessment process, it has attempted to balance those competing interests and the various constraints revealed through both that process and through the EACP. Its use of numerous subject matter experts and a team approach was important to obtaining that balance.

Many of the remaining complaints raised by Participants and presenters with respect to aboriginal engagement arise out of issues with the Crown's constitutional duty to consult with First Nations and representatives of other Aboriginal communities and persons, including the MMF, and the alleged lack of progress on that Crown Consultation Process. With respect, issues arising out of that process are beyond the scope of this hearing, as the duty to consult has not been delegated to Manitoba Hydro. Further, environmental assessment in Manitoba is not designed to assess the impact on treaty or Aboriginal rights.

As already decided in a preliminary motion by Peguis First Nation, "it is not the Commission's job to tell the Crown how to conduct its business. This includes the content, the process and the timing of the Crown's consultations." It also stated that "in the absence of any legal authority which would require the Commission to consider the nature and adequacy of Crown consultations or of direction from the Minister in the Terms of Reference, the panel is of the view that no such obligation exists."

Decision of the CEC dated August 31, 2012

Concerns remain with respect to the Technical Advisory Committee (“TAC”) process and the volume and substance of comments received from subject matter experts on that Committee. Again, those concerns cannot be addressed by Manitoba Hydro.

Evidence of Warren Mills, March 6, Pages 6443 - 6445

Throughout the hearing, we have heard from some landowners and farmers that they remain unhappy with the route selected and the residual effect the Project will have on their operations. The alternatives to the Project put forward by the Bipole III Coalition on their behalf are not acceptable from a reliability and cost perspective and cannot be implemented. To move the route elsewhere in southern Manitoba does not eliminate the concerns.

In the view of Mr. Nielsen, even with additional study and analysis, a better route through intensive agricultural land could not be found. It was reasonable routing which tried to avoid people, farm yards, residential areas and the like, and reduced diagonals. Moving the line elsewhere would only move the line to similar soil types and to someone else’s farming operation.

Evidence of Jim Nielsen, October 30, Pages 2485 – 2487

The Bipole III Coalition introduced some potential alternate routing with agricultural Manitoba through Mr. Berrien. However, as he conceded, the “devil is in the detail”. Many of his suggestions ignored routing constraints or impediments that were in existence, such as houses and shelter belts. There can be no substitute for the hours worked, and the kilometres travelled, in establishing a route that balances the needs and wants of the many landowners in the vicinity with the technical requirements of the Project.

Evidence of Robert Berrien, November 19, Page 5363 and 5365

In the final analysis, only 17.8 hectares of land will potentially be taken out of production as a result of tower placement, a tremendous feat given the length of the route and the necessity to go through western Manitoba.

Answer to Undertaking given at Page 2489 on October 30

Manitoba Hydro does, though, recognize and acknowledge the effect on such landowners. For that reason, it has a Landowners Compensation Policy to attempt to address the financial impact and has revised it over time to continue to address concerns that have been raised.

That program contains four components, made up of both one-time payments and “real time” payments to address specific impacts as they arise.

- Land compensation equivalent to 150% of the market value of the land taken for the easement, as compared to land acquired by way of expropriation (market value only).

Evidence of Curtis McLeod, October 30, Pages 2496 – 2500; Page 2505; Page 2519

- One-time structure impact compensation for the crop loss and related losses associated with the extra time and effort required to go around each tower, taking into the account the dominant land use in the past.

Evidence of Curtis McLeod, October 30, Page 2498

- Construction damage compensation negotiated post-construction for any kind of damage to property such as crops, land, or equipment

Evidence of Curtis McLeod, October 30, Pages 2497

- Ancillary damage compensation for direct or indirect impacts to the use of the property, such as impacts caused by an inability to aerial spray in one year; claims can be made by both landowners with towers on their property and by landowners in the vicinity of towers if they have been impacted.

Evidence of Curtis McLeod, October 30, Pages 2500 – 2501; Page 2506; Page 2520

In the one example provided – for one mile of right of way containing three or four towers and causing a minimal loss of cultivated land, a landowner would receive \$111,000 of compensation.

Evidence of Curtis McLeod, October 30, Page 2502

It is not a “one size fits all” solution and has been customized to some degree. It will address individual impacts and can certainly be adapted over time to deal with unique issues that arise over time. It offers an upfront payment immediately and is also on par or better than that provided by electrical utilities in neighboring Provinces.

Evidence of Curtis McLeod, October 30, Page 2502; Page 2505; Page 2520

While annual payments have been suggested, *Expropriation Act* does not allow for annual payments in this regard, as conceded by Berrien.

Evidence of Robert Berrien, November 19, Pages 5260 - 5261

Another competing interest raised during the hearing is the conflict between blueberry harvesters and the Corporation’s need to clear vegetation and manage it into the future. Although the experts have indicated that blueberries do better after disturbances such as fire or other clearing, further analysis has been done to address the concerns and minimize the conflict between these competing interests. Significant dollars have been expended on research and development, which includes research into blueberries.

Evidence of Kevin Szwaluk, October 29, Page 2266, Page 2270, and Page 2275

Evidence of James Matthewson, November 8, Page 4046

Assurances have been provided that no herbicides will be used during the construction process and its application later will be targeted, single plant applications. In many areas, construction will be done in the winter to ensure no damage is done to growing plants. Sensitive areas can be flagged during construction to ensure they are not disturbed and buffer zones established to address community members’ concerns. This is yet another example of the attempts by Manitoba to find balance.

Evidence of Glenn Penner, March 12, Page 6786

Evidence of Wayne Ortiz, March 12, Page 6810

Routing through lower quality pasture land was seen as a routing opportunity and selected as the Alternate Final Preferred Route in the area of Moose Meadows through a bison ranch, thereby

minimizing the environmental impact on moose and staying further away from the community of Pine Creek First Nation. However, this attempt to balance competing interests still has not addressed the visceral concerns of PCFN due to the incorrect perception that bison ranch operators could potentially receive compensation from Manitoba Hydro.

Evidence of Warren Mills, March 6, Page 6482 - 6483

Evidence of Pat McGarry, March 12, Page 6806

Through consultation with government resource managers, several suggestions were made in regard to routing which were adopted. For example a salt spring near Red Deer Lake was avoided and routing through Wildlife Management Areas minimized. The Round 4 consultation on the PPR also resulted in a number of route adjustments to adapt to specific landowner requests related to tower placement, irrigation and fence lines. An adjustment was also made to the PPR for proximity to a waterfowl area

Appendix 7B Chapter 7 EIS

The participation and contribution of many interested people and groups has helped locate a major transmission line project in a sustainable manner in a very large and diverse biophysical and socio-economic environment. The FPR (with adjustments) represents the compilation of many technical studies and the collective input of many stakeholders leading to a project route that has no significant impacts after mitigation and follow-up.

5. CAN MANITOBA HYDRO MANAGE THIS PROJECT RESPONSIBLY, PROFESSIONALLY AND SUCCESSFULLY GOING FORWARD?

Manitoba Hydro has developed an Environmental Protection Program which provides the framework for the implementation, management and monitoring of the environmental protection measures that are deemed necessary and important to the environment as the Project proceeds. Manitoba Hydro has made a written commitment to over 600 mitigation and monitoring measures designed to manage this Project responsibly professionally and successfully going ahead and to protect the environment as it moves forward.

Evidence of James Matthewson, November 8, Pages 4052 - 4053

The draft Project Environmental Protection Plan has been developed, but only after:

- a comprehensive review of its two most recent major projects (Wuskwatim Project and Riel Sectionalization) for lessons learned;
- a detailed literature review;
- a review of other North American Environmental Protection Plans for similar projects; and
- interviews with other utilities to gain from their experiences.

Evidence of James Matthewson, November 5, Pages 4050 - 4052

This demonstrates a commitment to using an Adaptive Environmental Management approach, one in which you plan, do, evaluate, learn, and adjust.

Evidence of James Matthewson, November 5, Pages 4117

The Environmental Protection Program has a number of key components which will also help Manitoba Hydro manage this Project responsibly professionally and successfully going forward, including:

- Monitoring Plans for both biophysical and socioeconomic elements;
- Management Plans for matters such as:
 - Access management;

- Blasting;
- Emergency preparedness and response;
- Erosion protection and sediment control;
- Rehabilitation/Remediation;
- Vegetation; and
- Solid waste/recycling;
- Environmental Protection Plans for construction, operations and maintenance, and decommissioning;
- A Heritage Resources Protection Plan;
- Inspection, Monitoring and Communication Programs;
- Continuing engagement of stakeholders;
- The use of the more innovative active Adaptive Environmental Management model;
- Use of a number of environmental officers/monitors and specialists with authority to inspect and monitor and, where necessary, shut down;
- Significant involvement of communities, including the hiring of local environmental monitors and community liaisons;
- Annual reviews and audits; and
- Annual Monitoring Reports hosted on the Manitoba Hydro website and submitted to MCWS.

Evidence of James Matthewson, November 8, Pages 4055 – 4117

One small example of this approach and commitment was provided by Dr. Petch as she described the many steps taken and the care exercised when two burial sites were discovered near the proposed Keewatinoow site. She described the considerable work done, in conjunction with Fox Lake Cree Nation, to protect and preserve these significant heritage resources, and to carry out further monitoring and work into the future.

Evidence of Virginia Petch, October 30, Pages 2444 - 2450

Manitoba Hydro is committed to a comprehensive Program of environmental protection. It is committed to engagement with communities, First Nations, the Métis, and regulators, and to their involvement in identifying/reviewing environmentally sensitive sites and corresponding

mitigation measures throughout Program development. It is committed to being adaptive, to learning, and to evolving throughout the duration of the construction and operation of the Project. The Program and associated Plans have been designed to meet or exceed applicable government guidelines and industry best practices.

Evidence of James Matthewson, November 8, Pages 4117 - 4118

Evidence of Deirdre Zebrowski, October 3, Page 479

The Corporation has taken on the significant responsibility to ensure the Project is implemented with minimal effects on the environment and people. The Project and environmental protection only begin with licensing and, while it is end of the regulatory process, it is merely the start for Manitoba Hydro.

THE FINAL TASK BEFORE THE CEC

Manitoba Hydro takes the position that each of the 5 questions have been answered in the affirmative and, based upon the entirety of the evidence, this CEC can, in good conscience and with strong conviction, now recommend to the Minister that the Project be licensed.

Specifically, Manitoba Hydro is asking that the FPR be adopted as indicated in the original filing of the EIS on December 1, 2011, save and except for the following change found in the supplemental EIS filed January 28, 2013:

- The AFPR in the Wabowden area, as it reduces scientific uncertainty and concern regarding the potential residual effects of the Project on Wabowden woodland caribou evaluation range. Manitoba Hydro believes that mitigation measures can address the concerns of the mining interests.

With respect to GHA 14, Manitoba Hydro is of the view that both the FPR and the AFPR are acceptable based upon the environmental assessment, although the AFPR contains considerably more high quality moose habitat and will result in more challenging mitigation measures related to access along the AFPR.

Manitoba Hydro remains in support of the FPR for GHA14A/19A, because the AFPR may result in potentially significant adverse effects on the culture of Camperville, Pine Cree First Nation and Duck Bay.

The CEC's task, however, does not end with that recommendation. What conditions does it recommend be placed on that licence? What mitigation measures need to be put in place and what future monitoring is required?

The Corporation has committed to over 600 mitigation and monitoring measures so as to ensure that any possible anticipated residual effect is minimized. Those commitments are contained in a letter of commitment to the CEC dated October 29, 2012, and Manitoba Hydro recommends that those be adopted. They are detailed, extensive, and properly address any residual effects that have been caused by the Project. They also involve stakeholders extensively in future endeavours.

A requirement that the commencement of construction of Bipole III be subject to a “pre-condition”, namely the successful negotiation of an agreement with a third party, such as suggested by the MMF and its expert, MSES, TCN, and others is not practical because it is not enforceable. There is no process or body, Court or government that can successfully compel two parties to “agree”. If there is to be an agreement, the parties themselves have to negotiate it and conclude it. Just as judges have, continuously, declined to enforce “agreements to agree”, they will be unable to compel a reluctant party to “agree” on any basis, be it assertions by the frustrated licence holder that the reluctant party is being unreasonable, or be it assertions by the third party that the licence holder is not negotiating in good faith or is not funding the third party’s negotiation costs in a reasonable amount.

Transcript, October 19, Page 2122

Such a condition is also not appropriate in the context of an environmental hearing. This is not a hearing into the constitutional rights of the MMF or others. It is a hearing into the environmental impact on the Valued Environmental Components relevant to this Project.

The MMF has suggested that there is an obligation arising out of the Aboriginal Justice Inquiry Implementation Commission (“AJIIC”) to negotiate an agreement or treaty with them prior to any natural resource development proceeding. With respect, the Bipole III Transmission Line Project is not a “natural resource development”.

Manitoba Hydro also asks the CEC to carefully consider the practical application of any recommendation it is pondering in regard to Manitoba Hydro, and whether the contemplated recommendation can, in fact, be implemented by it. Although heartfelt and perhaps legitimate, many of the requests being made by the Participants are far beyond the scope and authority of Manitoba Hydro. Manitoba Hydro asks that any recommendations made be thoughtful, practical and well-explained.

Manitoba Hydro would like to thank the Clean Environment Commission, the Participants and the various presenters for their attentiveness, helpful input and insightful questions throughout the process. Manitoba Hydro has attempted to learn through this process, to adapt and respond to concerns expressed and the recommendations made, and to improve the assessment overall. A full environmental assessment is an iterative process and, as a result of the participation of all

involved, the assessment process has been improved and the analysis of the Project more thorough. In the end result, the value of the hearing has been demonstrated and the end produce vastly improved. Manitoba Hydro will also take forward what it has learned from this experience and continue to improve upon its environmental assessments in the future.

APPENDIX A: SUMMARY RE: CUMULATIVE EFFECTS ASSESSMENT APPROACH

In response to issues raised by CAC and others during the hearing, Appendix A summarizes key points regarding the cumulative effects assessment approach and framework provided in the Bipole III Project EIS.

Compliance with Cumulative Effects Assessment Practitioners Guide

The cumulative effects assessment (CEA) for the Bipole III Project reflects current practice and follows a method in alignment with the *Cumulative Effects Assessment Practitioners Guide* (the “Guide”), prepared by the Cumulative Effects Assessment Working Group for the Canadian Environmental Assessment Agency (CEAAgency, 1999), and is therefore in compliance with the Guide and with good practice. Testimony to this was provided at the hearing by the lead author of the only current Canadian government guide available on CEA, the very Guide that Drs. Gunn and Noble themselves used and accepted as a benchmark. Mr. Hegmann's testimony on the matter of CEA current practice reflects his extensive and ongoing engagement in the authorship and/or management of project environmental assessments prepared for regulatory review and advice to governments and regulators, including for major linear pipeline projects in Canada that have relevance specifically to the CEA framework applicable to the Bipole III Project.

Evidence of G. Hegmann, March 12, Pages 6849-6850

Evidence of C. Osler, November 22, Page 5818

Clarifications on Specific Issues

1. **“Project-Centric Approach” and “Residual Effects Trigger”** – The CEA prepared in support of the Bipole III Project regulatory EIS filing follows a “project-centric” approach, within which also lies the concept of the “residual effects trigger” as discussed in this hearing, i.e., CEA was reviewed in Chapter 9 only for those VECs for which the Project results in a likely measureable adverse residual effect. This approach examines potential effects by the proposed Project on selected VECs, and through a cause-effect analysis evaluates significance of Project residual effects. This approach does not assess VECs unless they are affected by the Project, and also does not assess VECs where such effects of the Project are not measureable, and reflects understanding that Project contribution is critical to allow one to make judgment on the Project’s effects and hence its acceptability. The Guide

and the CEAAct support this as a fundamental basis of assessment. This approach was the practice adopted in the 2009 New Nuclear-Darlington project CEA², and in the CEAs used by BC Hydro in all of its recent northern transmission line project assessments. As such, the Bipole III CEA using this approach reflects current and best practice and is not deficient in regards to VEC selection and assessment of effects.³

Evidence of C. Osler, February 22, Pages 5818-5823; 5861-5863

Evidence of G. Hegmann, Feb 18 Rebuttal, Page 2

Evidence of G. Hegmann, March 12, Pages 6851-6856

- 2. “Baseline” reflects World Without the Project** - “Baseline” in the Bipole III Project CEA reflects the “world without the Project”, and is an essential requirement in defining the incremental residual effects of the Project as required for a “project-centric” CEA⁴. As such, this “baseline” differs from some “earlier time” or “natural” condition where there are no effects from other projects and activities that are considered in the CEA. For regulatory applications assessing the effects of a specific project, use of existing conditions to represent a baseline is an acceptable approach. Such baselines include present and past human actions, to the extent they may be mapped and otherwise identified. The Guide supports this as a fundamental basis of assessment of best practice and, as such, the Bipole III CEA reflects current practice and is not deficient in regards to use of baseline. Defining the "baseline" as the "world without the Project" does not preclude the ability to consider "earlier time" or "pre-development" conditions for some VECs, where this is feasible and useful for the overall assessment of cumulative effects on a VEC relative to a acceptable threshold, e.g., earlier time periods were considered in the Bipole III supplemental CEA filings with regard to caribou and moose.

² Subject to the screening including VECs that were positively affected by the project.

³ Mr. Hegmann discussed in his rebuttal and testimony that Dr. Noble and Dr. Gunn do not agree with the project-centric process followed in the Bipole III CEA and instead advocated an "ecosystem or ecologically or VEC based" approach based on health of ecosystem. It needs to be noted that a project-centric approach as recognized in current CEA practice and the Guide does not in any way mean that the CEA analysis does not also focus, where relevant, on the VECs themselves that are affected by the Project, including the context for the VEC absent and with the Project, and the sustainability of the VEC due to all factors affecting it, e.g., see Exhibit MH-59, slide 34 and related testimony of Mr. Osler. See also clarification #4 in this Appendix A.

⁴ The concept of "non-static" or "evolving" baselines as discussed in the hearing recognizes the possibility that baseline conditions (i.e., the world without the Project) may change in the future due, for example, to natural phenomena, such as wildlife or climate change. Discussion of these issues does not affect the fundamental point that the Guide supports use of existing baseline conditions in CEA, and that this definition of "baseline" does not preclude consideration of other information for a specific VEC when relevant and feasible.

Exhibit MH-59, Slides 7 and 8

Evidence of C. Osler, October 29, Pages 2172-2177

Evidence of C. Osler, November 22, Pages 5863-5865

Evidence of G. Hegmann, Feb 18 Rebuttal, Page 2

Evidence of G. Hegmann & C. Osler, March 12, Pages 6896-6901

- 3. All VECs with detectable adverse residual effects of the Project are included in the CEA** - Contrary to the evidence of Dr Gunn and Dr Noble asserting that the CEA in Chapter 9 of the Bipole III EIS looked only at VECs determined in Chapter 8 to have significant adverse effects from the Project⁵, the Bipole III CEA in Chapter 9 examined all VECs (namely 64 VECs) with detectable adverse residual effects of the Project as determined in Chapter 8, and, as such, did *not* look only at VECs determined in Chapter 8 to have significant adverse effects from the Project. Only two of the initial 67 VECs examined in Chapter 8 were not examined in Chapter 9 due to the absence of a detectable adverse residual effect of the Bipole III Project, and only one VEC examined in Chapter 8 was not examined in Chapter 9 due a residual positive effect. As a matter of record, this point was reviewed in detail in the response to *CEC/MH-VI-347*; further, review of Chapter 8 as well as the referenced interrogatory response confirms that in fact there were no VECs assessed in Chapter 8 to have ‘significant adverse effects from the Project.’”

As an additional related point of clarification, the Bipole III CEA includes Chapter 8 as well as Chapter 9. As stated in the EIS, VEC assessments in Chapter 8 in each instance considered the cumulative effects of past and current projects when assessing the effects of the Project on each VEC, i.e., the added CEA analysis of VECs in Chapter 9 focused on future projects/activities where there is spatial and temporal overlap with residual adverse effects of the Bipole III Project.

The CEA carried out in Chapter 9 for the 64 remaining VECs resulted in more detailed assessment of four VECs (boreal woodland caribou in three ranges as affected by the HVdc

⁵ This misunderstanding starts to occur around page 26 of the critique filed by Drs. Gunn and Noble, and permeates section 1.4 of Appendix A and reappears at page 39. The Chairman on March 12 at pages 6879-6880 noted that ‘we had been led to believe that if there is no significant residual effect, then there’s no need to go to the next step and do a cumulative effects assessment.’”

transmission line component, and three socio-economic VECs [namely community services, travel and transportation, and public safety] with regard to residual adverse effects from construction of the Keewatinoow converter station and associated facilities). Subsequent supplemental CEA analysis was provided separately for caribou (prior to the CEC hearing) and more recently for moose in western Manitoba (February 2013).

Response to CEC/MH-VI-347

Exhibit MH-59, Slides 16 and 17, 46 to 56

Evidence of C. Osler, October 29, Pages 2182-2184, 2206-2214

Evidence of C. Osler, November 22, Pages 5861-5867

Evidence of G. Hegmann, March 12, Pages 6893-6896

4. **Assessment considers VEC context in light of effects from all sources** – Notwithstanding analysis of incremental effects of the Project on each VEC, the Bipole III CEA considers the current and expected future context of each assessed VEC (i.e., including the effects on the VEC of other past, current and future activities) and, where available, any VEC thresholds. In this regard, the CEA examines the extent to which VECs are already disturbed and/or stressed by past actions and changing conditions (e.g., boreal woodland caribou listed as Threatened under federal and provincial legislation) and, where relevant, reasonably foreseeable future actions (e.g., public safety cumulative effects for Fox Lake Cree Nation and Gillam community members during construction of Keewatinoow converter station, Keeyask Generation and Conawapa Generation projects). In this regard, the Bipole III EIS structure in Chapter 8 assesses the CEA of Project residual effects combined with effects of past actions and existing projects/activities, and in Chapter 9 assesses the extent to which the Chapter 8 CEA determinations are modified for any VEC by consideration of Project effects combined with effects of other projects and activities not yet examined in Chapter 8, i.e., other future projects and activities as listed in Chapter 9.

Response to CEC/MH-VI-347

Exhibit MH-59, Slides 7 and 8, 33 and 34

Evidence of C. Osler, October 29, Pages 2172-2177, 2196-2197, 2206-2214

5. **CEA for Regional or Strategic Planning versus CEA for Project Regulatory Reviews** – The words “cumulative effects assessment” have often been used interchangeably to mean

two different things. A regional or strategic planning CEA has nothing to do directly with any one project application for regulatory review. Notwithstanding the potential benefits of having available a regional or strategic planning CEA in order to set context and (potentially) thresholds for overall effects on certain VECs in the region, the lack of such regional CEA studies or analytical approaches such studies may use does not in itself constitute deficiency in a CEA project assessment. Examples of where such regional or strategic CEA have been prepared, such as the oil sands region, confirm that such CEAs are supported by government responsible for overall resource and regional planning in the affected area, and Dr. Noble and Dr. Gunn agreed that "regional strategic environmental assessment is ultimately the responsibility of government". To date, no such overall regional or strategic CEA has been prepared by government for the various regions affected by the Bipole III Project.

On this matter, the Bipole III CEA also complies fully with the Scoping Document (Section 8), i.e., it is based on CEAA guidelines as well as best and current practices in that it is required only to take into consideration any relevant regional and strategic environmental assessments available at the time the Bipole III EIS was prepared (and no such assessments were in fact available).

The Guide also fully recognizes that regional "nibbling" effects of the type highlighted by Drs. Gunn and Noble and the "thousand cuts" imagery usually cannot be adequately dealt with on a project-by-project review basis, and that regional plans of the type discussed above (i.e., prepared by government) are required that clearly establish regional thresholds of change against which the specific actions may be compared.

Evidence of G. Hegmann, March 12, Pages 6857-6859, 6887-6893

Evidence of Dr. Noble & Dr. Gunn, November 15, Pages 4963-4964

Evidence of C. Osler, November 22, Pages 5006-5007

- 6. Use of Thresholds in Bipole III CEA** - The Bipole III Project CEA uses thresholds to assist evaluation of significance where thresholds are available for VECs, e.g., CEA for woodland caribou. Absence of use of thresholds does not necessarily represent a deficiency, so long as efforts are demonstrated to identify and apply if available. The Guide does not support the view that the significance of a cumulative effect on a VEC cannot be assessed or commented

upon unless there is some established threshold for the affected VEC⁶. In this regard, the Bipole III CEA represents current practice and the Guide supports this view.

Evidence of G. Hegmann, Feb 18 Rebuttal, Page 2

- 7. Reliance in CEA on future management measures associated with other projects -** The Bipole III Project CEA's reliance on future management measures associated with other future Manitoba Hydro projects is a pragmatic and realistic recognition of one part of the long-term solution of cumulative effects within a given region. As such, mention of future measures supported by future projects does not represent a deficiency given that reasonable efforts are committed to by Manitoba Hydro regarding effects management. In this regard, the Bipole III CEA represents current practice and the Guide supports this view.

Evidence of G. Hegmann, Feb 18 Rebuttal, Page 2

- 8. Accidental events are not assessed in CEA -** The Bipole III Project CEA does not assess accidental events or malfunctions. As such, absence of such an assessment within this CEA does not represent a deficiency. There is no federal *guidance* that stipulates inclusion of assessment of accidents in a CEA⁷. Assessment of accidents, malfunction and upset events (AMUEs) is typically done separately within a regulatory application (Chapter 8, Section 8.4 of Bipole III EIS) due to the very different nature of such effects (compared to routine project effects) and the low likelihood (rarity) of such effects. In this regard, the Bipole III CEA represents current practice and the Guide supports this view.

Evidence of G. Hegmann, Feb 18 Rebuttal, Page 2

- 9. Study Areas for CEA -** The Bipole III Project CEA uses a very broad regional study area, and a Local Study Area that is 4.8 km wide centred on the route for the HVdc transmission

⁶ In this regard, the Guide does not support Dr. Noble's evidence as follows on this point (November 15, Page 4851): "The point is that unless you have some established threshold, you can't really identify or comment on the significance of the cumulative effect." If further guidance is sought on this matter, Section 3.5.3 of the Guide addresses what the practitioner can do in the absence of defined thresholds (including "acknowledge that there is no threshold, determine the residual effect and its significance, and let the reviewing authority decide if a threshold has been exceeded").

⁷ In the hearing, Dr. Noble responded to a question from Mr. Beddome on this matter, saying (November 15, Page 5002) that the "operational policy statement for cumulative effects assessment at the federal level specifically requires catastrophic events to be considered, like major spills or risks, in good practice cumulative effects" and that "it's an important part of the consideration of cumulative effects." Mr. Hegmann's rebuttal confirms that there is no known support for Dr. Noble's testimony on this matter.

line and the area immediately surrounding other Project components; broader study areas beyond the Local Study Area are considered in the Bipole III EIS for the assessment of VECs as required and appropriate, and vary considerably based on the nature of the cause-effects on VECs. For linear projects such as transmission lines, use of a study area based on a linear corridor is common practice, and is commonly represented by a buffer along each side of the project right-of-way. As such, the use of the Local Study Area in the Bipole III CEA does not necessarily represent a deficiency. In this regard, the Bipole III CEA represents current practice and the Guide supports this view⁸.

**Evidence of G. Hegmann, Feb 18 Rebuttal, Page 2
Exhibit MH-59, Slides 20-21**

10. Regulatory Significance – Following from experience working with First Nation partners on the Keeyask Generation Project EIS, the Bipole III EA and CEA uses the term “regulatory significance” to differentiate the technical and objective standard of significance required to be met by the CEA Act from other non-technical or non-regulatory interpretations, i.e., the CEA Act guides on significance provide that significance determination is an objective exercise and not a question of personal point of view or public opinion. In relation to First Nation concerns in northern Manitoba, it is understood that the regulatory perspective of evaluating environmental effects of the Project that focuses on assessing the effects on certain VECs does not often fit with a holistic or Aski world view. – however, this difference in views has not stopped Manitoba Hydro from filing EISs (e.g., Keeyask Generation Project EIS) for new projects with First Nation partners and having these EISs include basically similar VEC selection, assessment and significance determinations as are provided in the Bipole III Project EIS. The material issues and concerns raised by affected northern Aboriginal communities such as TCN and FLCN are not readily or very appropriately addressed through VEC analysis in effects assessment – this includes issues of lack of trust, lack of involvement and a desire to be heard regarding past experiences with northern development and what has

⁸ The definition of the Local Study Area in the Bipole III EIS did not prevent, where relevant, the assessment of Project effects on a given VEC from extending beyond the Local Study Area into the much broader Project Study Area, e.g., Chapter 9 and response to CEC/MH-VI-347 identify the relevant VECs in this regard (climate, boreal woodland caribou and several socio-economic VECs). Broader regional analysis was also done more recently for moose (and the technical analysis for various VECs also included consideration of context information beyond the Local Study Area). Defining study areas is a matter separate from the type of CEA analysis carried out for a VEC in the defined area on a VEC, and the evidence of Drs. Gunn and Noble on this issue often focuses on a preferred method of analysis such as use of landscape indicators.

been learned. These issues are being addressed by Manitoba Hydro on an ongoing basis through continued dialogue focused on developing an effective relationship with these communities.

Evidence of C. Osler pages 3099-3101 and pages 5824 to 5826.

11. Scoping Future Projects into CEA - Prospective future projects and human activities were defined in the Bipole III CEA as “not yet approved nor in a planning/approvals process preparatory to being constructed/carried out” and are listed in Table 9.2-3. This table includes prospective future transmission projects in southern Manitoba that have recently received a lot of discussion at this CEC hearing, namely the New International Transmission Line and prospect of further development of new transmission lines in southern Manitoba (e.g., Letellier/St. Vital line; St. Vital- LaVerendrye). Each of these projects were in early planning stages at the time the Bipole III EIS was filed and without adequate definition or other information to support any meaningful inclusion in the Bipole III CEA assessment. It was noted in Chapter 9 of the EIS for each of these transmission lines that the project would not occur without comprehensive route selection and environmental impact assessment (which has still yet to occur as at March 2013), extensive public consultation and approval and licensing by the relevant regulatory authorities.

Chapter 9, Table 9.2-3: Prospective Future Projects & Activities

CEC-MH-III-090; CEC-MH-III-091;

Evidence of C Osler, Pages 3216 to 3229

12. Methods used to support regulatory CEA - Although techniques such as the use of landscape or stream crossing indicators and computer based models are not required by the Guide to support a regulatory CEA, in the Bipole III EIS similar techniques were applied where appropriate. For example, technical studies were provided on Habitat Fragmentation, and the recent Supplemental Enhanced Assessment for Moose filed in February 2013 included analysis of linear disturbance on a landscape scale and the use of computer based models, confirming (page 47) that landscape and linear development do not explain moose decline in western Manitoba⁹.

Habitat Fragmentation Technical Report (November 2011)

Enhanced Assessment for Moose (February 2013)

Evidence of G. Hegmann, Feb 18 Rebuttal, Page 3

⁹ The critique by Drs. Gunn and Noble includes recommended studies that Manitoba Hydro does not see to be reasonable in the case of the Bipole III Project CEA, including (by way of example) the recommendation of a full CEA to all water crossings (pages 38 and 45) and wetlands (page 38 and 53-54). In the case of water crossings, the Project complies with strict and highly successful federal requirements such that no federal EIA is required regarding aquatic (fish and fish habitat) impacts due to the commitment to follow Department of Fisheries and Oceans operational statements as summarized in the December 2011 EIS (pages 8-48 to 8-51) and also reflecting the plan to focus construction in such areas during the winter season timing windows (which further minimizes any potential effects). In the case of wetlands, this is not a VEC for this project - for the reason that no material evidence has surfaced to suggest that this Project is likely to have any notable effect on wetlands.