

April 18, 2016

By Email: [ec.dpger-ogaed.ec@canada.ca](mailto:ec.dpger-ogaed.ec@canada.ca)

Environment and Climate Change Canada  
351 Saint-Joseph Boulevard  
Gatineau, Quebec  
K1A 0H3

**Attention:** Mark Cauchi  
Executive Director, Oil, Gas and Alternate Energy Division

Dear Sir:

We write to provide the City of Vancouver's comments on the proposed methodology for assessing greenhouse gas emissions (the "**GHG Methodology**") presented in the Government Notice posted by the Department of Environment and Climate Change on March 19, 2016.

The City of Vancouver has committed to becoming the greenest city in the world by 2020 and, in pursuit of that goal, has undertaken and continues to undertake a wide range of initiatives. The City of Vancouver is also an Intervenor in the hearing before the National Energy Board concerning the application by Trans Mountain Pipeline ULC ("**Trans Mountain**") for a certificate of public convenience and necessity in respect of the proposed Trans Mountain Expansion Project (the "**TMEP**") and filed extensive written evidence and presented written and oral argument in that hearing opposing the application.

In this letter of comment we do not intend to repeat all of the evidence or the issues of concern raised by the City of Vancouver in the TMEP hearing before the NEB. Instead, the comments in this letter will be restricted to the issue of the scope of the GHG Methodology which, as currently proposed, excludes from assessment all downstream GHG emissions associated with the project under review.

The exclusion of downstream GHG emissions from the GHG Methodology has significant implications because downstream emissions (emissions from further processing and refining, overseas transport and final consumption of the oil) are by far the largest contributor to GHG emissions from oil pipeline projects.

For example, Dr. Mark Jaccard has estimated that the production of the 590,000 bbl/day of Alberta oil sands crude that would be transported on the proposed TMEP would have associated upstream GHG emissions of approximately 7.7 million tonnes per year. Over a 35

year period this would amount to as much as 270 million tonnes of upstream GHG emissions from this project alone.

By comparison, the downstream emissions associated with the TMEP are 10 times higher, estimated at 71.1 million tonnes per year and 2.5 billion tonnes in 35 years.

Thus, the combined upstream and downstream emissions associated with oil produced for transportation on the TMEP alone is 79 million tonnes per year.<sup>1</sup>

Canada's current emissions target for 2030 is a 30% reduction of GHG emissions from 2005 levels<sup>2</sup>. This translates to a limit on total annual GHG emissions of approximately 516 million tonnes per year. **GHG emissions associated with the TMEP alone would represent over 15% of the total allowable emissions in Canada by 2030.**

Canada's emissions target for 2050 was previously set at a 65% reduction in GHG emissions from 2005 levels. This translates to a limit on total annual GHG emissions of approximately 258 million tonnes per year. **GHG emissions associated with the TMEP alone would represent over 30% of the total allowable emissions in Canada by 2050.**

There are two reasons the downstream emissions (emissions from further processing and refining, overseas transport and final consumption of the oil) must be included in the GHG Methodology for assessing climate impacts.

First, project proponents, such as Trans Mountain, repeatedly justify the need for new pipeline infrastructure to Canada's coast on the basis that future increases in the production of Alberta's oil sands crude are dependent on access to new markets and securing a world price for the oil. The logical extension of this argument is that the pipeline project itself would be responsible for any increase in the downstream processing, refining and final consumption of Alberta oil sands crude as well as the overseas transportation required to get the oil from Canada's coast to markets in Asia and elsewhere.

The benefit to Alberta oil sands producers of securing a world price for its oil must, therefore, be assessed not only against the upstream GHG emissions associated with the project but also against the impacts associated with the increased downstream GHG emissions from the oil.

This leads to the second reason why downstream emissions must be included in the GHG Methodology and that is Canada's commitment, as set out in Article 2 of the Paris Agreement, to ensure that the increase in the global average temperature is "well below 2°C" above pre-industrial levels and, further to "pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels".

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<sup>1</sup> This ignores upstream and downstream emissions from: (1) all existing oil production capacity; and (2) all future increased oil production capacity associated with any of the other proposed pipeline projects.

<sup>2</sup> Assuming 2005 emissions of approximately 737 million tonnes.

Projects, such as the TMEP, are intended for the primary, if not sole, purpose of providing the transportation infrastructure for exporting Alberta oil sands crude to other markets that already have high GHG emissions. If these projects proceed, they will necessarily increase overall global GHG emissions attributable to downstream oil processing and consumption even if there is no actual increase in the total volume of oil consumed. This is because oil sands crude results in much higher GHG emissions on a per barrel basis than almost any other crude oil on the market. So even if one barrel of Alberta oil sands crude is simply replacing one barrel of another, lower emitting oil product, the GHG emissions from processing and consuming that barrel of oil will be higher.

A recent 2015 study, *Know Your Oil*, compares the upstream and downstream GHG emissions from a range of oil resources and provides an Oil-Climate Index (OCI) which can be used to compare crude oils and assess their climate consequences. As the authors note, the OCI highlights two central facts:

1. The fate of the entire barrel of oil is critical to understanding and designing policies that reduce a crude oil's climate impacts; and
2. The different sources of oil have different climate impacts which are not currently identified or priced into the market value of competing crudes or their petroleum products. As such, different oils may in fact entail very different carbon risks.<sup>3</sup>

As a result of their analysis, the authors of *Know Your Oil* identify Alberta oil sands crude as one of the most climate-intensive oils currently in production and requiring special attention from policymakers.<sup>4</sup> As illustrated by Figure 6 of the report<sup>5</sup>, all four of the Alberta oil sands crudes that were studied rank in the top ten for highest GHG emissions from processing and refining the oil (referred to as Midstream Emissions in the report). As for downstream transportation and combustion, Figure 11 illustrates that three of the Alberta oil sands crudes studied ranked in the top four highest GHG emissions.<sup>6</sup>

Any high-emitting nation that imports Alberta oil sands crude will have a reduced ability to meet their own GHG emission reduction targets as a result of the increased emissions (on a per barrel basis) associated with processing, refining and consuming that oil. In effect, Canada will be transferring its obligation to ensure that global average temperatures do not increase above 1.5°C to the nations that are importing Canada's oil.

At the COP21 conference the Government of Canada showed global leadership on the issue of climate change and GHG emission reduction. It is clear that if the world is to avoid the catastrophic impacts of climate change we must transition away from fossil fuels to renewable energy and must do so quickly. Projects which facilitate the increased production and consumption of fossil fuels, with a corresponding increase in global GHG emissions, must

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<sup>3</sup> Gordon, D., Brandt, A., Bergerson, J., and Koomey, J., *Know Your Oil: Creating A Global Oil-Climate Index, 2015* ("Know Your Oil") at p. 4 [Attachment 2]

<sup>4</sup> *Know Your Oil*, *supra*, at p. 4

<sup>5</sup> *Know Your Oil*, *supra*, at p. 24

<sup>6</sup> *Know Your Oil*, *supra*, at p. 33

be subject to careful scrutiny. The Government of Canada cannot properly assess the true impacts of the project on global GHG emissions if downstream emissions are ignored.

The impacts of additional downstream GHG emissions from the processing, refining and use of the oil products to be transported by projects under review must be included in the proposed GHG Methodology if there is to be a comprehensive assessment of the true impacts of the project on global GHG emissions. As discussed above, ignoring downstream GHG emissions may very well compromise Canada's overall commitment to limit rise in global temperature to 1.5 °C.

Finally, prior to allowing any increase in national emissions the Government of Canada must complete a comprehensive national emissions strategy to determine how our global commitments will be met. Only then can we evaluate and account for these new proposed emissions relative to the significant reduction programs that are required as Canada transitions to a low carbon economy.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Sadhu A. Johnston', with a long horizontal flourish extending to the right.

Sadhu A. Johnston  
City Manager

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