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May 13, 2016

Environment and Climate Change Canada
12th Floor, 351 Saint-Joseph Boulevard
Gatineau, QC K1A 0H3
ec.egesa-ughga.ec@canada.ca

To Whom It May Concern:

Re: Request for Extension – Submission of Comments on Draft Upstream GHG Assessment; Enbridge Pipelines Inc. (Enbridge) Line 3 Replacement Program (L3RP)

We represent the Assembly of Manitoba Chiefs in connection with its intervention before the National Energy Board (NEB) concerning Enbridge's L3RP.

AMC was interested to receive your department's draft Upstream GHG Assessment with respect to L3RP.

Part of AMC's position throughout the NEB proceedings was that without a consideration of cumulative effects, including upstream and downstream effects, GHG emissions and climate change, there is little hope of restoring balance to the environment.

Real action on the devastating effects of climate change is squarely within the public interest, in particular when it comes to determining the public necessity and convenience of L3RP.

In order to truly determine whether a project is worthy of a Certificate of Public Convenience and Necessity, upstream and downstream effects of the proposed Project must be addressed.

Given its position throughout the regulatory process, AMC is certainly interested in the opportunity to comment on your department's draft assessment.

The opportunity to comment is coming outside of the NEB process, without any advance notice and without any funding support available to the AMC to consult with the necessary experts. The 30 day comment period presents a significant challenge in allowing AMC to make meaningful and substantive comments and provide necessary input on the draft assessment.

Please consider this letter AMC's request for an extension on the comment period. We would appreciate a further 30 days to provide comments on AMC's behalf.

Yours truly,
<signature removed>

ALLISON FENSKE
ATTORNEY

AF/ab

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May 25, 2016

Environment and Climate Change Canada
12th Floor, 351 Saint-Joseph Boulevard
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ec.egesa-ughga.ec@canada.ca

To Who It May Concern:

Re: Enbridge Pipelines Inc. - Line 3 Replacement Program (L3RP)
Environment and Climate Change Canada (ECCC)
Review of Related Upstream Greenhouse Gas Emissions Estimates
Draft for Public Comments

EXECUTIVE SUMMARY

We are standing at a crossroads respecting the ability of humankind to continue to live comfortably on the surface of our mother the Earth.[1]

A Commitment for Action on Climate Change

- The Assembly of Manitoba Chiefs (AMC) is writing to offer its preliminary comments regarding the draft *Review of Related Upstream Greenhouse Gas Estimates* (the draft ECCC Review) associated with the $7.5 billion dollar Enbridge Line 3 Project (L3RP).[2]

- As caretakers of their ancestral lands, Indigenous people are uniquely positioned to discuss climate change and the protection of the environment.

- Guided by Elders, the AMC has played a significant role in the National Energy Board's (NEB) assessment of a project that will increase Canadian pipeline capacity by 370,000 barrels per day or roughly 9.5% of national daily crude oil production.

- As part of its submissions to the NEB, the AMC provided *The Great Binding Law* which was prepared by a Group of Anishinaabe (Obijbway), Nehetho (Cree) and Dakota Elders. It is attached as Appendix A. *The Great Binding Law* warns us that our relationship with Mother Earth is badly out of balance and that

1 Grand Chief Derek Nepinak, "We are standing at the crossroads – AMC Grand Chief Nepinak." *Net News Ledger*, (March 3, 2016), online at: Net News Ledger <http://www.netnewsledger.com/2016/03/03/65588/>.

2 Enbridge, "Line 3 Replacement Program" (2016) online at: <http://www.enbridge.com/Line3ReplacementProgram.aspx>.

we must take action to protect the environment. It bears close resemblance to the Joint Statement released by Indigenous people during the Climate Change Conference.[3]

- Attached as Appendix B to this commentary is a preliminary report by Dr. Robert Gibson, one of Canada's foremost experts on sustainability assessment, who offers an analysis of the draft ECCC Review within the broader context of Canada's commitment during the Paris Climate Change Conference (the Paris Commitment). Attached as Appendix C to this submission is a report by Dr. Thomas Gunton, a nationally recognized expert on the impact of energy projects. His report sets out a good practice approach to estimating upstream GHG emissions.

- On January 27, 2016, as part of a broader strategic review to "restore confidence in Canada's environmental assessment processes" the Government of Canada announced an interim approach to environmental assessment based on five guiding principles. For projects already under review, Canada indicated that "upstream greenhouse gas emissions linked to the projects under review will be assessed."[4]

- In terms of Indigenous people, the Prime Minister has stated that "there is no relationship more important to me – and to Canada – than the one with First Nations, the Metis Nation and Inuit"[5] The Prime Minister also recently told the world that "Indigenous peoples have known for thousands of years how to care for our planet. The rest of us have a lot to learn and no time to waste."[6]

- As a guiding principle under the interim approach, Canada promised that "Indigenous peoples will be meaningfully consulted, and where appropriate, impacts on their rights and interests will be accommodated."[7] Canada's recent full endorsement of the report of the Truth and Reconciliation Commission that called for the adoption and full implementation of *United Nations Declaration on the Rights of Indigenous People* and Canada's recent full endorsement of the Declaration - represents a commitment for action.[8]

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3 Native News Online Staff , Indigenous Peoples Release Joint Statement to UN Talks in Paris on Climate Change. *Native News Online*, (November 30, 2015), online at: Native News Online <http://nativenewsonline.net/currents/indigenous-peoples-release-joint-statement-to-un-talks-in-paris-on-climate-change/>. [Native News Online]

4 Natural Resources Canada, "Government of Canada Moves to Restore Trust in Environmental Assessment", (January 27, 2016), online at: <http://news.gc.ca/web/article-en.do?nid=1029999>. [Natural Resources Canada]

5 Prime Minister of Canada Justin Trudeau, "Statement by the Prime Minister of Canada after delivering a speech to the Assembly of First Nations Special Chiefs Assembly", (December 8, 2015), online at: - <http://pm.gc.ca/eng/news/2015/12/08/statement-prime-minister-canada-after-delivering-speech-assembly-first-nations#sthash.I4ab7CZf.dpuf>.

6 Bruce Cheadle, COP21: Trudeau Says Climate Change Fight Begins At Home, 'No Time To Waste'. *Huffington Post Politics Canada,* (2015, November 30), online at: Huffington Post <http://www.huffingtonpost.ca/2015/11/30/trudeau-arrives-for-busy-day-of-meetings-as-un-climate-conference-gets-underway_n_8679618.html>.

7 Natural Resources Canada, *supra* note 4.

8 Indigenous and Northern Affairs Canada, "United Nations Declaration on the Rights of Indigenous Peoples", (May 9, 2016), online at: <https://www.aadnc-aandc.gc.ca/eng/1309374407406/1309374458958>. [Indigenous and Northern Affairs Canada]

- In light of the commitment for action and recognition of a "nation to nation relationship",[9] Indigenous governments and people must be a partner in the strategic review rather than being consulted or engaged after the fact.

An Important Precedent under the Interim Approach

- This is the first time since the announcement of the interim approach and guiding principles that Environment and Climate Change Canada (ECCC) has presented an examination of the upstream effects of a project seeking to expand the capacity to transport crude oil.[10] As Dr. Gibson states:

> *The ECCC Line 3 upstream emissions report is the first application of a proposed standard method for addressing upstream emissions for environmental assessment purposes.*[11]

- The precedential value of this project cannot be overemphasized given the reality that:

> *Current pipeline projects including the Line 3 project, that have been proposed to and/or approved by the NEB have a cumulative capacity of over 3.4 MMbbl/d.*[12]

- A rigorous assessment is necessary to begin to restore public trust in the environmental assessment process and to provide an appropriate template for projects still to be considered. This is especially the case given Canada's recent commitment during the Paris Climate Change conference to work with other nations to keep global climate warming to "well below 2°C".[13]

- However, the draft ECCC Review is unlikely to assist in restoring public confidence in environmental assessment. It cannot be relied upon as a sound basis for informed decisions in the post Paris world.

- The draft review's analysis of the incremental effects of L3RP is simplistic, methodologically flawed and tailored to a future that no longer exists. It is inconsistent with modern environmental good practice and the direction of the *Canadian Environmental Assessment Act* (CEA 2012) especially as it concerns cumulative effects.[14]

- At a high level, key flaws of the draft ECCC Review include:

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9 *Ibid.*

10 Natural Resources Canada, *supra* note 4.

11 Appendix B – Dr. Bob Gibson, *Environmental assessment of the Line 3 Replacement project in light of Canadian climate change mitigation obligations: immediate considerations and broader implications*, (2016) at p 2.

12 Environment and Climate Change Canada, "Enbridge Pipelines Inc. - Line 3 Replacement Program Review of Related Upstream Greenhouse Gas Emissions Estimates Draft for Public Comments", (April 25, 2016) at p 15. [ECCC]

13 Prime Minister of Canada Justin Trudeau, "Statement by the Prime Minister of Canada on successful conclusion of Paris Climate Conference", (December 12, 2015), online at: <http://pm.gc.ca/eng/news/2015/12/12/statement-prime-minister-canada-successful-conclusion-paris-climate-conference>: "Together with our international partners, we agreed to strengthen the global response to limit global average temperature rise to well below 2 degrees Celsius as well as pursue efforts to limit the increase to 1.5 degrees."

14 SC 2012, c 19, s 19.

- limitings its analysis to Canadian policy commitments made prior to October 2015 and expressly failing to include consideration of the impacts of Canada's Paris Commitment[15]
- a failure to address the overall upstream cumulative effects of pipeline projects collectively and a mistaken focus on disentangling the incremental effects of L3RP
- an admitted failure, unlike certain other Canadian assessments, to assess the impact of the enhanced capacity of LRP on world oil prices, production and consumption and GhG emissions
- a failure to address indirect upstream effects
- the exclusion of downstream effects
- the omission of Aboriginal Traditional Knowledge (ATK) and Indigenous worldviews

- Perhaps most fundamentally, the ECCC report does not consider whether L3RP makes Canada's ability to meet its celebrated Paris Commitment more vulnerable. It does not answer the compelling question of whether expanding pipeline capacity:

  > *can be justified in a country that has made a commitment to doing its part in keeping global warming to not more than 1.5°C.*[16]

- Despite Canada's Paris Commitment, the draft ECCC Review fails to consider the implications of upstream impacts on prospects for meeting Canada's GHG abatement obligations. The analysis proceeds as if the only relevant upstream question is "whether the project might facilitate an increase in bitumen extraction operations and consequently lead to higher than existing GHG emission levels."[17]

- Viewed in light of the Paris Commitment, facilitating long term continuation of GHG emissions clearly qualifies as a contribution to potentially major adverse effects.[18]

<u>The Honour of the Crown</u>

- The Honour of the Crown is a legal principle that imposes responsibilities and duties on the Federal Government to act fairly and diligently with Indigenous people, promoting their dignity and respect.[19]

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15 ECCC, *supra* note 12 at pp 7 and 8: "The projections do not reflect the impact of additional federal, provincial or territorial measures that were announced since September 2015 or that are still under development."

16 Gibson, *supra* note 11 at p 4.

17 *Ibid.*

18 *Ibid* at p 3.

19 *Taku River Tlingit First Nation v British Columbia (Project Assessment Director)* [2004] SCJ No 69 (SCC) at 24

- The Supreme Court of Canada has recognized that the Honour of the Crown is at stake in all the Federal Government's dealings with Indigenous People.[20]

- Based on recent discussions, the expectation of the AMC is that Canada will be proposing a consultation process related to L3RP that appears to be meaningful. However, it is important to note substantial challenges in the process to date have impeded the ability of the AMC and First Nations to meaningfully engage in the discussion relating to climate change.[21]

- The AMC and other First Nation intervenors were not engaged with in the initial draft ECCC Review. No notice was given that the Review would be filed on April 25, 2016.

- To date, no resources have been provided to the AMC or other First Nation intervenors to assist in responding to the draft ECCC review. Despite the absence of notice and resources, First Nation intervenors have been given only 30 days to respond.[22]

- Given the absence of resources and the shortage of time, the AMC has not been able to seek meaningful guidance from its Elders. All contributions from Western experts and lawyers have been *pro bono*.

- The process undertaken to date does not accord with the Honour of the Crown. It does not represent meaningful realization of a "nation to nation relationship".[23]

- While AMC is not a rights holder with respect to the Crown's section 35 consultation obligations, the process to date does not satisfy the duty to consult and accommodate under s. 35 of *the Constitution Act, 1982*.

Recommendations for the L3RP

- The AMC and other First Nation intervenors should be offered the time and resources necessary to address the climate change implications of the L3RP and other projects on a "nation to nation" basis. It also is necessary to include and attribute equal weight to ATK and Indigenous worldviews. These recommendations are consistent with the Honour of the Crown and Canada's express commitments.

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20 *R v Badger* [1996] 1 SCR 771, para 41

21 Indigenous governments must play a critical role to play in the National Climate Change Framework. However, it is noteworthy that much of the attention surrounding the National Climate Change Framework has focused on the relationship between the Federal, Provincial and Territorial Governments. See Natural Resources Canada, *supra* note 4. Addressing climate change in Canada will require collaboration with Canada's provinces and territories to incorporate greenhouse gas emissions in environmental assessment processes and as part of a national climate change framework. See also *Trudeau, premiers agree to climate plan framework, but no specifics on carbon pricing*, March 3, 2016, http://www.cbc.ca/news/politics/first-ministers-pr...

22 AMC legal counsel has been informed by telephone that while the official date will not be extended submissions may be proferred after May 25, 2016.

23 Indigenous and Northern Affairs Canada, *supra* note 7.

- Without additional climate change analysis, the ECCC Review should not be relied upon to determine the merits of a Certificate of Public Convenience and Necessity

- The initial ECCC Review should be supplemented with a review of the long term implications of the project on efforts to meet Canadian climate change mitigation commitments. That review should include:
    - estimation of the long term cumulative effects of EL3P and other existing and reasonably foreseeable projects and activities on bitumen and other crude oil extraction rates, informed by comparison of a reasonable range of plausible scenarios;

    - assessment of the implications for associated upstream GHG emissions over the anticipated life of the project, in light of best current understanding of the accomplishments needed to meet Canadian GHG abatement commitments, again with comparison of plausible scenarios;

    - identification of possibly effective and reliable means of achieving GHG reduction of associated upstream GHG emissions deeply and timely enough to meet Canadian commitments with assessment of what needs to be put in place to ensure that the identified means will be used and the reductions achieved; and

    - conclusions about whether approving the project would be contribute to, or increase the difficulty of, meeting Canadian climate change abatement commitments, and about the terms and conditions needed in any approval to ensure consistency with meeting the GHG abatement commitments.

- In considering the merits of L3RP and any other similar undertaking, a basic test for approval should be confidence that it would contribute positively to meeting Canada's Paris Commitment.[24]

Recommended Findings for Future Applications

- Impacted First Nations, project proponents, potential investors, proposal reviewers and other stakeholders and decision making authorities need clear anticipatory guidance on how Canada's GHG abatement commitments will affect new project proposals.

- Informed approaches to GHG abatement issues are needed from the outset of planning and assessing new undertakings.

- Adding such considerations at the end of assessment reviews of individual projects is inefficient and unlikely to be adequately effective.

24 Gibson, *supra* note 11 at pp 5 and 6.

- Individual project-centred environmental assessment processes are not ideal venues for exploring and addressing issues of larger strategic importance and application; consideration should be given to the utility of strategic (sectoral) assessments.

- Future guidance from Canada would at a minimum need to provide:

    - the government's best working understanding of the practical implications of its climate change mitigation commitment, overall and for the particular sector involved;

    - appropriate methods of addressing the four issues listed in the previous section.

    - adequate provision for the inclusion of Aboriginal Traditional Knowledge and Indigenous Worldviews.

Recommended Approach for Good Practice GHG Estimates[25]

These recommendations apply to L3RP and future analogous projects:

- Indirect emissions including those generated by the manufacture of equipment, land use changes, consumption of power from the grid and production of other fuels off-site should be included.

- The assumption that any pipeline project being assessed would, if rejected, be replaced by an alternative pipeline or another mode of shipping and therefore cannot be deemed responsible for any increases in incremental production neglects government regulatory authority and fails to give due attention to cumulative effects; it **should not** be used in an analysis meant to estimate effects on upstream GHG emissions.

- The analysis should incorporate the impact of incremental production on global prices and consumption and should not assume that incremental Canadian production has no impact on global prices, global supply and global demand.

- The analysis should include the full life cycle GHG effects (including downstream effects) of incremental Canadian bitumen production and continued Canadian bitumen production beyond levels consistent with meeting the Paris commitment

- The GHG assessment should include an analysis of the impacts of the project on prospects for meeting Canada's GHG emission targets and determine if approval of the project is consistent with Canadian and global GHG targets.

- An expert based stakeholder process should be convened to develop a suitable methodology that addresses deficiencies in the draft document.

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25 Appendix C – Dr. Thomas Gunton, *Evaluation of Proposed Department of Environment and Climate Change Methodology for Estimating Upstream GHG Emissions*, (April 18, 2016) at pp 6 and 7.

Reserving the Right for Further Submissions

- AMC reserves the right to file further and additional submissions.

INTRODUCTION

> *Nature is always giving us signs to bring us messages. Right now, the human beings are behaving out of balance, and Mother Earth is reflecting that imbalance through climate change.*[26]

On behalf of the AMC, we are writing in response to the draft ECCC *Review of Related Upstream Greenhouse Gas Emissions Estimates* related to EL3P. Attached as Appendix A is *The Great Binding Law* prepared by a group of Anishinaabe (Obijbway), Nehetho (Cree) and Dakota Elders during AMC's intervention at the NEB for L3RP. Appendix B to this letter is a preliminary report by Dr. Bob Gibson considering the ECCC Review within the broader context of Canada's Paris Commitment.[27] Attached as Appendix C to this submission is a report by Dr. Thomas Gunton articulating a good practice approach to estimating GHG emissions.[28]

Guided by Elders, the AMC has been an active intervenor before the National Energy Board (NEB) concerning Enbridge's L3RP. It has argued that no determination of whether a project is worthy of a Certificate of Public Convenience and Necessity can be undertaken in the absence of a rigourous review of the cumulative upstream and downstream effects of the proposed Project. This is especially the case given the Paris Commitment to deep reductions in national GHG reductions within the lifetime of the project:

> ***The Great Binding Law*** *speaks to the imbalance the world is in. . . . Climate change is a symptom of that imbalance. Without a consideration of cumulative effects, including upstream and downstream effects, GHG emissions and climate change, there is little hope of restoring balance to the environment.*[29]

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26 Appendix A - Florence Paynter et al, "Ogichi Tibakonigaywin, Kihche'othasowewin, Tako Wakan: The Great Binding Law", Turtle Lodge Gathering 2015 (Sagkeeng, MB: November 28, 2015). [The Great Binding Law]

27 Robert B. Gibson is a professor in the School of Environment, Resources and Sustainability at the University of Waterloo, Canada. He mostly works on environmental policy issues and broader sustainability imperatives. His involvement with environmental assessment law, policy and process issues dates back to the mid 1970s and includes activities in most provinces and all three territories. In recent years, he has focused on integrating sustainability considerations in a diversity of applications including environmental assessments at the project and strategic levels. His second book on sustainability assessment – emphasizing applications and opportunities – is forthcoming from Routledge later this year.

28 Dr. Thomas Gunton is Professor and Director of the Resource and Environmental Planning Program at Simon Fraser University. Dr. Gunton has been an expert witness before the National Energy Board providing evidence on impacts of energy projects and oil and gas markets and has worked as an Assistant Deputy Minister of Energy and Mines and Deputy Minister of Environment. He has published over 80 peer reviewed articles and has been researching impacts of oil and gas pipelines for several decades.

29 Closing Argument of the AMC L3RP, "At the Crossroads: Reconciliation, Renewing Relationships and The Great Binding Law", December 11, 2016, at p 34. [At the Crossroads]

In January 2016, the AMC was pleased to learn of the commitment by the new Federal Government to address the grave risk of climate change and to "review and restore confidence in Canada's environmental assessment processes."[30]

However, the draft ECCC Review is unlikely to assist in restoring public confidence in environmental assessment.

A PRECEDENT SETTING REVIEW

> *Real action on the devastating effects of climate change is squarely within the public interest. . .*[31]

This is an important moment in Canadian regulatory history:

> *In December 2015, Canada and 194 other countries reached the Paris Agreement at the UNFCCC's 21 Conference of the Parties (UNFCCC's COP21). Under this agreement,countries committed to the long-term goal to limit average temperature rise to well below 2°C and pursue efforts to limit the increase to 1.5^{o}C. Under the UNFCCC, Canada committed to a target of reducing emissions 30% below 2005 levels by 2030.*[32]

On January 27, 2016, Canada introduced an interim approach including 5 guiding principles as part of a broader strategy to "restore confidence in Canada's environmental assessment processes." The intent was to "demonstrate to Canadians and the world that a clean environment and a strong economy go hand in hand."[33]

The draft ECC Review is the first examination of the upstream GHG effects of a project seeking to expand the capacity to transport crude oil. It purports to consider the upstream GHG effects of the largest project in Enbridge's history; a $7.5 billion project whose expected lifespan is over 50 years.[34]

The precedential value of the draft review is significant given that:

> *Current pipeline projects including the Line 3 project, that have been proposed to and/or approved by the NEB have a cumulative capacity of over 3.4 MMbbl/d.*[35]

A rigourous assessment is necessary to restore public trust in the environmental assessment process and to provide an appropriate template for projects such as Energy East and TransMountain which are still to be considered.

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30 Natural Resources Canada, *supra* note 4.
31 At the Crossroads, *supra* note 29 at p 34.
32 ECCC, *supra* note 12 at p 15.
33 Natural Resources Canada, *supra* note 4.
34 One would reasonably expect that Companies that expend vast resources in pipeline improvements will seek to recoup profits in the form of contracts with oil refineries and producers for decades to come.
35 ECCC, *supra* note 12 at p 15.

Just as importantly, it must be determined if building new crude oil pipeline capacity fits within the "national climate change framework." This is especially the case given Canada's Paris Commitment to work with other nations to keep global climate warming to "well below 2°C".[36]

Finally, the critical role of Indigenous governments must be recognized as part of the broader collaboration between the Federal Government, provinces and territories to incorporate greenhouse gas emissions in environmental assessment processes and as part of a national climate change framework. For Canada to realize its promise to work with Indigenous governments on a 'nation to nation' basis, Indigenous governments must be full partners in the National Climate Change Framework.[37]

THE REVIEW IS TAILORED TO A FUTURE THAT NO LONGER EXISTS

> *There is no more time for discussion on preventing "climate change". That opportunity has passed. "Climate change" is here. The Air is not the same anymore. The Water is not the same anymore. The Earth is not the same anymore. The Clouds are not the same anymore. The Rain is not the same anymore. The Trees, the Plants, the Animals, Birds, Fish, Insects and all the others are not the same anymore. All that is Sacred in Life is vanishing because of our actions.*[38]

The ECCC Review cannot be relied upon as a sound basis for informed decisions in the post Paris world. Key flaws include:

- limiting its analysis to Canadian policy commitments made prior to October 2015 and expressly failing to include consideration of the impacts of Canada's Paris Commitment
- a failure to address the overall cumulative effects of pipeline projects collectively and a mistaken focus on disentangling the incremental effects of L3RP
- an admitted failure, unlike certain other Canadian assessments, to assess the impact of the enhanced capacity of L3RP on world oil prices, production and consumption and GhG emissions
- a failure to address indirect upstream effects
- the exclusion of downstream effects
- the exclusion of ATK and Indigenous World Views

36 Trudeau, *supra* note 13.

37 Indigenous governments must play a critical role to play in the National Climate Change Framework. However, it is noteworthy that much of the attention surrounding the National Climate Change Framework has focused on the relationship between the Federal, Provincial and Territorial Governments. See for example, *Government of Canada Moves to Restore Trust in Environmental Assessment*, January 27, 2016, hhttp://news.gc.ca/web/article-en.do?nid=1029999 Addressing climate change in Canada will require collaboration with Canada's provinces and territories to incorporate greenhouse gas emissions in environmental assessment processes and as part of a national climate change framework. See also *Trudeau, premiers agree to climate plan framework, but no specifics on carbon pricing*, March 3, 2016, http://www.cbc.ca/news/politics/first-ministers-pr...

38 Native News Online, *supra* note 3.

Failure to Consider the Paris Commitment

> *Certainly we are not yet on the path for the Paris temperature targets.*[39]

Modern good practice environmental assessment must be driven by societal objectives, standards and goals. As Dr. Gunton observes:

> *An essential component of impact assessment is to analyze impacts relative to goals, targets, and thresholds for valued environmental components [VECs] to determine if the impacts are significant.*[40]
>
> *The key issue that must be addressed is whether the approval of a new project is consistent with Canada meeting its national targets.*[41]

Recognizing that the Interim Guiding Principles were introduced with a view to the broader objective of addresssing climate change, the core element of the upstream assessment must be focused on Canada's Paris Commitment. As Dr. Gunton and Dr. Gibson suggest key questions include:

> *. . . what policies and actions are required to ensure that Canada and the world meet their climate change objectives set in Paris to limit the average global temperature increase to 1.5 degrees.*[42]
>
> *whether a replacement crude oils pipeline with expanded throughput capacity . .. .can be justified in a country that has made a commitment to doing its part in keeping global warming to not more than 1.5°C.*[43]

It is clear from the ECCC Review that modelling efforts to understand the implications of commitments similar to that undertaken in Paris already have been undertaken:

> *A common result of modelling efforts to* analyze *a 2 [degree] C world is that overall global crude oil consumption declines relative to the status quo.*[44]

However, the ECCC Review walks away from the most critical element of its analysis citing forecast challenges:

> *Given the difficulties in predicting these variables, the analysis in this report uses a forecast based on the NEB that incorporates current policies and commercialized technologies.*[45]

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39 Thomson Reuters, "7th monthly heat record in row smashed amid Bonn climate meeting" (May 16, 2016) online at: <http://www.cbc.ca/news/technology/temperature-monthly-records-1.3584249>.

40 Gunton, *supra* note 25 at p 6.

41 *Ibid.*

42 *Ibid.*

43 Gibson, *supra* note 11 at p 4.

44 ECCC, *supra* note 12 at p 15.

45 *Ibid* at p 16.

> *The future impacts of existing policies and measures that have been put in place as of September 2015. The projections* ***do not reflect*** *the impact of additional federal, provincial or territorial measures that were announced since September 2015 or that are still under development.*[46] (bolding added)

This is a surprising omission. It underscores the reality that it would be unsafe and unreasonable to rely on the ECCC review for the purposes of determining a Certificate of Public Convenience and Necessity.

An Impoverished Analysis of Cumulative Effects

A constant theme in Canadian environmental assessment over the last twenty years is the importance of focusing on cumulative effects. As Ross observed in 1994:

> *The environmental effects of concern to thinking people are, simply put, not the effects of a particular project; they are* ***the cumulative effects of everything****. Hence, it is essentially logically to address cumulative effects if one wishes to consider the environmental effects of development projects.*[47] ***(bolding added)***

To similar effect today, Sinclair et al conclude that:

> *incisive assessment of cumulative effects is desperately needed to arrest the ongoing decline of so many VECs, and indeed of ecosystems at large.*[48]

Even the much (and legitimately) maligned CEAA 2012 mandates the consideration of cumulative effects:

> 19 (1) The environmental assessment of a designated project **must** take into account the following factors:
> (a) the environmental effects of the designated project, including the environmental effects of malfunctions or accidents that may occur in connection with the designated project and **any cumulative environmental effects that are likely to result from the designated project in combination with other physical activities that have been or will be carried out**; (emphasis added)

While recognizing the critical imperative of CEA, Sinclair et al warn:

> *CEA practice is woefully deficient or simply absent from contemporary decision-making on economic development.*[49]

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46 *Ibid* at pp 7 and 8.

47 W Ross, "Assessing cumulative environmental effects: both impossible and essential", in A Kennedy (ed), *Cumulative effects assessment in Canada: from concept to practice*, 1994 (Calgary AB: Alberta Society of Professional Biologists) at pp 6 and 7. See also P Duinker "Cumulative effects assessment: what's the big deal?" in A Kennedy (ed), *Cumulative effects assessment in Canada: from concept to practice*, 1994 (Calgary AB: Alberta Society of Professional Biologists) at p 15.

48 AJ Sinclair et al, "Looking up, down, and sideways: Reconceiving cumulative effects assessment as a mindset", EnvironImpact Asses Rev (2016) online at: <http://dx.doi.org/10.1016/j.eiar.2016.04.007> at p 10.

49 *Ibid* at p 10.

> *Once assessors enter the underworld of cumulative effects, they most often exit as quickly as possible, hoping that others (e.g., EIS reviewers and decision-makers) will sympathize with their unease and agree that cumulative effects are just too difficult to grapple with in a meaningful way.*[50]

Recognizing this enduring reality, Dr. Gunton concludes that:

> *analysis of GHG impacts of proposed projects must include a broader assessment of the cumulative impacts of proposed projects on Canada's GHG emission targets and global climate change objectives.*[51]

To similar effect, Dr. Gibson recommends:

> *estimation of the long term cumulative effects of EL3P and other existing and reasonably foreseeable projects and activities on bitumen and other crude oil extraction rates, with comparison of plausible scenarios.*[52]

While ECCC recognizes that current proposed and approved pipelines "have a cumulative capacity of over 3.4 Mmbbl/d,"[53] it does not follow the advice of Dr. Gunton and Dr. Gibson. Part B of the draft ECCC Review offers the overly simplistic observation that given:

> *multiple transportation modes available for crude oil,* ***it is possible that a portion of the emissions calculated in Part A would occur with or without the Line 3 project, or, for that matter with or without additional pipeline capacity more generally***.[54] (emphasis added)

Dr. Gunton concludes that the draft ECCC approach "does not address the need for assessing cumulative impacts of project approvals on Canada's GHG objectives and targets."[55] He analytically dismantles the ECCC treatment of alternative transportation projects:

> *Assuming that alternative transportation projects could be built in the absence of the project being assessed is a reasonable assumption.* ***However, the conclusion that this means that the upstream impacts of the project are small to nil is not reasonable. . .*** *each individual project impact assessment will assume no upstream effects because it effectively transfers the effect to other projects under consideration. . . . the fallacy of composition error is based on analyzing each project independently and not assessing the overall cumulative effects of the projects collectively.* [56] (bolding in original)

If this troubling methodology were used to analyze all transportation alternatives, no individual alternative would be found to contribute to an incremental increase in bitumen production or emissions

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50 *Ibid* at p 1.
51 Gunton, *supra* note 25 at p 1.
52 Gibson, *supra* note 11 at p 5.
53 ECCC, *supra* note 12 at p 15.
54 *Ibid* at p 9.
55 Gunton, *supra* note 25 at p 6.
56 *Ibid* at p 3.

and all projects could be approved on those grounds. In each case, the associated upstream effects would be assumed to be attributable to a different project or transportation method.

The whole analysis would be rendered meaningless by assuming away practically all upstream impacts as they are offloaded to a different transportation method that is out of scope.

This flaw is material. As Dr. Gunton concludes:

> *the decision on the viability of alternative energy transportation projects is a key methodological decision that has a large impact on the GHG impact estimate.*[57]

Part B of the draft ECCC review goes on to make an observation at material odds with meaningful cumulative effects analysis:

> *Under this scenario (additional pipelines in addition to Line 3), additional pipeline capacity could enable production growth, and therefore greater upstream GHG emissions relative to the baseline. However, attributing any particular portion of these incremental upstream emissions to the Line 3 project, or any specific pipeline project, would be difficult.*[58]

With respect, this conclusion undermines the essential objective of cumulative effects analysis which is to understand the impact of all current and reasonably foreseeable activities. Dr. Gibson and Dr. Gunton reject this flawed approach:

> *The narrow analysis addresses only the potential effects of the project itself on the possibility of increased upstream GHG emission levels. While the report considers the roles of other pipelines and transportation modes in facilitating expansion of bitumen extraction and associated GHG emissions, the analysis does not include an assessment of the project's contribution to cumulative upstream effects.*[59]

> *The impact assessments for each individual project may appear small relative to Canadian and global GHG emissions, but the cumulative impact of proposed projects will be large and inconsistent with Canadian and global climate change objectives.*[60]

The Choice not to Model Impacts

A number of Canadian studies including the Navius review of the Energy East project for the Ontario Energy Board have sought to model the impact of particular projects on world oil prices, production and emissions.[61]

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57 *Ibid.*
58 ECCC, *supra* note 12 at p 19.
59 Gibson, supra note 11 at p 3.
60 Gunton, *supra* note 25 at p 6.
61 Navius Research, "Discussion Paper: Greenhouse Gas Emissions Resulting from the Energy East Pipeline Project", (January 8, 2015) at p i. [Navius]

The draft ECC review does not adopt this approach. The ECCC estimates that Canada produced an estimated 3.9 million barrels per day (MMbbl/d) of crude oil in 2015.[62] The proposed project would increase pipeline capacity by 370,000 bbl/d. This is almost 9.5% of national crude oil production. Yet, ECCC never tests the impact of the project on global prices, demand and production.

Contrary to good practice GHG assessment techniques, ECCC concedes that:

> *Impacts of the project on oil markets, prices or production were not modelled for this analysis*[63]

Noting that recent reports from Navius as well as Erickson and Lazarus have taken a more robust approach, Dr. Gunton underlines the challenges with the ECCC choice not to model impacts:

> *In this [the Navius and Erickson and Lazarus] approach, incremental Canadian production resulting from the project* ***increases supply*** *which in turn* ***reduces price****. The reduced price increases global consumption and global GHG emissions. This method of incorporating price impacts is* ***more methodologically sound*** *than the assumption that Canadian production and non-Canadian production are substituted for each other with no impact on global price, production or consumption. Therefore the estimate of GHG emissions should incorporate potential price impacts as well as policy constraints such as GHG emission caps in the analysis and not assume that incremental Canadian production has no impact on global oil markets.*[64] (bolding added)

Indirect Upstream Effects are Ignored

The ECCC review acknowledges that the assessment "does not extend to indirect upstream emissions, such as those related to land-use changes and those generated during the production of purchased inputs including equipment, grid electricity and fuels."[65]

No justification is provided for this puzzling exclusion which appears to be analytically unsound and material. The land use changes associated with oil sands mining, deforestation and tailings ponds are well documented. The degradation of forests and wetlands that provide carbon sequestration services is not trivial.

This is especially the case given that exploration companies have committed to restoring the tailings ponds in the future. This endeavour will require expending large amounts of energy to treat the water and reclaim the land to pre-existing conditions.

As noted by Dr. Gunton, the approach of ECCC is inconsistent with the approach of pipeline applicants given that emissions are associated both with grid electricity and purchased input fuels .

> *The proposed methodology states that emissions associated with the manufacture of equipment, land use changes, grid electricity and fuels that are produced elsewhere will be omitted from*

62 ECCC, *supra* note 12 at p 10.
63 *Ibid* at p 2.
64 Gunton, *supra* note 25 at p 5.
65 ECCC, *supra* note 12 at p 4.

> *the analysis. . . . excluding GHG emissions from these associated upstream impacts is* ***unjustified****. . . . GHG emissions generated by incremental grid power consumed by upstream production is clearly a result of the upstream production and will generate incremental GHG emissions that should be included . . .* ***pipeline applicants*** *in estimating GHG impacts of pipelines, which* ***include all the GHG emissions generated by power supplied by the grid to the pipeline*** *. . .* [66] (bolding added)

Exclusion of Downstream Effects

The major proportion of GHG impacts from oil are generated by end use consumption, not extraction.

Good practice GHG assessment includes downstream emissions. Studies have indicated that the largest contributors to pipeline-related GHG emissions are downstream. For example, a GHG emissions study conducted by Navius for Energy East found that upstream emissions account for only 13-26% of total emissions for the proposed project.[67]

It is understood that the downstream effects of Canadian oil production will most likely occur in the U.S. or other parts of the world and will include contributions to global GHG emissions.[68] However, downstream impacts are omitted from the draft ECCC review. The rationale for exclusion appears to be based on international practice in the national attribution of GHG emissions. But it is inconsistent with the objective of impacts assessment.

As noted by Dr. Tom Gunton:

> *The general principle in International Panel on Climate Change (IPCC) analytical framework is to assign GHG emissions to the country in which the emissions are generated. . . . The logic of this approach is that the country in which the emissions are generated has the authority and responsibility for controlling emissions, while the country exporting the oil has no control over how the oil is used and what GHG emissions are generated. [...]*
>
> *While the IPCC logic makes sense for assigning national accountability for GHG emissions,* ***any analysis of GHG impacts of a project should consider the full life cycle GHG impacts of oil production, which include end use consumption****. The downstream impacts of oil consumption could not occur without production and are therefore an impact of production that needs to be included in the analysis. This is the approach used by Navius in their assessment of the GHG impacts of Energy East. Therefore the proposed DECC methodology should be amended to include full life cycle impacts of Canadian oil production in its assessment of GHG impacts. Otherwise the analysis will significantly underestimate GHG impacts from Canadian production.*[69] (bolding added)

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66 Gunton, *supra* note 25 at p 1.

67 Navius, *supra* note 61.

68 The draft ECCC review concludes that PADD III (U.S. Gulf Coast) is the ultimate destination for increased volumes of crude oil transported to the U.S. Midwest

69 Gunton, *supra* note 25 at p 5.

Dr. Gunton's analysis is supported by the guidance of CEA 2012. Section 5 b) iii) of *CEAA 2012* expressly provides that the environmental effects to be taken into account for a designated project include a change that may be caused to the environment that would occur outside Canada.[70]

The Exclusion of Aboriginal Traditional Knowledge and World Views

First Nations people are the Original Peoples of this land. They hold a unique insight into climate change and are particularly vulnerable in terms of its impacts. As noted by AMC Grand Chief Derek Nepinak:

> *We know that the goals of the Paris agreement do not become effective until 2020 and that a sense of urgency must be instilled in current government deliberations respecting climate change. This sense of urgency must be brought by Indigenous communities who are* ***living with the impacts of climate change everyday.*** *In this reality, we must demonstrate leadership and be at the forefront of planning and implementing climate change policy. We can do this because we are the* ***original stewards of this land*** *and governments around the world are* ***looking to indigenous knowledge*** *now to help save ourselves from ourselves.*[71] (bolding added)

Despite this reality, the draft ECCC Review makes no reference to Aboriginal Traditional Knowledge or World Views. It does not suggest that engagement was undertaken with First Nations in preparing the Review.

ATK and Indigenous worldviews cannot be understood as relics of the past as they remain very relevant today. The exclusion of ATK and Indigenous worldviews in the draft ECCC Review would appear inconsistent with the intent of our new Federal Government, emerging trends in scholarly research and guidance from the Canadian Environmental Assessment Agency.

Recently, Prime Minister Trudeau told the world "Indigenous peoples have known for thousands of years how to care for our planet. The rest of us have a lot to learn and no time to waste."[72] According to Trudeau Scholar Aaron Mills,

> *It's becoming part of the orthodoxy of legal education in Canada that Canadian law needs to relate with indigenous legal orders. The centre of the dialogue on that relationship is thus now beginning to shift to how they ought to relate with one another.*[73]

Canadian Environmental Assessment Agency Guidance reinforces the importance of having reference to ATK:

> *ATK is held by the Aboriginal people who live in the area of a proposed project, and who have a long relationship with the lands and resources likely to be affected. As such, the input of ATK into the EA process can assist in an EA in many ways.*[74]

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70 SC 2012, c 19, s 5(b)(iii).
71 Nepinak, *supra* note 1.
72 Cheadle, *supra* note 6.
73 Aaron Mills, *The Lifeworlds of Law: On Revitalizing Indigenous Legal Orders Today*, forthcoming, at p 6.

The Most Fundamental Error

It is clear the ECCC Review presents a fundamentally flawed consideration of the impacts of the project (by itself or cumulatively with other projects) in terms of GHG emissions.

But as Dr. Gibson observes, in light of the Paris Commitment, even a good practice GHG impact assessment fails to address the central question:

> *The compelling question is whether a new pipeline for diluted bitumen can be justified in a country that has made a commitment to doing its part in keeping global warming to not more than 1.5°C. The test for that is clearly not whether the project (by itself or cumulatively with other projects) would facilitate expansion of bitumen extraction and associated emissions. Instead, we need to assess the project's effects on meeting Canada's climate change mitigation commitment:*
>
> - *would the project's effects over its anticipated lifetime be compatible with meeting Canada's GHG abatement commitment?*
> - *would these effects contribute positively to meeting Canadian obligations?*[75]

THE HONOUR OF THE CROWN

> *The threat of climate change is such that the real issue is whether we will survive as a civilization and whether there will even be an economy left to speak of."*[76]

The Honour of the Crown is a legal principle that imposes responsibilities and duties on the Federal Government to act fairly and diligently with Indigenous people, promoting their dignity and respect.[77] The Supreme Court of Canada has recognized that the Honour of the Crown is at stake in all of the Federal Government's dealings with Indigenous People.[78]

Through its interim Principles for environmental assessment, Canada has promised that "Indigenous peoples will be meaningfully consulted, and where appropriate, impacts on their rights and interests will be accommodated."[79]

The Prime Minister has stated that "there is no relationship more important to me – and to Canada – than the one with First Nations, the Metis Nation and Inuit"[80] Canada's recent full endorsement of the report of the Truth and Reconciliation Commission that called for the adoption and full implementation of

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74 Canadian Environmental Assessment Agency, "Reference Guide Considering Aboriginal Traditional Knowledge in Environmental Assessments Conducted under the *Canadian Environmental Assessment Act, 2012*," Canadian Environmental Assessment Agency Policy and Guidance Papers, (March 2015), online at: <https://www.ceaa-acee.gc.ca/default.asp?lang=en&n=C3C7E0D3-1>.

75 Gibson, *supra* note 11 at p 3.

76 APTN National News, "Ottawa's changes to pipeline approval process not enough, say some First Nations", (January 28, 2016) online at: <http://aptn.ca/news/2016/01/28/ottawas-changes-to-pipeline-approval-process-not-enough-say-some-first-nations/>.

77 *Taku River Tlingit First Nation v British Columbia (Project Assessment Director)* [2004] SCJ No 69 (SCC) at p 24.

78 *R v Badger* [1996] 1 SCR 771, at para 41.

79 Natural Resources Canada, *supra* note 4.

80 Trudeau, *supra* note 5.

United Nations Declaration on the Rights of Indigenous People coupled with Canada's recent full endorsement of the Declaration - represents a commitment for action.[81]

Based on recent discussions, the expectation of the AMC is that Canada will be proposing a consultation process related to L3RP that appears to be meaningful. However, it is important to note substantial challenges in the process to date have impeded the ability of the AMC and First Nations to meaningfully engage in the discussion relating to climate change.[82]

The AMC and other First Nation intervenors were not engaged in the initial ECCC Review. No notice was given that the Review would be filed on April 25, 2016.

To date, no resources have been provided to the AMC or other First Nation intervenors to assist in responding to the Draft ECCC review. Despite the absence of notice and resources, First Nation intervenors in the NEB proceeding were given only 30 days to respond.[83]

Given the absence of resources and the shortage of time, the AMC has not been able to seek meaningful guidance from its Elders. All contributions from Western experts and lawyers have been *pro bono*.

The process undertaken to date does not accord with the Honour of the Crown. It does not represent meaningful realization of a "nation to nation relationship".[84]

While AMC is not a rights holder with respect to the Crown's section 35 consultation obligations, the process to date does not satisfy the duty to consult and accommodate under s. 35 of *the Constitution Act, 1982*.

CONCLUSION

Through its Paris Commitment, Canada has acknowledged the risks posed by the grim spectre of climate change. *The Great Binding Law* written by Elders at Turtle Lodge best describes our current imbalance:

> *We cannot continue to disrupt the Natural Laws of life. If even one of us disrespects that Great Binding Law, if affects us all, and it will come back to us. Nature's Laws are self-enforcing. What we put into our circle always returns to our web of life. Mother Earth will have the final say because she is the Mother to us all.*
>
> *Nature is always giving us signs to bring us messages. Right now, the human beings are behaving out of balance, and Mother Earth is reflecting that imbalance through climate change.*

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81 Indigenous and Northern Affairs Canada, *supra* note 8.

82 For example, it is the understanding that while a ministerial panel has been named to engage with communities and Indigenous groups for the TransMountain project, the Enbridge Line 3 will not be receiving a panel of a similar nature.

83 AMC legal counsel has been informed by telephone that while the official date will not be extended submissions may be proferred after May 25, 2016.

84 Canada, Legislative Assembly, House of Commons Debates, 42nd Parl, 1st Session, (12 April 2016) at 2171 (Honourable Jody Wilson-Raybould).

> *Our ancestors prophesized of this time – a time of climate change, a time of crossroads, a time of self-examination, and a time of choice. Our choice is not a choice of words, it is a choice of action. We need to stand strong now in alliance with Mother Earth.*
>
> *We are all in this together. Today, we call on all Nations of the world to join us in the spirit of our Original Instructions to care for Mother Earth together, and find true peace.*

When the potential cumulative effects of L3RP and other expansion projects are considered in light of Canada's Paris Commitment to GHG emission abatement, facilitation of continued extraction and distribution at current levels over the life of the project may appear to be unacceptable. As Dr. Gibson notes:

> *whether acceptability (concerning the upstream effects alone) could be achieved would depend on analyses of what . . . is reasonably certain given demonstrated technological and governance capacities, the effects of firm carbon pricing commitments, and other mandatory requirements and motivations.*[85]

This analysis is not attempted in the ECCC Review.

Based on this reality, the AMC makes the following recommendations:

<u>Recommendations for the L3RP</u>

- The AMC and other First Nation intervenors should be offered the time and resources necessary to address the climate change implications of the L3RP and other projects on a "Nation to Nation" basis. It is also necessary to include and attribute equal weight to ATK and Indigenous worldviews. These recommendations are consistent with the Honour of the Crown and Canada's express commitments

- Without additional climate change analysis, the ECCC Review should not be relied upon to determine the merits of a Certificate of Public Convenience and Necessity

- The initial ECCC Review should be supplemented with a review of the long term implications of the project on efforts to meet Canadian climate change mitigation commitments. That review should include:
    - estimation of the long term cumulative effects of EL3P and other existing and reasonably foreseeable projects and activities on bitumen and other crude oil extraction rates, informed by comparison of a reasonable range of plausible scenarios;
    - assessment of the implications for associated upstream GHG emissions over the anticipated life of the project, in light of best current understanding of the

85 Gibson, supra note 11 at p 4.

accomplishments needed to meet Canadian GHG abatement commitments, again with comparison of plausible scenarios;

- identification of possibly effective and reliable means of achieving GHG reduction of associated upstream GHG emissions deeply and timely enough to meet Canadian commitments with assessment of what needs to be put in place to ensure that the identified means will be used and the reductions achieved; and

- conclusions about whether approving the project would be contribute to, or increase the difficulty of, meeting Canadian climate change abatement commitments, and about the terms and conditions needed in any approval to ensure consistency with meeting the GHG abatement commitments.

- In considering the merits of L3RP and any other similar undertaking, a basic test for approval should be confidence that it would contribute positively to meeting Canada's Paris Commitment.[86]

Recommended Findings for Future Applications

- Impacted First Nations, project proponents, potential investors, proposal reviewers and other stakeholders and decision making authorities need clear anticipatory guidance on how Canada's GHG abatement commitments will affect new project proposals.

- Informed approaches to GHG abatement issues are needed from the outset of planning and assessing new undertakings.

- Adding such considerations at the end of assessment reviews of individual projects is inefficient and unlikely to be adequately effective.

- Individual project-centred environmental assessment processes are not ideal venues for exploring and addressing issues of larger strategic importance and application; consideration should be given to the utility of strategic (sectoral) assessments.

- Future guidance from Canada would at a minimum need to provide:

    - the government's best working understanding of the practical implications of its climate change mitigation commitment, overall and for the particular sector involved;

    - appropriate methods of addressing the four issues listed in the previous section.

    - adequate provision for the inclusion of Aboriginal Traditional Knowledge and Indigenous Worldviews.

86 *Ibid* at p 3.

Recommended Approach for Good Practice GHG Estimates[87]

These recommendations apply to L3RP and future analogous projects:

- Indirect emissions including those generated by the manufacture of equipment, land use changes, consumption of power from the grid and production of other fuels off-site should be included.

- The assumption that any pipeline project being assessed would, if rejected, be replaced by an alternative pipeline or another mode of shipping and therefore cannot be deemed responsible for any increases in incremental production neglects government regulatory authority and fails to give due attention to cumulative effects; it **should not** be used in an analysis meant to estimate effects on upstream GHG emissions.

- The analysis should incorporate the impact of incremental production on global prices and consumption and should not assume that incremental Canadian production has no impact on global prices, global supply and global demand.

- The analysis should include the full life cycle GHG effects (including downstream effects) of incremental Canadian bitumen production and continued Canadian bitumen production beyond levels consistent with meeting the Paris commitment

- The GHG assessment should include an analysis of the impacts of the project on prospects for meeting Canada's GHG emission targets and determine if approval of the project is consistent with Canadian and global GHG targets.

- An expert based stakeholder process should be convened to develop a suitable methodology that addresses deficiencies in the draft document.

Reserving the Right for Further Submissions

AMC reserves the right to file further and additional submissions. Thank you for your consideration of these comments.

Yours truly,

<signature removed>

<signature removed>

BYRON WILLIAMS
DIRECTOR

ALEX NISBET
ARTICLING STUDENT AT LAW

BW/

87 Gunton, *supra* note 25 at pp 6 and 7.

Attachment B

Environmental assessment of the Line 3 Replacement project in light of Canadian climate change mitigation obligations: immediate considerations and broader implications

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24 May 2016

Attachment B

Environmental assessment of the Line 3 Replacement project in light of Canadian climate change mitigation obligations: immediate considerations and broader implications

notes prepared by
Robert B. Gibson
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24 May 2016

The questions at hand

• How adequate is the recently proposed approach to project-related upstream GHG emissions (and other climate change issues within the ambit of federal responsibilities), in Environment and Climate Change Canada's supplementary environmental assessment review of the GHG effects of the Line 3 Replacement pipeline proposed by Enbridge Pipelines Inc.?

• More broadly, how should the Canadian government address climate change implications in environmental assessment reviews and associated decision making on proposed hydrocarbon pipeline proposals now in the approval process and in the future?

• Ultimately, how should the Canadian government address climate change implications in decision making on all new undertakings, including proposed new policies and programs as well as new projects?

The immediate context

• For many years now, hydrocarbon pipeline proposals and approval processes have been a major area of controversy in Canada, and climate change implications have been among the major unresolved issues.

• At the Paris Climate Conference in early December 2015, the Canadian government made a commitment to work with other nations to keep global climate warming to "well below 2ºC".[1] Meeting that commitment entails something approaching elimination of Canadian anthropogenic emissions of greenhouse gases (GHGs), within the next few decades. While the implications of this commitment have not yet been clarified in detailed analysis, they involve some tightening of the common pre-Paris target for relatively advantaged jurisdictions, which was an 80% cut in GHG emissions by 2050 relative to 1990 levels.[2]

1 "Together with our international partners, we agreed to strengthen the global response to limit global average temperature rise to well below 2 degrees Celsius as well as pursue efforts to limit the increase to 1.5 degrees." – Government of Canada, "Statement by the Prime Minister of Canada on successful conclusion of Paris Climate Conference," 12 December 2015, http://pm.gc.ca/eng/news/2015/12/12/statement-prime-minister-canada-successful-conclusion-paris-climate-conference.

2 That target, adopted in, for example, the EU and Ontario, is based on expected needs to limit global warming to 2ºC. Limiting warming to "well below 2ºC" would require earlier

• In January 2016, the federal government announced initial steps to improve attention to climate change effects in project assessment reviews. The announcement introduced a requirement to consider project-related upstream GHG emissions as well as GHG emissions directly linked to the project itself. As well, the announcement tied the new initiative to broader federal/provincial/territorial collaboration on a national climate change framework, including implications for environmental assessment processes.[3]
• In late April 2016, in support of the commitment to address upstream GHG emissions in project assessments, Environment and Climate Change Canada (ECCC), released a draft report estimating upstream GHG emissions related to the Line 3 Replacement pipeline project proposed by Enbridge Pipelines Inc.[4] The Canadian portion of the Line 3 Replacement project would move crude oils (of several types, mostly originating from bitumen mining or in-situ extraction) from Hardisty, Alberta, to Gretna, Manitoba, and be combined with replacement of Line 3 portions in the United States. The net effect would be a substantial increase in effective throughput capacity of Line 3 for shipping Canadian crude oils to markets including refineries in the US Gulf Coast.[5]

The draft ECCC Line 3 upstream emissions report is the first application of a proposed standard method for addressing upstream emissions for environmental assessment purposes.[6] Following this method, the draft ECCC report focuses on whether proceeding with the project would facilitate an increase in Alberta production, assumed to be mostly from expansion of in-situ or mined bitumen extraction, and consequent expansion of GHG emissions.[7]

and bigger accomplishments.

3 Government of Canada, "Government of Canada Moves to Restore Trust in Environmental Assessment," news release 27 January 2016, http://news.gc.ca/web/article-en.do?mthd=index&crtr.page=1&nid=1029999.

4 Environment and Climate Change Canada (ECCC), "Enbridge Pipelines Inc. - Line 3 Replacement Program: Review of Related Upstream Greenhouse Gas Emissions Estimates," Draft for Public Comments, 25 April 2016, http://www.ceaa-acee.gc.ca/050/document-eng.cfm?document=114134.

5 The ECCC Line 3 Replacement upstream analysis is based on a throughput increase of 370,000 barrels per day (p.3).

6 ECCC, "Estimating upstream GHG emissions," *Canada Gazette* 150(12) 19 March 2016, http://www.gazette.gc.ca/rp-pr/p1/2016/2016-03-19/html/notice-avis-eng.php. In the introduction to the announcement, ECCC notes that it "… intends to use this methodology to fulfill its responsibilities to conduct these assessments as announced by the Government on January 27, 2016."

7 The ECCC Line 3 Replacement upstream analysis assumes bitumen extraction sources for additional throughput: "Given that most production growth will be comprised of bitumen, crude oil transported on any additional pipeline capacity in the future will likely be largely comprised of diluted bitumen (dilbit) blends from Western Canada.:"Given that most production growth will be comprised of bitumen, crude oil transported on any additional pipeline capacity in the future will likely be largely comprised of diluted bitumen (dilbit) blends from Western Canada. This conclusion informs the discussion throughout Part B." (p.10)

Despite the recently renewed and deepened climate change commitments, the draft ECCC report does not consider upstream implications for GHG abatement obligations over the coming decades. On the contrary, the analysis proceeds as if the only relevant upstream question were whether and to what extent the project might facilitate an increase in Canadian oil production, including from bitumen extraction operations and consequently lead to higher than existing GHG emission levels.

The narrow analysis addresses only the potential effects of the project itself on the possibility of increased upstream GHG emission levels. While the report considers the roles of other pipelines and transportation modes in facilitating expansion of oil and bitumen extraction and associated GHG emissions, the analysis does not include an assessment of the project's contribution to cumulative upstream effects.

The evident deficiency of the upstream analysis

At a time when GHG emission abatement and economic decarbonization are key national as well as global imperatives, environmental assessment and associated decision making clearly ought to give these matters close attention. The relevant questions include how current and future abatement and decarbonization efforts might be affected by the proposed project itself and in cumulative combination with other activities.

In any such assessment, the needed analysis should attempt to answer two key questions:

- would the project individually and through cumulative effects help to perpetuate current levels of upstream GHG emissions over time; and
- more broadly, would the project help to extend current reliance on the fossil fuel economy and its dependent components.

A positive answer to either of these two questions would establish likelihood of significant adverse effects.

The relevant period for assessment extends beyond the assumed deadline for near elimination of net anthropogenic GHG emissions in Canada to include the reasonable lifetime of the project. The replacement pipeline would be a very long lasting structure offering relatively low cost transportation for crude oils. The draft ECCC report recognizes that the relatively low cost of pipeline transportation for mining and in-situ bitumen extraction operations could make some marginal extraction operations profitable in certain scenarios for future oil prices. But the draft report does not consider the effects of the long term availability of relatively inexpensive transport on transition to a non-fossil future.

Those effects are likely to be complex and influenced by a multitude of factors. But the effects might well make meeting GHG abatement commitments much more difficult. For bitumen producers, an available pipeline would facilitate long term extraction. For the pipeline owners, the large sunk costs and relatively modest operating costs of a pipeline would provide strong incentives to keep the pipeline filled and operating for as many decades as possible and to delay the pipeline's fate as a stranded asset. All the commercial and other relationships surrounding the pipeline and the associated production and consumption would add to dependencies on the fossil path and encourage resistance to transition to other paths.

Even within its very narrow focus, the analysis and embedded assumptions in the ECCC report may well be open to debate. But the fundamental problem is that the

analysis misses the implications for meeting GHG abatement commitments, and that is the main point for climate change purposes.

What is needed to assess the upstream climate change implications of the proposed Line 3 Replacement project

The compelling question in this case is whether a replacement crude oils pipeline with expanded throughput capacity can be justified in a country that has made a commitment to doing its part in keeping global warming to not more than 1.5ºC. The test for that is clearly not whether the project (by itself or cumulatively with other projects) would facilitate expansion of bitumen extraction and associated emissions. Instead, we need to assess the project's effects on meeting Canada's climate change mitigation commitment:

- would the project's effects over its anticipated lifetime be compatible with meeting Canada's GHG abatement commitment?
- would these effects contribute positively to meeting Canadian obligations?

For the proposed Line 3 Replacement project and for any other such undertaking, a basic test for approval should be grounds for confidence that it would contribute positively to meeting Canadian obligations. The design objective should be to maximize these contributions beyond the minimum necessary to meet present commitments.

The ECCC's draft upstream analysis indicates that if approved, the proposed pipeline itself would at least facilitate continued bitumen extraction and eventual combustion, potentially for another 50-100 years. In combination with other existing and anticipated projects, Line 3 Replacement would support and serve increased bitumen extraction and distribution.

Considered in light of Canadian commitments to GHG emission abatement, facilitation even of merely continued bitumen extraction and distribution at current levels over the life of the project would appear to be unacceptable given current GHG emissions attributable to mining and in-situ operations.

Whether acceptability (concerning the upstream effects alone) could be achieved would depend on analyses of what abatement of extraction and other pre-transportation GHGs is reasonably certain given demonstrated technological and governance capacities, the effects of firm carbon pricing commitments, and other mandatory requirements and motivations. Such analyses are not provided in the draft ECCC report and are not otherwise at hand.

The potential acceptability of anticipated upstream emission effects would rely, for example, on firm grounds for confidence that the associated GHG emissions would be effectively eliminated by carbon capture and permanent storage and/or other mechanisms put in place soon enough to meet a prudent schedule for satisfying Canadian GHG abatement obligations.

More generally, satisfactory evidence for upstream emissions acceptability for the cumulative effects of any combination of the currently proposed pipelines would rest on evidence that the project and its context of surrounding law, economics and technology, etc., would serve reliably in a limited transitional role contributing to Canada's prospects for eliminating almost all of its anthropogenic GHG emissions by 2050 (see the discussion below concerning the GHG abatement target and deadline for Canada).

No such evidence is available in or suggested by the draft ECCC report.

Immediate responses for the Line 3 Replacement case

The needs outlined above should be no great surprise to the proponents, decision makers and other players in environmental assessments in Canada. The essentials of climate change science findings concerning the consequences of inadequate GHG emission abatement have been well established for many years. While the consequential requirements for ambitious GHG abatement efforts may not yet be well defined, the broad parameters have long been clear enough to support substantive obligations to address GHG abatement in environmental assessments – especially in applications that involve major long-lasting infrastructure.

Despite variations in scope and ambition, all environmental assessment laws retain responsibilities for attention to potentially major adverse effects. Facilitating long term continuation of GHG emissions qualifies as a contribution to potentially major adverse effects.

How best to ensure appropriate assessment of these effects, the potential for mitigation, and the implications for project approval, rejection and/or conditions remains complex. In environmental assessments, the burden of argument mostly falls on the proponent of the undertaking to make the case for approval. Process administrators and government decision makers have accepted responsibility to provide guidance on some questions of broad application. On many matters of strategic importance, however, no authoritative guidance has been provided. Project proponents and review bodies and other assessment participants are then left to address the issues as well as they can within the confines of a project-focused environmental assessment process.[8]

In the case of the Line 3 Replacement, the National Energy Board report largely ignores GHG issues[9] and the draft ECCC analysis provided as a supplement to the NEB report considers upstream GHG effects without attention to abatement needs.

At this stage, the federal government could and should rework the initial ECCC upstream emissions analysis with more reasonable assumptions and objectives. The analysis should emphasize assessment of the long term implications of the project for efforts to meet Canadian climate change mitigation commitments. The reworked review should include the following four components:

- estimation of the long term cumulative effects of Line 3 Replacement and other existing and reasonably foreseeable projects and activities on bitumen and other crude oil extraction rates, informed by comparison of a reasonable range of plausible scenarios;
- assessment of the implications for associated upstream GHG emissions over the anticipated life of the project, in light of best current understanding of the accomplishments needed to meet Canadian GHG abatement commitments, again including attention to cumulative effects and with comparison of plausible

8 This has led to increasing demands for effective strategic level assessments designed to guide project-level processes. See Robert B. Gibson, Hugh Benevides, Meinhard Doelle and Denis Kirchhoff. "Strengthening strategic environmental assessment in Canada: an evaluation of three basic options," *Journal of Environmental Law and Practice,* 20:3 (2010), pp.175-211.

9 National Energy Board, National Energy Board Report – Enbridge Pipelines Inc OH-002-2015, Volumes I and II, Calgary: April 2016, https://docs.neb-one.gc.ca/ll-eng/llisapi.dll?func=ll&objId=2949686&objAction=browse.

scenarios;

- identification of possibly effective and reliable means of achieving GHG reduction of associated upstream GHG emissions deeply and timely enough to meet Canadian commitments, with assessment of what needs to be put in place to ensure that the identified means will be used and the reductions achieved; and
- conclusions about whether approving the project would contribute to, or increase the difficulty of, meeting Canadian climate change abatement commitments, and about the terms and conditions needed in any approval to ensure consistency with meeting the GHG abatement commitments.

In the absence of such a reworking of the analysis, the issues remain – to be addressed by the participants in the remaining part of the Line 3 Replacement public process, and by the government in reaching a decision on the case.

The government may choose to ignore the four issues listed above. But without serious public responses to all four, no approval of the proposed project is potentially justifiable and no rejection is likely to be adequately understood.

Guidance for subsequent cases

Fundamentally identical issues remain for the deliberations on the proposed Trans Mountain and Energy East pipelines for transporting bitumen and other crude oils. Attention to these issues is logically required under the federal government's interim approach to improving environmental assessment process credibility, including the requirements to consider project-linked upstream as well as direct greenhouse gas emissions.[10]

Using the supplemental analysis approach adopted in the Line 3 Replacement case would be more useful in these further cases if equivalents of the broader analysis suggested above are provided. However, the issues merit more timely recognition than they can get in post-review addenda.

Informed approaches to GHG abatement issues are needed from the outset of planning and assessing new undertakings. Adding such considerations at the end of assessment reviews of individual project proposals is inefficient and unlikely to be adequately effective. Also, individual project-centred environmental assessment processes are not ideal venues for exploring and addressing issues of larger strategic importance and application.

Project proponents, potential investors, proposal reviewers and other stakeholders and decision making authorities need clear anticipatory guidance on how Canada's GHG abatement commitments will affect new project proposals. That guidance would at minimum need to provide

- the government's best working understanding of the practical implications of its climate change mitigation commitment, overall and for the particular sector involved; and
- appropriate methods of addressing the four components listed in the section above.

Associated considerations from the bigger picture:

(i) *The overall GHG abatement target and deadline for Canada*

10 See footnote 3.

• The precise Canadian contribution needed to meet our responsibilities for limiting climate change to keep overall climate warming "well below 2ºC" is not easily determined. It involves questions not only about what is necessary globally but also about what is the fair distribution of abatement responsibility given different levels of capacity and culpability. Nevertheless, it is clear that the common earlier target of an 80% cut in GHG emissions by 2050 relative to 1990 levels is insufficient to meet the "well below 2ºC" objective. Moreover, it was always only an interim target on the road to net elimination of nearly all anthropogenic GHG emissions. For working purposes, a roughly 90-95% cut from 1990 levels would seem to be needed by 2050 or shortly thereafter.
• Canada has repeatedly set and failed to meet its targets for GHG emission abatement. Canada's interim commitment under the 2009 Copenhagen Accord was to reduce its emissions by 17% from 2005 levels by 2020. Environment Canada projected in 2014 that the target would be missed by a wide margin.[11]
• Since May 2015, the Canadian target has been to reduce GHG emissions to 30% below 2005 levels by 2030.[12] Meeting that modest target too would require significant new GHG abatement initiatives and would have to be followed by much more substantial abatement in the following 20 years.

(ii) *Staged interim abatement targets and deadlines*
• Incentives to delay action on climate change are powerful. Immediate objectives seem more tangible and pressing. Established practices and pathways are more convenient. For effective climate change mitigation, clear presentation of the implications, the extent of changes needed, and why they must begin now is crucial. So are emphases on the positive opportunities involved.
• Actions to achieve GHG emission reduction and elimination are much more likely to be undertaken if credibly serious staged deadlines are set with enough lead times to guide immediate as well as far-sighted policies and investments.
• Ensuring the deadlines are "credibly serious" is essential. This seriousness must be demonstrated in the short term to establish the plausibility of longer term reliability for planning and investment purposes.
• Long lead times for significant transitions are perhaps always necessary. They are especially crucial where

- the existing infrastructure or technology stock is capital intensive and long lived (e.g., housing and pipelines);
- existing practices (e.g., as represented by fossil energy systems) are widely linked to other dependent or interdependent activities (e.g., extensive supporting infrastructure and combustion based technologies);
- the transitions require technological and/or institutional innovations that are likely to depend on extensive and uncertain development, testing and adjustment of new capacities (e.g., replacement of fossil-based industrial processes, transport electrification and supporting power grids);

11 Environment Canada, *Canada's Emission Trends 2014,* Ottawa, Canada, 2014, https://ec.gc.ca/ges-ghg/default.asp?lang=En&n=E0533893-1&offset=1&toc=show
12 Government of Canada, "Government of Canada announces 2030 emissions target," 15 May 2015, http://news.gc.ca/web/article-en.do?nid=974959

- key components of the alternative systems (e.g., biofuels, carbon capture and storage, batteries) are not yet available, or at least not yet proven or affordable at scale or for all the anticipated applications;
- significant inequity concerns already exist, may be introduced and/or may be exacerbated (e.g., by pushing for more hydropower projects on Aboriginal lands).

• The selection of incremental interim and ultimate targets and deadlines must be credible in process as well as substance, but working GHG abatement deadlines are needed now. Transitions with long lead times become more difficult and costly with each year of delay.

(iii) Questions illustrating immediate needs for clear guidance for project planning and investment, environmental assessment and associated decision making

• What initial carbon price and rate of incremental increase must be established now to guide planning and investment decisions about undertakings that generate or facilitate GHG emissions?

• What rules do we need to put in place now for environmental assessments and other evaluations and decision making on proposals to permit new projects that would generate and/or facilitate continued GHG emissions for decades to come?

• What are the dates by which we must
- stop opening new offshore areas to hydrocarbon drilling,
- stop issuing drilling permits,
- stop approving new coal mines and oil/gas extraction projects,
- stop permitting new pipelines or other long term hydrocarbon infrastructure,

where the new undertakings are not accompanied by firm arrangements for full abatement of their lifecycle GHG emissions?

• What are the dates for completion of each key stage in the processes for
- converting public and private transport from fossil fuels to non-fossil sources?
- converting residential and commercial/institutional heating and cooling to non-fossil energy sources (e.g., geothermal, solar)?
- converting electricity generation to non-fossil sources?
- converting industrial energy demands (e.g., in the metals, chemicals and cement sectors) from fossil to other energy or feedstock sources?

• When do non-fossil energy and other alternatives need to be in place for transportation, heating/cooling, electric power generation, etc., and what steps are needed to accomplish the transition in time?

(iv) Integrating GHG emission abatement with other crucial imperatives

• Climate change is not the only threat to future wellbeing or the only area offering big opportunities for improvements. Even if greenhouse gases were entirely benign, we would still be heading into ever deeper unsustainability because of other excessive demands on the capacities of ecological and socio-ecological systems (for resources, waste sink capacities and accommodation of disturbance), and because continuing and increasingly dangerous inequities (most of the benefits from the growing pressures on the biosphere go to those already advantaged while well over a billion people suffer from serious material deficiencies). The transitions needed for climate change mitigation must

therefore also serve more broadly to reduce pressures on the biosphere, enhance equity and address other positive requirements and opportunities for progress towards sustainability.

- Many actions needed for climate change mitigation are needed also for other reasons. Many notable steps already taken have been driven by non-climate imperatives (e.g., in urban planning, the shift from car-oriented urban sprawl to transit-friendly urban density is beneficial for climate change reasons but has driven mostly by the rising costs of servicing and commuting in low density urban regions facing growth pressures).
- GHG abatement requirements must be planned to complement broader sustainability initiatives and to avoid invidious trade-offs (e.g. pursuit of low carbon pathways that raise other significant risks and burdens for future generations).

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Evaluation of Proposed Department of Environment and Climate Change Methodology for Estimating Upstream GHG Emissions

Prepared by Dr. Thomas Gunton
April 18, 2016

On March 19, 2016, the Canada Department of Environment and Climate Change (DECC) released its proposed methodology for estimating upstream GHG impacts for major oil and gas projects. The purpose of this review is to provide comments on the proposed methodology.

This evaluation concludes that while the proposed methodology for including upstream GHG impact assessment in project reviews is an improvement in the review process, the proposed methodology has serious deficiencies that need to be addressed. Further, the analysis of GHG impacts of proposed projects must include a broader assessment of the cumulative impacts of proposed projects on Canada's GHG emission targets and global climate change objectives.

The evaluation is organized under the following two components of the proposed methodology: a. methodology for estimating upstream GHG emissions; b. discussion of the impacts on Canadian and global GHG emissions.

Methodology for Estimating Upstream GHG Emissions

The DECC methodology proposes estimating upstream GHG emissions by product type to reflect the different product GHG emission intensities per unit of product shipped. The methodology proposes testing alternative scenarios to reflect the range of uncertainty in potential product shipments. It is important that these scenarios be cross checked against upstream production forecasts by product type to ensure consistency. Shippers have discretion which products to ship based on aggregate product availability and product economics. Therefore, the aggregate production forecasts are a better indicator of what will be shipped than specific forecasts provided by individual project proponents.

The proposed methodology states that emissions associated with the manufacture of equipment, land use changes, grid electricity and fuels that are produced elsewhere will be omitted from the analysis. No rationale is provided for this in the documentation and the case for excluding GHG emissions from these associated upstream impacts is unjustified. All incremental impacts resulting from the production of upstream activities should be included in the estimates. For example, GHG emissions generated by incremental grid power consumed by upstream production is clearly a result of the upstream production and will generate incremental GHG emissions that should be included (by the same token energy produced by the activity that is sold back into the grid should be excluded as an impact of the project). This is the approach used by the pipeline applicants in estimating GHG impacts of pipelines, which include all the GHG emissions generated by power supplied by the grid to the pipeline (TM 2013). This is also the approach used in the GHGenius model that was developed by S&T Squared

Consultants Inc. under contract to Natural Resources Canada and used by the Pembina Institute in their estimate of upstream GHG emissions generated by Energy East (Flanagan and Demerse 2014).

Discussion of the Impacts on Canadian and Global Upstream Emissions

The second component of the DECC methodology assesses the Canadian and global GHG impacts of the project. The proposed method identifies three steps in this analysis: a. examine resource production scenarios with and without the project; b. identify alternative transportation projects that may be built in the absence of the project and; c. assess impacts of a and b on Canadian and global GHG emissions.

Assessing impacts on Canadian and global GHG emissions from upstream production is the most controversial and problematic part of the impact analysis. As the following Table 1 summarizing alternative estimates of GHG from the Northern Gateway, Keystone XL and Energy East Pipelines illustrates, different assumptions can have dramatic impacts on the results, with estimated impacts ranging from very large to almost nil for the same project. Alternative estimates of annual GHG impacts of Energy East, for example, range from .7 to 32 MT/year and the Northern Gateway range from 3.7 to 76.3 MT/year. Three key issues account for the wide variation in results: estimating the impact of the project on Canadian production, estimating the impact of the project on global production, and treatment of downstream impacts.

Table 1. GHG Emission Estimates of Pipelines

Pipeline	GHG Estimates Range MT/year	Studies
Northern Gateway	3.7 to 76.3	Gunton and Broadbent (2012)
Keystone XL	1.3 to 27.4	USDS (2014)
Keystone XL	100 to 110	Erickson and Lazarus (2014)
Energy East	30-32	Flanagan and Demerse (2014)
Energy East	.7 to 17	Navius (2015)

Impact of Project on Canadian Production

A key issue is the assumption of what will happen to Canadian oil production if the project is not built. Low estimates of GHG impacts are based on the assumption that if the project is not built, other pipeline and/or rail projects will be constructed that will transport the product to market and therefore production will be the same or close to the same with and without the project. This is the approach used by the US State Department (2014) and Forest and Brady (2013) in their analysis of Keystone XL and by Navius (2015) in their analysis of Energy East. These lower estimates sometimes include some adjustment for transportation cost differences that can have small impacts on production forecasts. For example, the US State Department analysis of Keystone XL assumes that in the absence of Keystone XL, rail shipments will be used to transport the oil to market

(USDS 2014). But because the analysis assumes that rail shipments can be more expensive than pipeline shipments, the higher cost of rail could constrain high cost marginal production of oil, especially if oil prices are weak. The State Department conclusion is that building Keystone XL could therefore result in a slight increase in Canadian production and GHG emissions.

Other studies are based on the assumption that if the project is not built, the oil that would have been shipped on the project cannot be shipped on economically viable alternative transportation projects. Rail may be too expensive or capacity constrained and alternative pipeline projects may not be built. Pembina Institute uses this assumption in their analysis of the impacts of Energy East (Flanagan and Demerse 2014). Based on this assumption, all the oil shipped on Energy East is assumed to be incremental production and the GHG impacts of the project are therefore significantly higher than those forecast by Navius (2015).

As the range in estimates of the impacts of Energy East illustrate, the decision on the viability of alternative energy transportation projects is a key methodological decision that has a large impact on the GHG impact estimate. Unfortunately the proposed DECC methodology does not provide clear guidance on this issue. The DECC methodology appears to favour the approach that assumes no to little change in production by referencing the need to assess the impact of alternative transportation projects that will be built if the project under review is not constructed.

Assuming that alternative transportation projects could be built in the absence of the project being assessed is a reasonable assumption. **However, the conclusion that this means that the upstream impacts of the project are small to nil is not reasonable**. The logical conclusion of this approach is that no transportation project will ever result in incremental production because there is always an alternative means of transportation available. Therefore each individual project impact assessment will assume no upstream effects because it effectively transfers the effect to other projects under consideration. The aggregate result from all the individual assessments is that there is no increase in Canadian production and no increase in GHG emissions from building transportation projects. This conclusion is however clearly false because if **none** of the projects are built, it is not possible to transport the product to market and without being able to transport the product, Canadian production and GHG emissions will be lower. This fallacy of composition error is based on analyzing each project independently and not assessing the overall cumulative effects of the projects collectively.

There are several ways of avoiding this error. One approach is to use a cumulative impact assessment methodology that estimates the collective impact of all potential transportation projects on Canadian production, compared with a scenario in which no new projects are constructed. There are different approaches to conducting this type of cumulative impact assessment. For example, several different scenarios of potential projects can be used to reflect uncertainty regarding the actual mix of projects that may be built. The incremental production resulting from these incremental transportation options would be similar to current forecasts of Canadian oil production in an

unconstrained transportation system. If no new projects are built, oil production would be capped at current transportation capacity. If estimates are required for individual projects, the incremental oil production forecast could be allocated based on the capacity of individual projects. Further adjustments could be made in allocation among projects to reflect differences in costs and markets.

Another and simpler approach would be to compare two scenarios: scenario one would cap upstream production at existing transportation capacity and scenario two would cap upstream production at existing capacity plus the capacity of the new project being assessed[1]. Capacity constraints could then be compared to production forecasts and all production that is in excess of existing capacity would be incremental production induced by the new project. If, for example, existing transportation capacity was being fully utilized, all shipments on the new project would be incremental production attributed to the new project. This type of approach is used, for example, in the Pembina study of Energy East (Flanagan and Demerse 2014), which assumes that all shipments would be incremental production.

Although more work would be helpful to define the specific structure of a cumulative impact assessment approach, using this approach is essential to correctly assess the upstream GHG impacts of transportation projects. If this approach is not used and it is assumed that the project being reviewed will have little to no impact on Canadian production because it will be replaced by alternative projects, the upstream GHG impacts of the oil production will be incorrectly assumed to be nil or close to nil.

Impacts of Project on Global Oil Production

The DECC proposed methodology references the need to assess global impacts of proposed projects and suggests that the primary impact on global GHG emissions will be the difference in upstream emissions intensity between Canadian and non-Canadian crude oil.

Estimating the impact of a proposed project on global GHG emissions is perhaps the most problematic component of the analysis due to the complexities of world oil market dynamics. One assumption is that lower production in Canada resulting from the project not being built will be replaced by increased production elsewhere in the world, with little to no change in global production. Under this assumption, the change in GHG emissions is the difference in emission intensity of Canadian production relative to the substitute production. This is the approach used by the US State Department in its analysis of Keystone XL in which they assume that if Keystone XL is built, incremental Canadian oil imports to the US would displace oil imported from other jurisdictions and the GHG impacts would be the product of the difference in emission intensity of the Canadian oil relative to the substitutes times the quantity displaced by Canadian imports (USDS 2014). As stated above, this is the approach referenced in the DECC methodology.

[1] Capacity should be based on operational capacity, which may vary from nameplate capacity.

Other studies (Navius 2015; Erickson and Lazarus 2014) incorporate the impact of the proposed project on world oil prices, production and consumption. In this approach, incremental Canadian production resulting from the project increases supply which in turn reduces price. The reduced price increases global consumption and global GHG emissions. This method of incorporating price impacts is more methodologically sound than the assumption that Canadian production and non-Canadian production are substituted for each other with no impact on global price, production or consumption. Therefore the estimate of GHG emissions should incorporate potential price impacts as well as policy constraints such as GHG emission caps in the analysis and not assume that incremental Canadian production has no impact on global oil markets. Further, given that oil is a non-renewable resource with a fixed supply, the assumption that foregone Canadian production can always be replaced by production elsewhere is dubious. Over the long run the world's oil will become increasingly expensive as supply is used up and it will become increasingly difficult to replace foregone Canadian production.

Upstream and Downstream Impacts

The major proportion of GHG impacts from oil are generated by end use consumption, not extraction. Estimates for Canadian SAGD, for example, conclude that upstream activities account for about only 10% of total GHG emissions (IHS CERA 2010). The GHG impact assessment by Navius (2015) estimates that upstream emissions account for only 13-26% of the total GHG emissions from Energy East. Therefore the decision on whether to include the full life cycle GHG emissions from oil production or restrict the analysis to just the extraction emissions will have a significant impact on the GHG estimates.

The general principle in International Panel on Climate Change (IPCC) analytical framework is to assign GHG emissions to the country in which the emissions are generated. Under this approach, all downstream end use emissions from consumption of Canadian oil are attributed to the country in which the consumption occurs. The logic of this approach is that the country in which the emissions are generated has the authority and responsibility for controlling emissions, while the country exporting the oil has no control over how the oil is used and what GHG emissions are generated. The proposed DECC methodology follows this convention by proposing to estimate only upstream GHG emission impacts.

While the IPCC logic makes sense for assigning national accountability for GHG emissions, any analysis of GHG impacts of a project should consider the full life cycle GHG impacts of oil production, which include end use consumption. The downstream impacts of oil consumption could not occur without production and are therefore an impact of production that needs to be included in the analysis. This is the approach used by Navius in their assessment of the GHG impacts of Energy East. Therefore the proposed DECC methodology should be amended to include full life cycle impacts of Canadian oil production in its assessment of GHG impacts. Otherwise the analysis will significantly underestimate GHG impacts from Canadian production. Again, it should noted that estimating full life cycle impacts is problematic because of the challenges in

estimating the impact of Canadian production on world oil consumption and world GHG emissions.

Impact on GHG Targets and Climate Change Objectives

An essential component of impact assessment is to analyze impacts relative to goals, targets, and thresholds for valued environmental components to determine if the impacts are significant. Consistent with this principle, GHG impacts need to be assessed in terms of Canada's GHG targets and global climate change objectives. The question is whether the proposed project is consistent with climate change objectives. Put another way, the question is what policies and actions are required to ensure that Canada and the world meet their climate change objectives set in Paris to limit the average global temperature increase to 1.5 degrees.

There is a global consensus that meeting these targets requires a dramatic reduction in GHG emissions. The previous Canadian government committed to GHG reductions of 17% by 2020 and a 65% reduction by 2050. According to some recent studies, meeting these national objectives will likely require limiting the growth of Canadian oilsands production (Hoffele 2015).

Different studies and assumptions will lead to different estimates of what quantity of oil production is consistent with Canadian and global climate change objectives. But the key issue that must be addressed is whether the approval of a new project is consistent with Canada meeting its national targets.

The proposed DECC method does not address the need for assessing cumulative impacts of project approvals on Canada's GHG objectives and targets. Without putting the impacts in this larger context, the impact assessment will not provide the necessary information for decision makers. The impact assessments for each individual project may appear small relative to Canadian and global GHG emissions, but the cumulative impact of proposed projects will be large and inconsistent with Canadian and global climate change objectives. Therefore, it is essential that the GHG impact assessment include a cumulative effects analysis that assesses the impact of the project relative to Canadian and global objectives.

Conclusion

The proposed DECC methodology of including upstream GHG project impacts is an improvement on the current approach that excludes upstream impacts from consideration. However, there are a number of deficiencies in the proposed methodology that need to be addressed. We propose the following guidelines for the impact assessment method.

1. Indirect emissions including those generated by the manufacture of equipment, land use changes, consumption of power from the grid and production of other fuels off-site should be included.

2. The method that assumes that the project being assessed would be replaced by an alternative project and therefore there is little to no incremental production **should not** be used to estimate GHG emissions. This approach incorrectly assumes that there is little to no incremental production resulting from expansion of transportation capacity. Instead, the impact assessment should use either: i. a cumulative impact assessment method that incorporates the combined effect of all proposed transportation projects and compares production under a no new projects scenario to a likely new projects scenarios and apportions the incremental production by project based on project capacity and economics or; ii. a comparison of a no new projects scenario to a one new project (project being assessed) scenario.
3. The analysis should incorporate the impact of incremental production on global prices and consumption and should not assume that incremental Canadian production has no impact on global prices, global supply and global demand.
4. The analysis should include the full life cycle GHG impacts of incremental Canadian production.
5. The GHG assessment should include an analysis of the impacts of the project on Canada's GHG emission targets and determine if approval of the project is consistent with Canadian and global GHG targets.
6. Overall, the proposed DECC method is vague and unclear on a number of key issues that have a significant effect on the GHG impact assessment. These issues need to be resolved and the methodology needs to be refined prior to undertaking any impact assessments. It is suggested that an expert based stakeholder process be convened to further develop the methodology to address deficiencies to ensure that all stakeholders will have confidence in the methodology and the impact assessment.

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OGICHI TIBAKONIGAYWIN, KIHCHE OTHASOWEWIN, TAKO WAKAN:

The Great Binding Law

Written at Turtle Lodge

The Turtle LODGE

By Oshoshko Bineshiikwe – Blue Thunderbird Woman, Osawa Aki Ikwe (Florence Paynter); Zoongi Gabowi Ozawa Kinew Ikwe – Strong Standing Golden Eagle Woman (Mary Maytwayashing); Nii Gaani Aki Inini – Leading Earth Man (Dave Courchene); Giizih-Inini – (Dr. Harry Bone); Zhonga-giizhing – Strong Day (Wally Swain); Naawakomigowiinin (Dennis White Bird); Kamintowe Pemohtet – Spirit Walker (D'Arcy Linklater); Mah Pe Ya Mini (Henry Skywater)

Nitam - Michemach Oche - Ahana...

In the beginning, when time started, a long, long time ago, *Kizhay Manitou*, the Great Spirit, gave us one universal Law – *Ogichi Tibakonigaywin* – a Law that connects us all. Through this Law we were all given our unique languages, songs, ceremonies, ways of life, teachings and stories. We were all given our ways of loving and taking care of Mother Earth.

Kizhay Manitou put spirit in Mother Earth and all of life. We come from the spirit world and flow through the Earth. We will all return to the spirit world and to the Earth when our journey on Earth has been completed.

Through Mother Earth, *Kizhay Manitou* planted the seeds of life, with Original Instructions on how to be and how to sustain our relationship with Mother Earth. Mother Earth gave birth to the plants, the animals, the birds and finally to the human being. *Kizhay Manitou* gave us medicines for everything that can affect us.

Mother Earth is alive and she is the Original Mother of life. She has a living spirit and she is sacred. Mother Earth is so beautiful – she is the most beautiful creation – the most beautiful woman of all.

As the Mother of life, Mother Earth gives birth, and gives us everything we need to live – the food, the water, the medicines, the clothing, the shelter, and most of all, the love, kindness and teachings that a mother gives to her child.

Her teachings are reflected in Natural Laws – the balance of nature in the rising and setting of the sun, the patterns of the weather through the winds, the rains, and the elements of life, the natural flow of the blood of the Earth through the rivers and the oil beneath her, the cycles of the moon and the breaking of the waters when a child comes, as woman gives life in the most natural of ways. As long as we are breathing this beautiful air, whether we realize it or not, there is an invisible umbilical cord that always connects us to our Original Mother – our life source, Mother Earth.

In Nehetho, the word *Waskaawe siweno (WAS-KAAH-WAY-SEE-WIN)* means "Everything around you" and describes how we are all connected.

In Dakota, *Mitakuye Owasana* means "All my relations – we are related." We are related to the stars in the sky, the birds, the fish, the animals and the plant life.

In Anishinaabe, *Nikanisitook* acknowledges "All my relatives in life."

With the exception of the human being, all of the other living beings of creation have continued to follow their Original Instructions and live in balance and harmony with Natural Laws. It is only the human being that has severed its natural connection to Mother Earth and lost its connection to her Natural Laws.

We cannot continue to disrupt the Natural Laws of life. If even one of us disrespects that Great Binding Law, it affects us all, and it will come back to us. Nature's Laws are self-enforcing. What we put into our circle always returns to our web of life. Mother Earth will have the final say because she is the Mother to us all.

Nature is always giving us signs to bring us messages. Right now, the human beings are behaving out of balance, and Mother Earth is reflecting that imbalance through climate change.

We are the free and independent Original People of this land. As the roots of this land, we are the true leaders of our ancestral lands – *Manito Ka Apit* – Where *Kizhay Manitou* – the Great Spirit – sits.

We come from the Dakota, Nehetho, and Anishinaabe Nations who have lived on our ancestral lands since *Kizhay Manitou* placed us here with our languages, songs, ceremonies, teachings and ways of life. We have always been here.

As unique Dakota, Nehetho, and Anishinaabe Peoples, we speak with one voice. We have respect for each other. As the Original People we welcome you. We come forward to share with you. We come to share that love with you. We bring our shared understanding and that is this:

> We are all brothers and sisters and we all have a sacred responsibility to take care of and make an alliance with Mother Earth.
>
> We are a peaceful people. We are not asking for anything for ourselves. The human being was the last part of creation to be created. It is our spiritual responsibility to take care of that life.

Kizhay Manitou had a vision of a world filled with peace and love. It is through the land that we can find that peace and love.

All of humanity needs to make a journey to the land, to the sacred sites, places of healing, teaching and connection, to find peace.

We make an invitation to the whole human family, and all the children, to come to our lodges so we can teach them to love the land, connect to the land, and take care of the land. Our journey begins with gratitude to the Earth and to the Spirit. *Kizhay Manitou* gave all of us gifts to share with each other, to take care of the Earth and all life.

In our lodges, the children will hear the teachings, feel the ceremonies and feel the love for Mother Earth.

Our ancestors prophesized of this time – a time of climate change, a time of crossroads, a time of self-examination, and a time of choice. Our choice is not a choice of words, it is a choice of action. We need to stand strong now in alliance with Mother Earth.

We are all in this together. Today, we call on all Nations of the world to join us in the spirit of our Original Instructions to care for Mother Earth together, and find true peace.

It will require a peaceful journey back to the Earth, to find our direction for our survival.

As one of our great Lakota leaders of the past, Crazy Horse, said:

Upon suffering beyond suffering;
The Red Nation shall rise again.
It will be a blessing for a sick world
A world filled with broken promises, selfishness and separations
A world longing for light again!
I see a time, long after the skies have grown dark and dirty
And the Water has become bad-smelling
I see a time of seventh generation,
When all the colours of mankind
Will gather under the Sacred Tree of Life
And one whole Earth will become one Circle again.