

**Bipole III Transmission Project
Clean Environment Commission Hearing
March 12, 2013**

**Testimony by George Hegmann, Stantec
Regarding the Cumulative Effects Assessment**

Mr. Chairman, I wish this morning to re-state and expand on my main points further to my submission of February 18, *Bipole III Cumulative Effects Assessment: Rebuttal to Gunn and Noble Critique*. I hope this will provide context for my comments, and thereby assist the Manitoba Clean Environment Commission in its continued deliberation of the proposed Bipole III project.

The issue that has brought me here today, and the issue of interest to the Commission, is the adequacy of the cumulative effects assessment, or CEA. Doubts have been raised as to its adequacy based on the Gunn and Noble critique, basing their views on what they consider is acceptable practice on various points of method. And it would appear that certainly a few major points in the critique are generic in nature, that is, they apply to an assessment done anywhere in Canada.

As such, given the sweeping nature of the critique, bringing into question the very fundamentals by which assessments are done, notwithstanding a myriad of technical details within, I feel obliged to respond today by taking an equally broad view to establish what I believe is the appropriate perspective.

My previous written submission provided my point-by-point response on some of the matters raised in the critique. For the record this morning, for the most important of these points, the Bipole III CEA does reflect current practice, does follow a method in alignment with the *Cumulative Effects Assessment Practitioners Guide*, and is not deficient as claimed to the extent it be rejected and completely redone.

So where to begin? I believe an examination of adequacy begs the question from where arises the standard by which such assessments should be conducted, both on the fundamentals and in the many technical details of method? Is it perhaps from a definitive source, or sources, of published government guidance, or perhaps from the precedence of years of assessments accumulated through many public reviews, some such as this, or perhaps is it from the postulations of advocates of good practice from academic research.

Stated differently and plainly, the question to be answered is: what makes a good environmental assessment, which includes cumulative effects assessments, and who says so?

My answer, in the largest sense, is all of the above. The history of assessment practice in Canada, indeed, globally, has followed the same evolutionary path as other examples of public administrative process and applied science; namely, we learn as we go and whenever possible avail ourselves of the opportunity to improve over time and hence advance the practice.

That said, there remains fundamentals that have become well established and have served their purpose well. Some of these fundamentals serve us well because they allow us to pragmatically test the acceptability of project applications subject to legislative provision, in this case environmental assessment Acts, all within a process of public review. They also serve us well because they provide a means by which one may apply data, science and insight to assessing the potential effects of proposed projects interacting with complex natural and human landscapes. These fundamentals therefore help do what all good assessments must do, which is to provide meaningful information to decision makers to help them render their decision on the fate of the project application before them.

The fundamental critique which I now specifically wish to address is the so called use in Bipole III of the “project-centric” approach, within which also lies the concept of the “residual effects trigger”, that term having arisen previously in this hearing. I have this morning chosen to discuss this point from all the matters previously raised regarding the Bipole CEA as this one appears to be the most fundamental and repeated topic of discussion, a common thread, if you will, running through it.

This approach is juxtaposed in the critique against a preferred “ecosystem based” approach reflecting “ambitious scoping”. I am unfamiliar with the term “ambitious scoping”, am unclear as to what it means, and no definition is forthcoming from the critique. I am familiar with the term “ecosystem based scoping”, although it too in both the critique and the literature is poorly defined. Generally, it advocates an expansive approach to scope assessed valued ecosystem components, or VECs, under the supposition that some VECs deserve to be assessed even though there is no or a weak demonstrable effect by the project. In other words, assessed simply because it happens to reside in the region in which the project occurs, and because someone is concerned about the VECs fate. For all its intuitive meaning and potential, much needs however to clarify just what ecosystem based assessment really means when it comes to actually using it in an assessment.

The basics of the project-centric concept are simple, with profound importance in project assessments. In its simplest sense, one assesses things that the project may affect. Technically, we pursue a cause-effects chain of effects on each selected VEC, but in all cases, the project is the starting point, hence the term “project-centric”...the project is the centre of the assessed universe. This is important because, as I previously alluded to, the

purpose of the assessment is to test the merits of the project, typically within a mandate subject to the public interest test. As such, our interest is then what effects that project may cause.

A corollary of this is the following: if the project under review does not affect something, I do not have to assess that thing.

When it then comes to cumulative effects, one pursues an effect on a cumulative basis only for effects on VECs caused by the project. We then look about to see if other human actions may also cause effects on the same VECs, and if so, we now have the basis to explore that effect on a cumulative basis.

Perhaps nowhere is the disparity more evident between these apparent contrasting points of view than the dismissal in the critique of the value of concluding the significance of a project's incremental contribution to cumulative effects, in deference to making a conclusion on overall cumulative effect. Understanding that project contribution is critical to allow one to make judgement on the project's effects and hence its acceptability.

Now what often happens at this point, as a concern expressed by those advocating such expansive approaches as "ecosystem based", are two things: 1) did we miss including an effect, and 2) did we get all the affected VECs in the assessment?

On the first point, did we miss including an effect, the debate revolves around what project effects merit attention on a cumulative basis. Of so much which could be said on this, I'll just say that the effect has to at least be measurable, that is, in some way is discernible amongst the endlessly complex natural and human ecology that surrounds us. And, to lay a related matter to rest, it does not have to be considered significant to be "passed on" to the cumulative effects assessment. On this first point the Bipole CEA follows current practice and follows the *Cumulative Effects Assessment Practitioners Guide*.

On the second point, did we get all the affected VECs in our assessment, the debate revolves around the possibility that things "out there" may have been missed that warrant assessment. This view argues that current practice too narrowly identifies VECs, leaving open the possibility that the assessment paints an effects picture less than may otherwise be justified.

However, the assessment practitioner must, as every assessment must, make a choice of VECs based on clear, reasonable and defensible criteria, the resulting VECs including those that are clearly affected. And some of these may in part be selected because they offer a window, offer insight, into broader effects on other receptors. In short, the job of any assessment is not to assess everything, but to assess everything that can be

reasonably demonstrated to be affected and for which the results provide decision makers with useful information, with insight, into the acceptability of the project. On this second point the Bipole CEA follows current practice and follows the *Cumulative Effects Assessment Practitioners Guide*

I now wish to move on, not by continuing to address each technical point, but to change direction and address what I feel are the two most important issues underlying the critique, issues which frame the context of such reviews. These points often get missed in such discussions, yet must be first understood to understand the way assessments work and the legitimacy of such critiques. These issues have been alluded to so far by others, and so I wish here to make them plain. The *first* is the difference between two types of CEA, one for project applications, the other for research and study. The *second* is the difference between current practice as conducted by practitioners, who do CEAs for regulatory applications, and the views espoused by those who study the art of assessment and wish to improve it.

Regarding the first, a confusion due to lack of clarity has occurred over the years regarding what the words “cumulative effects assessment” are actually referring to at any given moment. The reason for the confusion, which is causing endless trouble for all involved, is that these words have often been used interchangeably to mean two things at the same time. And they cannot.

One of the two versions is CEA done in support of regulatory filing requirements for individual project applications. That is what has brought us here today and to which I have focused my discussion so far. The other is the so called “regional” or “strategic” environmental assessment or study.

This latter version has nothing to do directly with any one project application for regulatory review, and instead examines some regional area within which many things by people may be happening, all to better understand what is happening now and what may be forecast to happen. These regional or strategic environmental assessments enjoy far greater freeboard to examine effects and VECs and many other things, unencumbered by the project-centric process of project assessments and often also enjoying the benefits of more time and a more expansive pursuit of information, data and analysis.

However, and as stated in my previous submission, lack of such ostensible advancements in assessing cumulative effects through such regional studies does not in itself constitute deficiency in a project assessment. And certainly, for such matters of method and analytical option, not to the degree as claimed so as to result in a near complete failure of an assessment in meeting regulatory filing information requirements.

There is great benefit to land and resource use administrators, and to regulators, to wherever possible have *both*, each approach serving different ends through different

means. Examples of this can be found elsewhere in Canada, and as discussed in considerable and useful detail in the academic literature by researchers, including Dr. Noble and Dr. Gunn. It is my longstanding view, supported by a cast of many in that literature, that the assessment of cumulative effects on an individual project-by-project basis benefits both the practitioner and decision maker more if such studies are available and used as a “backdrop” of information onto which one may drape a project’s effects in comparison.

It is also important to point out that, as of yet, no statutory trigger exists that defines when and where such studies are mandated.

Which then brings me to the second issue, that of current practice by practitioners and practice as envisioned by those who seek to improve that practice. In other words, both by practitioners and by theoreticians. What has emerged in Canada is an understandable frustration by the theoreticians, many (but not all by any stretch) working as researchers in academic institutions, regarding how assessments are done. Project assessments are viewed as too narrowly scoped, too weak in supporting data and analysis, and too much following simplistic formulae to the absence of innovation, more detail and the adoption of more expansive, all encompassing approaches. The use of landscape scale models to simulate far pasts and hypothetical far futures are examples of this.

This situation has arisen for a variety of reasons. However, I believe there is one clear driver that emerges as a root cause, reflecting an unresolved tension between the implications of two definitions of purpose of environmental assessments. The first definition is to assess and manage effects of regulated projects. The second is to enable sustainable development. The view by pundits of current practice is that practitioners and proponents place too much emphasis on the first to the minimization or exclusion of the latter, with CEAs representing an opportunity, a common place as the nexus of the two, to pursue larger objectives in support of sustainable development.

These definitions are explicitly expressed in the *Canadian Environmental Assessment Act*, but the notion broadly applies anywhere in Canada through provincial and territorial equivalents, many which were modelled after the federal Act.

This situation is unfortunate. The purpose at least of the federal Act is clear, and it appears *first* in a list of purposes, that the focus of the Act is to assess and manage effects of individual projects subject to provisions of the Act. I would argue that sustainable development, a rather large and commendable purpose, may, amongst many initiatives, be served well by assessments done well. In any event, those in pursuit of the larger ideals of sustainability assume that assessments must commensurately rise to the occasion by equally pursuing ideals to match.

To such critiques however I, as both a practitioner and theoretician (as to which depending on the job at hand), offer the following to this.

Current assessment practice, and to be clear that associated with project regulatory applications, does what it does because it works within what I refer to as the “pragmatic limits of the possible”. Pragmatic speaks to, as all good practitioners do and are the virtues of good assessment, doing everything possible with available data and knowledge, supplemented by new observations within the time available, scoping as broadly as possible but always tied back to the project under review, all the while fully admitting gaps, uncertainties and assumptions.

The limits of the possible speaks to just how far the science, analytical technology and basic human insight and experience can take us, which sometimes is simply not as far as the theoreticians wish, their views based on assessments taking on the vestments of long-term studies more appropriate in the halls of basic scientific research. Often, these limits are simply not recognized or accepted until one actually is immersed into conducting a regulatory application, which I can guarantee once experienced will never leave you ever looking at assessments the same way again.

The *Cumulative Effects Assessment Practitioners Guide* was written specifically as guidance for projects subject to regulatory review, specifically under the provisions of the *Canadian Environmental Assessment Act*, and with a clear focus on a foundation of practice firmly in recognition of the pragmatic limits of the possible.

The limits of the possible must also, for regulatory applications, consider another basis of reasoning than the purely scientific or technical. I refer to a standard of certainty as evidence in support of an application before a regulator. Practitioners must always ensure a variety of qualities exist in this regards to their work, including defensibility, completeness, robustness and accuracy. Practitioners must always ensure that our data, analysis and conclusions reflects these qualities. This stands in contrast to where overly enthusiastic advocates of advancing CEAs wish to go; namely, into the conceptual, the hypothetical, and what I refer to as fictionalizing.

Again, CEAs are viewed as fertile grounds to “play” in the past, present and future, while admirable in introducing notions and possibilities, represent at times too great a risk of not reflecting the very qualities of integrity as a standard of certainty expected by the reviewing authorities themselves to assist them in making their conclusions and recommendations based on supportable evidence.

I also wish to make clear that, in my view, insights from practitioners and theoreticians are *both* required for the practice of assessment to move ahead in the best way possible. What works and does not work, what is possible and is not possible, what simply makes sense and does not, must benefit by the engagement of all involved parties in the place

where practice meets theory. I am aware for example of the good work done by Dr. Gunn and Dr. Noble and others in the academic literature on trying to move assessment practice ahead — and but for my one strong caveat that it at times this must be tempered...but not stalled...by the pragmatic limits of the possible — the world of environmental assessment would be poorer without it.

In conclusion, environmental assessments, being the larger term that includes looking at cumulative effects, are not research studies, although, and they often do, embed likeminded elements, such as recommendations for monitoring. These do as much as can be expected, which is to offset uncertainties by learning more and adaptively evolving as time goes by. That approach follows the original and true definition of the precautionary principle, which states that lack of information should not in of itself be used as an excuse to not make decisions now. Instead, recognised lack of information should be used as the basis to plan for addressing that lack while proceeding with all the care and due diligence the many mechanisms at play offer, many which avail themselves in public review such as the one we are in today.

Thank-you. This concludes my presentation.