Hearing Order _____
File No. OF-Fac-Oil-T260-2013-03 02

IN THE MATTER OF
TRANS MOUNTAIN PIPELINE ULC - TRANS MOUNTAIN EXPANSION APPLICATION

NOTICE OF MOTION

Name of person bringing motion:	CITY OF VANCOUVER
Decision or order requested:	1. That the Board expand the List of Issues set out in Appendix A to the Hearing Order OH-001-2014 to include the environmental and socio-economic effects associated with upstream activities, including the development of oil sands crude, and the downstream use of the oil transported by the proposed pipeline.

May 16, 2014
Date submitted

Frances J. Connell
Signature

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STATEMENT OF FACTS

1. On December 16, 2013, Trans Mountain Pipeline ULC, as a general partner of Trans Mountain Pipeline L.P. (together "Trans Mountain"), filed an application

with the National Energy Board (the "NEB" or "Board") pursuant to section 52 for a Certificate of Public Convenience and Necessity (the "Application") in connection with the Trans Mountain Expansion Project (the "Trans Mountain Project").

2. The Trans Mountain Project, if approved, would include:

   a. The construction of 987 kilometres of new pipeline and the reactivation of 192 kilometres of exiting pipeline, with a combined capacity of 540,000 barrels of oil per day;

   b. The construction of twenty new storage tanks located at the Edmonton (5), Sumas (1) and Burnaby (14) Terminals;

   c. The construction of a new dock complex at the Westridge Marine Terminal ("WMT"), with a total of three Aframax-capable berths and a utility dock.

Application, Volume 1, pp. 1-2 and 1-3

3. The new pipeline would run from Edmonton, Alberta to Burnaby, British Columbia, and has been designed to transport heavy crude oils extracted from the Alberta oil sands.

4. Currently, the number of oil tanker vessels loaded at the WMT is approximately five per month, with a total of approximately ten tanker trips per month through English Bay and the Burrard Inlet to and from the WMT. The Trans Mountain Project would increase the number of oil tankers loaded at the WMT to thirty-five (35) per month, with a total of approximately seventy (70) tanker trips per month to and from the WMT.

Application, Volume 1, p. 1-47

5. The Board had, prior to the filing of the Application, posted on its website a list of issues to be considered during the hearing of the Application, as follows (the "List of Issues"):

1. The need for the proposed project.

2. The economic feasibility of the proposed project.

3. The potential commercial impacts of the proposed project.

4. The potential environmental and socio-economic effects of the proposed project, including any cumulative environmental effects that are likely to result from the project, including those required to be considered by the NEB's *Filing Manual*.

5. The potential environmental and socio-economic effects of marine shipping activities that would result from the proposed project, including the potential effects of accidents or malfunctions that may occur.

6. The appropriateness of the general route and land requirements for the proposed project.

7. The suitability of the design of the proposed project.

8. The terms and conditions to be included in any approval the Board may issue.

9. Potential impacts of the project on Aboriginal interests.

10. Potential impacts of the project on landowners and land use.

11. Contingency planning for spills, accidents or malfunctions, during construction and operation of the project.

12. Safety and security during construction of the proposed project and operation of the project, including emergency response planning and third-party damage prevention.

6. The Board concluded the List of Issues by noting that it "does not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of the oil transported by the pipeline."

7. On February 10, 2014, the City of Vancouver (the "City") filed an *Application to Participate* in the hearing of Trans Mountain's Application before the NEB. In its *Application to Participate*, the City identified a number of direct impacts of the Trans Mountain Project, and expressly raised the issues of climate change and sustainability as follows:

   a. "Vancouver's international reputation as one of the most liveable cities in the world and its leadership in sustainable development provides significant value to its economy, 94% of which is non-resource based. … The local economy depends on Vancouver's reputation for sustainability to attract businesses, professionals and other workers and will be negatively impacted by the Project"; and

   b. "Vancouver has responsibility for planning and mitigating impacts of severe weather events and rising sea levels, including impacts on its infrastructure, and is collaborating with other levels of government to implement Vancouver's Climate Change Adaptation Strategy. The Project, through its impact on global GHG emissions, will significantly increase the overall need for and costs of adaptation".

City of Vancouver *Application to Participate*, 10 February 2014 (**Attachment "A"**)

8. The City's *Application to Participate* also identified the City's knowledge and expertise with respect to, among other things, identifying and assessing local conditions and risk factors and the adequacy of the Project design for climate adaptation "including projected local wave height and storm severity."

9. By letter dated February 19, 2014, Trans Mountain filed a written submission to the Board on the Applications to Participate, proposing a restrictive approach to participation and inviting the Board to treat the List of Issues as closed.

Letter from S. Denstedt, Osler, Hoskin & Harcourt LLP to National Energy Board *Submission Regarding Applications to Participate*, 19 February 2014 (**Attachment "B"**)

10. On March 4, 2014, the City filed a response to Trans Mountain's written submissions, requesting that the Board take a broader approach to participation and noting that the List of Issues included an expression of intention only and not a final decision with respect to the Board's consideration of upstream activities and downstream uses.

Letter from F. Connell, City of Vancouver, *Response to Trans Mountain Submission on Applications to Participate* (**Attachment "C"**)

11. On April 2, 2014, the Board issued its *Completeness Determination* and *Hearing Order* OH-001-2014, along with its *Ruling on Participation* regarding the Application.

National Energy Board, *Completeness Determination*, 2 April 2014 (**Attachment "D"**)

National Energy Board, *Hearing Order* OH-001-2014, 2 April 2014 (**Attachment "E"**)

National Energy Board, *Ruling on Participation*, 2 April 2014 (**Attachment "F"**)

12. The *Hearing Order* includes, at Appendix I, the same list of twelve issues set out in the July 29, 2013 List of Issues and concludes with the statement that:

> The Board does not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of the oil transported by the pipeline.

13. The *Ruling on Participation* granted intervenor status to 400 parties on the basis that they had demonstrated to the Board that they were either directly affected by the proposed project or are in possession of relevant information or expertise or, as is the case for the City of Vancouver, both.

14. In its *Ruling on Participation*, the Board confirmed that Intervenors would be given the opportunity to raise issues outside of the List of Issues if they could

show that they had a specific and detailed interest that was "directly affected" by the granting or refusing to grant the Application.

Ruling on Participation, at page 5

GROUNDS FOR REQUEST

15. Pursuant to sections 2(1), 13 and 15(b) of the *Canadian Environmental Assessment Act 2012* (the "*CEAA*"), the Trans Mountain Project is a designated project subject to an environmental assessment. The Trans Mountain Project is also subject to the requirements of the *National Energy Board Act* (the "*NEB Act*") and, as such, the Board is the responsible authority for both the section 52 Application for a Certificate of Public Convenience and Necessity and the environmental assessment of the Trans Mountain Project in accordance with the provisions of the *CEAA*.

CEAA, section 15(b) (**Attachment "G"**)

16. The Board has obligations under both the *CEAA* and the *NEB Act* which require it to take into consideration the upstream and downstream environmental effects of the proposed Trans Mountain Project and the social and economic costs associated with those effects. These obligations are discussed below, firstly, in connection with the *CEAA* review and, secondly, in connection with the *NEB Act* requirements on a section 52 review.

Canadian Environmental Assessment Act 2012

17. The purposes of the *CEAA* include:

    a. Ensuring that designated projects like the Trans Mountain Project "are considered in a careful and precautionary manner to avoid significant adverse environmental effects" [section 4(1)(b)];

    b. Ensuring that opportunities are provided for meaningful public participation during an environmental assessment [section 4(1)(e)];

c. Encouraging federal authorities, which includes this Board, "to take actions that promote sustainable development in order to achieve or maintain a healthy environment and a healthy economy" [section 4(1)(h)]; and

d. Encouraging the study of the cumulative effects of physical activities in a region "and the consideration of those study results in environmental assessments" [section 4(1)(i)]

CEAA Act, Attachment "G"

18. Furthermore, the Board is *mandated* by section 4(2) of the *CEAA*, to exercise their powers "in a manner that protects the environment and human health and applies the precautionary principle".

19. Section 5(1) of the *CEAA* sets out the environmental effects that must be taken into account by the Board in its review of the Trans Mountain Project, which includes any "change that ***may*** be caused to the environment" in another province or outside Canada. The "environment" is broadly defined in section 2(1) of the *CEAA* to include land, water, air and "all layers of the atmosphere". Accordingly, the Board is obligated to take into account evidence of possible changes to the global atmosphere, including increased CO2 emissions, regardless of whether or not it can be demonstrated that the Trans Mountain Project will, in fact, cause a change to the environment.

20. Section 5(2) of the *CEAA* sets out additional effects that must be taken into account by the Board in its assessment of the Trans Mountain Project, including the following:

a. a change that ***may*** be caused to the environment and that is directly linked or necessarily incidental to the exercise of powers by a federal authority that would permit the carrying out, in whole or in part, of the Trans Mountain Project; and

b. an effect of any such change on health and socio-economic conditions.

21. In this case, if the Trans Mountain Project were approved as a result of the Board's hearing of the Application and subsequent recommendations, there is a direct link between that approval and the increased production of oil sands crude and increased GHG emissions from that production such that the considerations in section 5(2)(a) and (b) of the *CEAA* are engaged.

a. Connection between Trans Mountain Project and Increased Oil Sands Production

22. It is significant for the purposes of demonstrating the direct connection between the oil sands development and the approval or disapproval of the Project that the primary purpose of the Trans Mountain Project is "to provide additional transportation capacity for crude oil from Alberta to markets in the Pacific Rim."

Application, Volume 1, p. 1-4

23. At page 6 of the IHS Report, Mr. Kelly highlights, as a benefit of the Trans Mountain Project, the fact that the proposed project "would provide structural access to new markets in the Asia/Pacific region." The Application describes this enhanced access as providing "a critical alternative market to Canadian crude oil producers."

Application, Volume 1, p. 1-4

24. With these two brief statements, one relating to the purpose of the Trans Mountain Project and the other to its primary benefit, Trans Mountain has confirmed that upstream activities and downstream uses are not only relevant, but are central, to the issues that the Board must consider in its review of the Application. Trans Mountain's ability to demonstrate both the need for and the economic feasibility of the Trans Mountain Project, the first two issues on the Board's List of Issues, clearly depends on evidence of these upstream activities and downstream uses.

25. To this end, Trans Mountain has filed three expert reports in support of its Application and which is intended to justify both the need for and the economic feasibility of the Trans Mountain Project:

a. Direct Written Evidence of Steven J. Kelly, IHS Global Canada Limited, November 30, 2013 (the "IHS Report");

Application, Volume 2, Appendix A

b. Report of Glen Hodgson, The Conference Board of Canada, *The Trans Mountain Expansion Project: Understanding the Economic Benefits for Canada and its Regions*, November 30, 2013; and

Application, Volume 2, Appendix B

c. Direct Evidence of John J. Reed, November 3013.

Application, Volume 2, Appendix C

26. For the purposes of this Notice of Motion, the City relies on this evidence to support a finding by this Board that there is a direct connection between the oil sands development and the approval or disapproval of the Trans Mountain Project such that the Board must take into account the upstream and downstream environmental effects. The City may, however, dispute the assumptions or conclusions set out in these reports in its own evidence filed subsequently in these proceedings.

27. The following summary of Trans Mountain's expert evidence clearly demonstrates the direct connection between the Trans Mountain Project and increased production of oil sands crude.

28. First, the IHS Report identifies the fact that virtually all future increases in crude oil production in Western Canada is attributable to growth in oil sands development as follows:

a. Total Western Canada crude production is forecasted to grow by 3 per cent annually from 2013 to 2037, which represents incremental production of 3.43 million barrels per day in that period.

b. 3.23 million barrels per day (94%) of that incremental production is attributable to increases in heavy crude production from the oil sands. Oil sands production clearly represents the vast majority of the increase in total crude production over the forecast period.

c. However, even the 6% increase attributable to non-oil sands production is misleading. Trans Mountain's expert evidence confirms that all of the forecasted increases in non-oil sands production occur within the next 2 years, during which time the proposed pipeline will not even be operational.

d. As of 2015, non-oil sands production levels off (according to forecasts published by the Canadian Association of Petroleum Producers ("CAPP")) or declines (according to the IHS report). No one is forecasting any increase at all in non-oil sands production levels after 2015 for the remainder of the forecast period (approx. 20 years).

e. Accordingly, for the period 2015 to 2037 (the end of the forecast period), 100% of the forecast increases are solely and directly attributable to oil sands production.

IHS Report, Application, Volume 2, Appendix A, pp. 22, 23 and 24

29. Second, the IHS Report confirms that the existing pipeline infrastructure does not have sufficient capacity to handle the projected growth in oil sands production. In fact, Figure A-9 of the IHS Report demonstrates that Western Canada crude oil supply has already exceeded the existing pipeline capacity by a small margin. It is clear from Figure A-9 that the additional pipeline capacity proposed for the Trans Mountain Project is necessary if additional crude oil is to be produced for export to Asia/Pacific Markets.

30. Figure A-9 identifies other potential increases in pipeline capacity that may result if projects such as Keystone XL and Northern Gateway are approved. However, it is far from certain that these projects will be approved. In any case, if one or more of these projects do receive approval, Trans Mountain claims that there will still be additional capacity demands and, in fact, it relies on these demands to justify the need for and economic feasibility of the Trans Mountain Project.

31. It is anticipated that Trans Mountain will seek to argue that there is no direct connection between the Trans Mountain Project and increased production of oil sands crude on the grounds that the oil can be transported by rail instead and, therefore, the lack of pipeline infrastructure to transport the oil will not result in a change in production levels.

32. As outlined above, the Trans Mountain Project includes the construction of twenty new storage tanks, the bulk of which (fourteen) will be constructed at the Burnaby Terminals, and the construction of a new dock complex, with a total of three Aframax-capable berths at the WMT.

33. These expanded storage tank and terminal facilities are required to accommodate the 590,000 barrels per day of pipeline capacity for the 987 kilometres of new pipeline that will be constructed between Edmonton and Burnaby and the corresponding increase in oil sands crude to the coast. The expanded terminal facilities are also required to accommodate the massive increase in tanker traffic (from 5 to 35 tankers per month) that will be used to transport the oil sands crude, primarily diluted bitumen, to the Asia-Pacific markets.

34. Leaving aside the question of whether rail transportation could accommodate the increased volume of oil production, the fact is that if the Application is refused there will be no additional storage tanks or terminal facilities constructed. Thus, even if producers were to ship their oil by rail, there would be nowhere to store

the additional 590,000 barrels of oil each day and nowhere for the new tankers to land and take delivery of the additional oil production.

35. Furthermore, there is strong evidence in Trans Mountain's Application of the economic disincentive to oil producers of using rail transportation as an alternative. In his Direct Written Evidence, Steven J. Kelly ("Kelly") provides evidence that the use of rail instead of pipeline transportation would increase the cost to producers by at least $5-6 per barrel, and possibly more, during the forecast period. Kelly's evidence is as follows:

> The use of pipeline capacity instead of rail transportation is conservatively estimated to provide an increase in producer netbacks of $5-6 per barrel (constant 2012 US) during the forecast period.

And at p. 15:

> [N]etback prices for heavy crude are estimated to be $5 to $6 per barrel (constant 2012 US) higher as a general consequence of the development of new pipeline capacity. The netback price benefit is attributed to the lower cost of pipeline transportation for heavy crude to the assumed clearing market location (the U.S. Gulf Coast), compared to the cost of rail transportation. This is considered a conservative estimate, in part because the rail transportation cost estimate excludes rail car lease costs.

(Underlining added.)

IHS Report, *Direct Written Evidence of Steven J. Kelly*, Application, Volume 1, Appendix A, pp. 10 and 15

36. This increased cost more than offsets the projected $2 per barrel netback premium that Mr. Kelly has forecasted for exports to Asia/Pacific markets. It would also completely eliminate the overall netback to all other oil sands producers who IHS has projected will benefit from the Trans Mountain Project (the "TMEP"). The Conference Board of Canada report estimates this netback to non-TMEP producers at $5-6 per barrel:

> According to IHS, shippers of heavy oil on the TMEP will receive additional netback benefits from the market access provided by the TMEP, beyond the general industry benefits expected for all heavy oil

> producers. Heavy oil shippers on the TMEP that sell into California Asian markets are expected to garner higher prices for those products. This will mean a higher netback of about $7 -8 per barrel versus the $5-6 per barrel that other heavy oil producers will experience.
>
> IHS Report, Application, Volume 1, Appendix A, at p. 7;
>
> The Conference Board of Canada, *The Trans Mountain Expansion Project: Understanding the Economic Benefits for Canada and its Regions*, November 30, 2013 (the "CBC Report"), Application, Volume 1, Appendix B, at p. 43

37. The disincentive to increased oil sands production where rail transportation is required becomes even greater if producers are not able to get the oil onto tankers for shipment to the Asia/Pacific markets. As discussed above, a refusal of Trans Mountain's Application would mean that there would be no expansion of the marine terminal and storage facilities and, therefore, no ability to handle increased oil production transported by rail.

38. It is clear from the evidence presented in the IHS Report that access to Asia/Pacific markets is a key driver of increased oil sands production. Mr. Kelly's evidence confirms that there will not be sufficient growth in either domestic or US consumption to create demand for the additional 590,000 barrels per day of oil sands production that Trans Mountain has forecasted. Mr. Kelly gives the following evidence at page 8 of his report:

> IHS forecasts that total crude demand by U.S. refineries will remain relatively stagnant through the end of the decade, and that their demand will decline thereafter.
>
> IHS Report, Application, Volume 1, Appendix A, at p. 8

39. The combined effects of significantly reduced, or eliminated, netback benefits and lack of access to Asian/Pacific markets means that producers will have no financial incentive to increase production from the oil sands. Support for this conclusion is found in the statement at page 47 of the IHS Report that:

> As prices moderate, we expect less upstream investment compared with an environment of continuously rising prices.

IHS Report, Application, Volume 1, Appendix A, at p. 47

40. At page 16 of the IHS Report, Kelly further highlights the importance of access to Asia/Pacific markets to realizing the financial and economic benefits of the Trans Mountain Project, as follows:

> The price of Canadian heavy crude has been discounted below price parity against comparable crudes (such as Mexican Maya and the U.S. Gulf Coast) for much of the last decade. This has been the case, even though these crudes are similar in quality and have nearly equivalent values in coking refineries. The price discount suggests that the supply of Canadian heavy crudes has exceeded demand in their main markets north of the U.S. Gulf Coast, which has led producers to seek access to other markets. For example, the TMEP targets large markets in the Asia/Pacific region, to expand the market for Canadian heavy crudes.
>
> [Underlining added.]

IHS Report, Application, Volume 1, Appendix A, at p. 16

b. Connection between Increased Oil Sands Production and Increased GHG Emissions

41. There should be no question that there are GHG emissions generated by the process involved in extracting and producing oil sands crude. If more oil sands crude is produced, then there will be an increase in these GHG emissions.

42. Oil sands crude is often referred to as "dirty" oil because of the much higher greenhouse gas emissions produced by the extraction of oil sands crude as compared to conventional crude oil.

43. In a letter from the Environmental Protection Agency ("EPA") to the U.S. Department of State, dated April 22, 2013, commenting on the draft Supplemental Environmental Impact Statement (DSEIS) which was under review in connection with the proposed Keystone XL Pipeline, the EPA noted that lifecycle GHG emissions from oil sands crude could be 81% greater than for other crude oils. The letter states, in part, as follows:

> "We commend the Department of State's efforts to estimate the lifecycle greenhouse gas (GHG) emissions associated with oil sands development and the proposed Project, to analyze the effect of the Project on Canadian oil sands production and to consider measures to reduce GHG emissions. As recognized by the DSEIS, oil sands crude is significantly more GHG intensive than other crudes, and therefore has potentially large climate impacts. The DSEIS reports that lifecycle GHG emissions from oil sands crude could be 81% greater than emissions from the average crude refined n the U.S. in 2005 on a well-to-tank basis, and 17% greater on a well-to-wheels basis. This difference may be even greater depending on the assumptions made. The incremental emissions from oil sands crude transported by the Project would therefore be 18.7 million metric tons CO2-e (carbon dioxide equivalent) per year when compared to an equal amount of U.S. average crudes, based on the Project's full capacity of 830,000 barrels of oil sands crude per day. ... If GHG intensity of oil sands crude is not reduced, over a 50 year period the additional CO2-e from oil sands crude transported by the pipeline could be as much as 935 million metric tons. It is this difference in GHG intensity – between oil sands and other crudes – that is the major focus of the public debate about the climate impacts of oil sands crude.

Letter from Cynthia Giles, Assistant Administrator for Enforcement and Compliance Assurance, United States Environmental Protection Agency to Jose W. Fernandez and Kerri-Ann Jones, Assistant Secretaries, U.S. Department of State (22 April 2013) **(Attachment "H")**

44. Mark Jaccard, a professor at Simon Fraser University with a doctorate in energy economics and policy and former Chair and CEO of the B.C. Utilities Commission, has prepared a report on the impacts of the Trans Mountain Project on GHG emissions and Canada's climate change commitments in the event that the project were approved. Mr. Jaccard states in his report that the primary incremental effect of Trans Mountain Project, if approved, would be to increase the production of oil sands crude, also known as bitumen, resulting in an increase in upstream GHG emissions of approximately 7.7 million tonnes per year. Over a 35 year period, from the proposed date of construction through to 2050, this would amount to as much as 270 million tonnes of additional GHG emissions from oil sands crude produced for shipment on the new pipeline.

MK Jaccard and Associates, *Impact on GHG Emissions and Climate Targets of the Trans Mountain Expansion Project*, May 14, 2014, ("Jaccard Report") pp. 1 - 4 (**Attachment "I"**)

45. These emissions, when combined with the annual operating emissions identified by Trans Mountain in its Application, are equivalent to adding 2.2 million average emission cars to Canada's existing vehicle stock.

Jaccard Report, Table 1, Attachment "I"

46. With respect to downstream emissions, what Mr. Jaccard refers to as the unaccounted emissions from further processing and refining, overseas transport and final consumption, the Jaccard Report estimates that the incremental downstream GHG emissions resulting from the Trans Mountain Project, if approved, would be 71.1 million tonnes per year.

Jaccard Report, Table 2, Attachment "I"

47. In his report, Mr. Jaccard points out that downstream emissions cannot be dismissed on the basis that there would be alternative suppliers that would stand in the place of Trans Mountain if the Trans Mountain Project were not approved. Rather, the downstream emissions will be avoided entirely if countries, including Canada, act to reduce GHG emissions in line with the targets they committed to in the 2009 Copenhagen Convention on Climate Change, as follows:

> At [the 2009 Copenhagen] meeting, Canada and other major countries reconfirmed and strengthened national targets for the years 2020 and 2050 as part of a commitment to prevent global temperatures from rising more that 2°C from pre-industrial levels by 2100.
>
> With those commitments, global demand for oil would not be growing as it is today and this would especially reduce demand for high-cost oil from Alberta bitumen production. One of the world's leading research institutes on energy-economy modeling, the Institute for the Science and Policy of Global Change at MIT, recently modeled a global effort to reduce GHG emissions that was actually less ambitious than what Canada and other countries committed to at Copenhagen (it would allow temperatures to rise

> by more that 2°C by 2100, although not by as much as they would if no actions were taken).
>
> According to their analysis, even this more modest effort at mitigating climate change would reduce the global demand for oil to the extent that oil sands expansion, and associated new pipelines like the TMEP, would not occur. Instead, there would be a gradual decline in production from the oil sands over the next decades. The authors noted in conclusion, "The niche for the oil sands industry is fairly narrow and mostly involves hoping that climate policy will fail."

Jaccard Report, at p. 5, citing Chan, G., Reilly, J., Paltsev, S. and H. Chen, *Canada's Bitumen Industry Under CO2 Constraints,* Report No. 183, Science and Policy of Global Change Institute, MIT, 2010, Attachment "I"

48. The Jaccard Report refers to the recently published Environment Canada report, *Emmission Trends 2013*, which identifies the disproportionate contribution of emissions from growing oil sands production to Canada's total GHG emissions. Figure 2 of the Jaccard Report, demonstrates that oil sands production accounts for the single largest GHG contributor in Canada, both now and in the future, and will play a very significant role in Canada's failure to meet its 2020 GHG emission reduction targets.

Jaccard Report, pp. 7, 8 and 9, Attachment "I"

49. In the historical period, between 2005 and 2011, oil sands production increased by 64% and GHG emissions from the oil sector as a whole increased by 62%. This correlation between increased oil sands production and increased GHG emissions from Canada's oil sector as a whole demonstrates that these increased GHG emissions are almost wholly attributable to oil sands production.

Jaccard Report, p. 9, Attachment "I"

50. The fact that future growth in oil sands production cannot occur without new transportation infrastructure, such as the Trans Mountain Project has been acknowledged by the Canadian Association of Petroleum Producers ("CAPP").

CAPP recently identified the importance of the connection between new pipelines and increased oil sands productions as follows:

> Western Canadian supplies are essentially landlocked and will need additional transportation infrastructure to bring this growing oil supply to markets. ...
>
> [P]ipelines will remain the preferred mode of transportation for crude oil.

Jaccard Report, p. 9, citing CAPP, *2013 Crude Oil Forecast, Markets & Transportation*, http://www.capp.ca/getdoc.aspx?DocId=227308&DT=NTV, Attachment "I"

51. Finally, as set out in more detail above, in its assessment of the Trans Mountain Project pursuant to the *CEAA*, section 5(1) requires the Board to take into account any "change that ***may*** be caused to the environment" in another province or outside Canada. The "environment" is broadly defined to include all layers of the atmosphere. Accordingly, the Board is obligated to take into account evidence of possible changes to the global atmosphere, including the rise in temperatures that may be caused by increased GHG emissions from oil sands production. It is not necessary for the City of Vancouver, or any other intervenor, to demonstrate that the Trans Mountain Project will, in fact, cause a change to the environment in order for the issue of upstream and downstream impacts to be included in the List of Issues.

52. The Board has no discretion to limit the scope of the environmental effects that it is required to consider pursuant to sections 5(1) and (2) of the *CEAA*.

53. Further, the fact that section 5(1) expressly contemplates changes that may be caused to the environment in another province or outside Canada, confirms that it is entirely appropriate and, in fact, mandatory, that the Board hear evidence on:

    a. the upstream environmental effects, including increased GHG emissions, that may be caused by an actual or potential increase in production of oil sands crude as a result of the Trans Mountain Project; and

b. the downstream environmental effects, including increased GHG emissions, that may be caused by an actual or potential increase in the processing and consumption of oil sands crude as a result of the Trans Mountain Project.

54. A decision by the Board to fail to consider this evidence would be a breach of its statutory authority under the *CEAA* and would be sufficient grounds to overturn any recommendations made by the Board pursuant section 52 of the *NEB Act*.

C. The Precautionary Principle

55. Both sections 4(1)(b) and 4(2) of the *CEAA* incorporate the precautionary principle into the Boards consideration of the Trans Mountain Project, emphasizing that the Board ***must*** apply the precautionary principle in a manner that protects the environment and human health.

CEAA, ss. 4(1)(b) and 4(2), Attachment "G"

56. The precautionary principle was most recently considered by the Supreme Court of Canada in *Castonguay Blasting Ltd. v. Ontario (Environment)*, [2013] 3 S.C.R. 323, where Madame Justice Abella described the precautionary principle as follows, at para. 20:

> This emerging international law principle recognizes that since there are inherent limits in being able to determine and predict environmental impacts with scientific certainty, environmental policies must anticipate and prevent environmental degradation (O. McIntyre and T. Mosedale, "The Precautionary Principle as a Norm of Customary International Law" (1997), 9 *J. Envtl. L.* 221, at pp. 221-22; *114957 Canada Ltée (Spraytech, Société d'arrosage) v. Hudson (Town)*, 2001 SCC 40, [2001] 2 S.C.R. 241, at paras. 30-32).

Castonguay Blasting Ltd. v. Ontario (Environment), [2013] 3 S.C.R. 323, at para. 20 **(Attachment "J")**;

114957 Canada Ltée (Spraytech, Société d'arrosage) v. Hudson (Town), 2001 SCC 40, [2001] 2 S.C.R. 241, at paras. 30-32 **(Attachment "K")**

57. The precautionary principle is also consistent with the Board's statutory obligation, pursuant to section 4(1)(h) of the *CEAA* to take actions that promote sustainable development.

58. Section 2(1) of the *CEAA* defines "sustainable development" as development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.

CEAA, s. 2(1), Attachment "G"

59. The Board has confirmed in its prior decisions that the principle of sustainability when applied to environmental assessment includes, as a core consideration, the life-cycle impacts of the project. For example, the Joint Review Panel for the Mackenzie Gas Project stated that life-cycle impacts would, by definition, include the upstream and downstream impacts of the project in determining the project's contribution to sustainability.

Joint Review Panel for the Mackenzie Gas Project, *Foundation for a Sustainable Northern Future: Report of the Joint Review Panel for the Mackenzie Gas Project*, vol. 2, c. 19: "Sustainability and Net Contribution (Ottawa: Canada, Minister of the Environment, 2009) at pp. 586, 589-590 (**Attachment "L"**)

60. A decision on the Trans Mountain Project has serious implications for future generations. First, the project will have a direct impact on increased GHG emissions and Canada's inability to meet its climate change commitments. Second, if upstream and downstream impacts are not considered by the Board, and the Trans Mountain Project is found not to have sufficient incremental effect on GHG emissions on its own, then the Board is effectively promoting *un*sustainable development. The result is that any number of new pipelines will receive approval which, cumulatively, will have enormous and irreversible impacts.

61. Both the precautionary principle and the Board's obligation to promote sustainable development lend further support to a determination by the Board to hear evidence on the socio-economic impacts of upstream production of oil sands crude and downstream uses. Absent this evidence, the Board cannot properly consider the long-term environmental impacts of the Trans Mountain Project and the extent to which the project does or does not promote sustainable development.

National Energy Board Act

62. Pursuant to section 52(1) of the *NEB Act*, the Board must, in preparing its report to the Minister:

a. set out its recommendation as to whether or not the Minister should issue a certificate of public convenience and necessity for the Trans Mountain Project, taking into account "whether the pipeline is and will be required by the present ***and future*** public convenience and necessity"; and

b. set out all terms and conditions "that it considers necessary or desirable in the public interest" to which the certificate will be subject.

NEB Act, s. 52(1) **(Attachment "M")**

63. Section 52(2) of the *NEB Act* requires the Board to have regard to all considerations that appear to be directly related to the Trans Mountain Project and to be relevant. The Board may also have regard to "any public interest that in the Board's opinion may be affected by the issuance of the certificate".

NEB Act, s. 52(2), Attachment "M"

64. The public interest has been defined by the Board as inclusive of all Canadians and refers to the balance of economic, environmental and social considerations that changes as society's values and preferences evolve over time. The consideration of the public interest includes the local, regional and national benefits and burdens of the Trans Mountain Project.

National Energy Board, *Reasons for Decision: Emera Brunswick Pipeline Company Ltd.*, GH-1-2006 (May 2007), Ch. 8 at p. 84 ("*Emera*") (**Attachment "N"**)[1]

65. This approach is consistent with prior decisions of the NEB and with Federal Court of Appeal decisions that have considered the Board's obligation to make a public interest determination based on all classes and categories of interests. The Board must identify and weigh all relevant evidence on the record and come to a determination whether, overall, the project is in the public interest and whether the project meets the test for present and future public convenience and necessity. This requires that the Board balance both the benefits and burdens of the Trans Mountain Project before coming to a final determination.

Emera, at p. 94 , Attachment "N"

66. The Board adopted the following definition of the public interest in its Reasons for Decision in Sumas Energy 2, Inc. EH-1-2000:

> [I]n order to establish whether the project is in the public interest, the Panel must understand its potential economic, social, and other benefits and then determine whether these balance or outweigh the project's costs and negative impacts on the environment, public health, and safety and other social and economic matters.

Sumas Energy 2, Inc. EH-1-2000, *Reasons for Decision* (March 2004) ("Sumas Decision") at p. 10 (**Attachment "O"**)

67. In Sumas Energy 2, Inc., the applicant was seeking a Certificate of Public Convenience and Necessity to construct an international power line (the "IPL"). During the hearing process, the Board was asked to consider evidence of the environmental effects of emissions from the U.S. power plant that would generate the electricity to be transmitted on the international power line. In deciding that these upstream impacts were within the Board's mandate under section 52 of the *NEB Act*, the Board said this:

> The Board does not see a distinction between considering the effects of facilities that are within provincial jurisdiction and those

[1] Appendices to the Reasons for Decision are not included in Attachment "N" due to their size.

> of facilities under U.S. jurisdiction. If those matters are relevant to the Board's decision, the Board has authority to consider them.
>
> The Board notes that, in SE2's Further Direct Evidence, it submitted evidence of the direct economic benefits in Canada of the IPL. Included are over $180 million per year of natural gas payments related to fueling the Power Plant. The Board is being asked to consider the possible benefits in Canada of the Power Plant as part of its consideration of the IPL but is being asked to disregard possible burdens in Canada from the operation of the Power Plant. The Board considers that it is as appropriate to consider the possible burdens in Canada as it is to consider the possible benefits.
>
> (Underlining added.)

Sumas Decision, at p. 139, Attachment "O"

68. The decision of the Board was upheld on appeal to the Federal Court of Appeal, where that court noted that the Board had properly engaged in a balancing of the benefits and burdens resulting from the IPL and the power plant with a view to determining whether the public convenience and necessity test was met.

Sumas Energy 2 Inc. v. Canada (National Energy Board) 2005 FCA 377, at paras. 18-19, 23, 33 and 34 ("*Sumas Energy*") **(Attachment "P")**

69. By far the largest benefit of the Trans Mountain Project cited in the Application are the forecasted oil producer revenues that are expected to rise by $45.4 billion "as a result of higher netbacks that can be attributed to Western Canadian oil producers having access to new markets through the Project."

Application, Volume 2, p. 2-42

70. In addition, Trans Mountain relies on benefits to the Canadian Energy Industry as a whole, citing the inflationary effect on oil prices that would result from increased access for oil sands production to new, predominantly Asian, markets, and removing Canadian heavy crude from the US Gulf Coast market. For example, Trans Mountain states, at p 2-43:

> "All Western Canadian producers would have the opportunity to realize higher netback prices through the Project, on production that is priced in the Asia/Pacific region rather than the US Gulf Coast region. ... These benefits would apply from 2018 through the end of the forecast period in 2037."
>
> Application, Volume 2, p. 2-43

71. If the Board is going to consider this evidence filed by Trans Mountain on the issues of financial benefits and economic feasibility, which relies on upstream benefits to Western Canadian oil producers and the Canadian Energy Industry as a whole as well as the downstream benefits of access to the Asia/Pacific Markets, then it follows that the Board must also hear and consider evidence of the upstream and downstream burdens.

72. The Federal Court of Appeal in *Nakina (Township) v. Canadian National Railway Co.* discussed the meaning of the term "public interest" in the context of a decision of the Railway Transport Committee, concluding that it would be an error in law for the administrative body to exclude from consideration any class or category of interest forming part of the totality of the general public interest. The Court said, at para. 5:

> ... I would have thought that, by definition, the term "public interest" includes the interests of all the affected members of the public. The determination of what is in the public interest involves the weighing and balancing of competing considerations. Some may be given little or no weight; others much. But surely a body charged with deciding in the public interest is "entitled" to consider the effects of what is proposed on all members of the public. To exclude from consideration any class or category of interests which form part of the totality of the general public interest is accordingly, in my view, an error of law justifying the intervention of this court.
>
> (Underlining added.)

Nakina (Township) v. Canadian National Railway Co. (1986), 69 N.R. 124 (F.C.A.) ("*Nakina*") (**Attachment "Q"**)

73. There is a substantial body of evidence from scientists, economists, insurance industry analysts and others, confirming that climate change is happening and that

there are significant social and economic costs associated with climate change. Some of this evidence is already before the Board in the Affidavits that were filed by Lynne M. Quarmby, Eric Doherty, Ruth Wolmsley, John Vissers, Shirley Samples, Forest Ethics Advocacy Association, Tzeporah Berman, John Clarke and Bradley Shende in support of their Notice of Motion dated May 6, 2014 (the "Forest Ethics Motion"). The City of Vancouver incorporates by reference the following affidavit evidence filed in support of the Forest Ethics Motion:

a. Affidavit of Mark Jaccard, affirmed April 25, 2014; and

b. Affidavit of Danny Harvey, affirmed April 25, 2014.

74. This evidence can be summarized as follows:

a. There are multiple, independent lines of evidence that the climate is warming, with a global mean temperature rise of 0.8°C over the past century.

Harvey Affidavit, Forest Ethics Motion, paras. 6 and 7

b. The majority of the global warming over the past century, and almost all of the warming since 1950, is due to increased GHG concentrations in the atmosphere.

Harvey Affidavit, Forest Ethics Motion, paras. 8 and 11

c. At the current rising rate of GHG emissions, the earth's average temperature is expected to increase 3-5°C by 2100.

Jaccard Affidavit, Forest Ethics Motion, para. 6

d. Climatologists predict that the rising temperatures will melt polar ice, thus raising sea levels.

Jaccard Affidavit, Forest Ethics Motion, para. 7

e. Climatologist also predict that the rising temperatures will cause an increase in extreme weather events, including droughts, hurricanes, floods and heat-waves.

Jaccard Affidavit, Forest Ethics Motion, para. 7

f. When adjusted for the risk of catastrophic outcomes, and huge immeasurable cost to humans and ecosystems these would cause, the nations of the world, including Canada, have accepted a target of limiting global warming to no more than 2°C above pre-industrial levels.

Jaccard Affidavit, Forest Ethics Motion, para. 21;

Harvey Affidavit, Forest Ethics Motion, para. 20

g. Energy-economy models show that almost none of the planet's unconventional oil resources (which includes oil sands crude) can be exploited if the 2°C limit is to be met. There is no "emission space" for exploitation of oil sands crude.

Jaccard Affidavit, Forest Ethics Motion, para. 28;

Harvey Affidavit, Forest Ethics Motion, para. 20

h. To have only a 2/3 probability of staying within the 2°C limit, global emissions of CO2 will have to drop by 40-80% by 2050 and will have to reach zero before the end of this century.

Harvey Affidavit, Forest Ethics Motion, para. 20

75. The insurance industry has recognized climate change as a real phenomenon with significant economic and social impacts. As an industry whose business model is based on assessing and managing risk, it is significant that they have recognized the economic impact of climate change and the effect that the increase in the

frequency, intensity, duration and timing of extreme weather events will have to their industry (in the form of increased insurance claims and the factoring of climate change risks into insurance rates) and the economy in general.

Affidavit of Robert Bartlett, sworn May 16, 2014, paras. 4 – 5 and Exhibit "A" **(Attachment "R")**

76. A recent report prepared by Swiss Re, a recognized leader in the insurance market, notes, at page 17, that "climate change exposes local populations to mounting challenges and costs of protecting assets, including human lives, against weather related risks". The report further states that:

> Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions. Indeed, if left unchecked, it is estimated that the overall costs of the effects of climate change could amount to 20% of global gross domestic product by the end of this century [*Stern Review on the Economics of Climate Change,* Lord Nichols Stern, 2006].

Swiss Re Sigma Report "Natural Catastrophes and Manmade Disasters in 2013" (the "Swiss Re Report"), *Bartlett Affidavit*, para. 5 and Ex. "A", pp. 15 and 17, Attachment "R"

77. The Swiss Re report also discusses the need to limit the global average temperature rise to no more than 2°C by 2050, as follows:

> In terms of overall social and economic impact, the point at which climate change becomes dangerous is difficult to assess and is ultimately a societal value judgment. The consensus is that the rise in global average temperatures should be limited to no more than 2°C by 2050. In terms of global carbon emissions, limiting the warming to 2°C corresponds to a global carbon budget – cumulative amount of greenhouse gases that can be released into the atmosphere – of 1200 GtC, with 550 GtC already emitted. This substantial emission reduction, it is hoped, will prevent worst case climate change impacts and still allow societies to cope with the consequences.

Swiss Re Report, *Bartlett Affidavit*, para. 5 and Ex. "A", p. 18

78. While climate change is a global issue, the City of Vancouver is also directly impacted by the effects of increased GHG emissions from the Trans Mountain

Project, including increased upstream production and downstream use of oil sands crude, and climate change is a matter of significant concern to the City.

Affidavit of Sean Pander, sworn May 16, 2014 (the *"Pander Affidavit"*), at para. 3 **(Attachment "S")**

79. Vancouver is a coastal city with 69.8 kilometres of waterfront. As sea levels rise due to climate change, the City's waterfront is vulnerable to flooding.

Pander Affidavit, at para. 3(a)

80. Further, Vancouver's oceanic climate will be susceptible to increased frequency and severity of extreme weather events and this will have impacts on the City's infrastructure with associated costs. Changing precipitation patterns, especially during winter months where rainfall amounts will increase significantly, will also result in higher frequencies of overland flooding and sewer backup.

Pander Affidavit, at paras. 3(b) and (d)

81. Finally, decreasing winter snow pack as a result of warmer temperatures will result in reduced drinking water reservoirs during increasingly dry summer periods.

Pander Affidavit, at paras. 3(c) and (e)

82. The City has a number of policies, plans and strategies in place in an effort to address the concerns regarding climate change. These include:

a. The "Greenest City 2020 Action Plan", with reduced carbon emissions as one of its three areas of focus;

Pander Affidavit, at para. 8, Ex. "C"

b. The Greenhouse Gas Emission Reduction Official Development Plan, which specifies GHG reduction targets for the City of: (i) 6% below 1990 GHG levels by 2012; (ii) 33% below 2007 GHG levels by 2020; and (iii)

80% below 1990 GHG levels by 2050. It also requires that all new construction be carbon neutral by 2030.

Pander Affidavit, at paras. 6 and 7, Ex. "B"

c. The Climate Change Adaptation Strategy, adopted by the City in July 2012, to guide future land use and infrastructure planning for the City. Under this strategy, the City is required to take action to adapt to changing precipitation patterns and amounts, increasing temperatures, sea level rise, and increases in extreme precipitation and wind events.

Pander Affidavit, at para. 9, Ex. "D"

83. It is clear from all of this evidence, that climate change is happening and that there are substantial social and economic costs associated with climate change. The City has also identified a number of direct impacts which could have significant financial implications. In particular, the City will incur costs in responding to the impacts of climate change and implementing its Climate Change Adaptation Strategy and the other City plans and policies referenced above. The more severe the impacts of climate change are, the greater the costs of adaptation will be. Furthermore, increasing severity of impacts will reduce the ability of the City to respond to or prepare for extreme events.

Pander Affidavit, at para. 4

84. The City is currently modelling the impacts of sea level rise on the City to the year 2100 and 2200, which will quantify the social, financial, response and recovery implications of sea level rise as follows:

a. Social implications such as displacement of people (shelter needs);

b. Financial implications including damage to buildings, content loss and inventory loss;

c. Response implications of potential damage to critical infrastructure

(hospitals, fire stations, etc.); and

a. Recovery implications such as debris volumes.

Pander Affidavit, at para. 12

85. The results of the modelling will not be available until late spring 2014. However, preliminary projections by the Province of British Columbia suggest that the costs to prepare 250 km of shoreline and low-lying areas in southwestern BC for sea level rise would be in the order of $9.5 billion.

Pander Affidavit, at paras. 12 and 13

86. The Intergovernmental Panel on Climate Change (IPCC) released its fifth assessment report in 2014. The IPCC assessment report notes that reducing climate change can also reduce the scale of adaptation that might be required, whereas delaying climate change mitigation actions may reduce options for climate-resilient pathways in the future … Greater rates and magnitude of climate change increase the likelihood of exceeding adaptation limits."

Pander Affidavit, at para. 4, Exhibit "A"

87. Returning to the statutory obligations imposed on the Board by section 52 of the *NEB Act*, the case authorities and prior decisions of the Board make it clear that positive benefits of the Trans Mountain Pipeline must be weighed against the negative impacts. In the words of the Board, in order to establish whether the project is in the public interest, the Board must understand its potential economic, social, and other benefits **and then determine whether these balance or outweigh the project's costs and negative impacts on the environment, public health, and safety and other social and economic matters**.

Reasons for Decision in Sumas Energy 2, Inc. EH-1-2000, Attachment "O"

88. It is not possible for the Board to satisfy its obligation to balance both benefits and burdens unless the Board allows the parties to introduce evidence on these

issues, including evidence of the upstream activities, oil sands development and downstream uses that are driving Trans Mountain's application for expanded pipeline facilities. The Board must hear evidence on and take into consideration the detrimental effects on the City of Vancouver specifically and on Canadians generally, as well as subsequent generations, of the increases in GHG emissions resulting from increased oil sands development and consumption.

89. As the Federal Court of Appeal said in *Nakina (Township) v. Canadian National Railway Co.*, if the Board were to exclude from consideration any class or category of interests which form part of the totality of the general public interest, this would be an error of law justifying the intervention of the court.

DECISION SOUGHT

90. The City of Vancouver requests that the Board expand the List of Issues set out in Appendix A to the Hearing Order OH-001-2014 to include the environmental and socio-economic effects associated with upstream activities, including the development of oil sands crude, and the downstream use of the oil transported by the proposed pipeline.