



TransCanada

In business to deliver

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Ms. Genevieve Walker
NEPA Coordinator
U. S. Department of State
OES/ENV Room 2657
2201 C Street, N.W.
Washington, DC 20520

Dear Ms. Genevieve,

In President Obama's June 25, 2013, speech addressing climate change, he indicated that the impact that the Keystone XL Pipeline will have on greenhouse gas (GHG) emissions will be a critical consideration in determining whether the Project is approved. In that light, TransCanada provides its view of the facts as they pertain to the Project's contribution to GHG emissions.

Global crude oil demand is static. The world will not consume incremental volumes of crude oil because Keystone XL is constructed. Rather, the oil that would be transported by the Keystone XL pipeline would simply displace similar heavy crude oil currently refined in the US. The US currently refines about 4 million bpd of imported heavy crude oil with the largest suppliers of heavy crude to the US Gulf Coast region being Venezuela and Mexico. As stated in TransCanada's May 8, 2013 letter to the Department of State, the oil sands production that is expected to be transported by the Keystone XL Project would displace those Venezuelan and Mexican crude oils.¹

The most recent study released by IHS CERA on the lifecycle GHG emissions from Canadian oil sands indicates there is no significant difference in lifecycle GHG intensities between the product

¹ Letter to Genevieve Walker, May 8, 2013, at p. 2.

proposed to be carried by Keystone XL and similar heavy crudes.² IHS CERA found that, "[i]f Keystone XL is not built, the United States will import more heavy oil from Venezuela; these crudes have similar carbon intensities to Canadian oil sands products (resulting in little to no change in the overall GHG intensity of the US crude slate)."³

This position is consistent with the results of the Jacobs (2009) and TIAX (2009) studies referenced in the draft SEIS released by the Department of State on March 1, 2013.⁴ It is expected that any incremental GHG emissions arising from the products carried by KXL will be at the low end of the range of the current estimates provided in the draft SEIS (approximately 3 to 7 million tonnes CO₂e per year). This lower range more accurately reflects the product mix that will be carried by the Project (diluted bitumen), the displacement of heavy crudes from Venezuela and Mexico, and lower volumes of diluted bitumen transported than was used in the draft SEIS (accounting for shipment of up to 100,000 barrels per day of Bakken crude oil).

An increase of greenhouse gas emissions in the range of 3 to 7 million tonnes per year represents 0.06% to 0.1% of the 2011 US national greenhouse gas inventory. This range of emissions would have an unmeasurable impact on climate. According to the written statement of Paul C. Knappenberger, Assistant Director, Center for the Study of Science, Cato Institute, to the *Joint Hearing on Keystone XL Pipeline: Examination of Scientific and Environmental Issues* before the U.S. House of Representatives, Committee on Science, Space and Technology, Subcommittee on Energy and Subcommittee on the Environment, an additional 18.7 million metric tons of carbon dioxide emissions per year would result in a change in the global average temperature of about 0.00001 degrees Celsius per year – one one-hundred thousandths of a degree.⁵ Given that the estimated incremental greenhouse gas emissions associated with the products carried by Keystone XL are expected to be substantially less than 18.7 million tonnes per year, the estimated increase in the average global temperature would be less than one one-hundred thousandth of a degree.⁶

² IHS CERA report, "Oil Sands, Greenhouse Gases and US Oil Supply, Getting the Numbers Right – 2012 Update," November 2012, Table 2, page 23.

³ IHS CERA letter to the Department of State, April 19, 2013.

⁴ The estimate of GHG emissions intensity from Venezuelan crudes by the National Energy Technology Laboratory (NETL) that is included in the draft SEIS is based on a medium crude and is therefore not reflective of the heavy crudes that will be backed out by products transported by KXL.

⁵ Written Statement, Paul C. Knappenberger, Assistant Director, Center for the Study of Science, Cato Institute, to the *Joint Hearing on Keystone XL Pipeline: Examination of Scientific and Environmental Issues* before the U.S. House of Representatives, Committee on Science, Space and Technology, Subcommittee on Energy and Subcommittee on the Environment, May 7, 2013, pages 4- 5.

⁶ Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2011, April 12, 2013, Table ES-2, page ES-7.

Approving or denying the Keystone XL Pipeline will not impact the type of, or amount of, oil refined in the US. The Draft Supplemental EIS has already found that “[a]pproval or denial of any one crude oil transport project, including the proposed Project, remains unlikely to significantly impact the rate of extraction in the oil sands, or the continued demand for heavy crude oil at refineries in the U.S.”⁷ Approval of the Project will impact the source of the heavy crude oil to US refineries. As the decision will have little impact on GHG emissions, the only relevant question is whether the US wants to source its heavy oil from Canada, a friendly and stable ally with strict environmental standards, or from other suppliers whose interests are not aligned with those of the United States and have limited or no environmental standards.

The Canadian oil sands are the third largest oil reserve in the world and represent 60% of the global reserves open to private sector investment and development. Moreover, 22.2% of current production from the Canadian oil sands is controlled by US multi-national companies, 13% by other international producers and 65% by Canadian owned entities.⁸ The Canadian oil sands are a critical resource to Canada, the United States and to the world. This critical resource will be developed. The Canadian Government has made the responsible development of this resource a high priority. Denial of a Presidential Permit for the Keystone XL Pipeline will not slow oil sands development. Current production is expected to nearly triple within 12 years. (CAPP2012 – 1.6 million to 4.2 million bbl/day by 2025, five million bbl/day by 2030.⁹

The decision on one pipeline will not impact the oil sands achieving its ultimate potential as a global supplier or economic engine for Canadian economic growth and prosperity. Regardless of whether Keystone XL is constructed, there are numerous other pipeline projects in development to expand the amount of transportation capacity available to the Alberta oil sands. In addition, transportation of crude oil by rail has experienced tremendous growth. Current evidence of actual crude oil rail movements, orders placed for construction of additional rail cars capable of moving crude oil, and installed and future planned infrastructure projects to facilitate the movement of crude oil by rail at both supply and market locations indicate that this growth will continue. Given all of these facts, a decision on Keystone XL will have little to no impact on GHG emissions

⁷ Department of State, Draft Supplemental EIS, March 2013, 1.4 Market Analysis, 1.4.1 Introduction, page 1.4-1.

⁸ Statistics Canada, 2010

⁹ <http://www.oilsandstoday.ca/Reports/Pages/FactBook.aspx> Page 14).

Today, GHG emissions from the Canadian oil sands total 55 million metric tonnes of CO₂ equivalent.¹⁰ These emissions represent approximately 7.8% of Canada's GHG emissions and less than 1/5 of 1% of global GHG emissions. Referencing the Draft Supplemental EIS, the Congressional Research Service recently found that GHG emissions from Canadian oil sands delivered by the pipeline would represent an increase in annual US GHG emissions of 0.06% to 0.3%.¹¹ As stated above, we believe the incremental emissions to be closer to 0.06% to 0.1% of US emissions. As such, the estimated incremental GHG emissions would not significantly exacerbate the problem of carbon pollution.

While we recognize that emissions will increase as production from the oil sands grows, both the industry and Canadian Government are working to minimize and mitigate these growing emissions. The industry continues to invest in new technology and practices that move the GHG intensity per barrel level down. Since 1990, GHG emission levels on a per barrel basis have been reduced by 26%¹², and several producers have achieved GHG intensities that are comparable to conventional oil production. This trend is expected to continue.

In 2007, the Alberta Government introduced GHG emission regulations that impose a carbon fee of \$15 per tonne if oil sands producers fail to achieve a mandatory 12% reduction in per barrel GHG emissions from an average baseline intensity (2003 to 2005). This fee is invested in CO₂ emissions mitigation efforts. Provincial and Federal Governments are currently developing regulations that potentially will increase these standards and penalties. In 2008, the Alberta government committed \$2 billion investment in Carbon Capture and Storage (CCS) technology that would be used to reduce CO₂ emissions. To date, two projects have been selected and signed grant agreements with the Province and they are expected to reduce GHG emissions by 2.8 million tonnes annually beginning in 2016.¹³

In addition, when the Canadian Government signed the Copenhagen Accord in December 2009, it committed to the same GHG reduction target of 17% below 2005 levels by 2020 as the United States Government. The Canadian Government continues to work toward meeting these commitments.¹⁴ Canada has advanced new regulations to curb tailpipe emissions which mirror those recently announced in the United States and it has moved forward with regulations that require new and existing coal-fired power plants to meet a GHG emission standard equivalent to a new efficient combined cycle natural gas

¹⁰ 2011 emissions, CAPP website, Environment Canada, 2013

¹¹ Canadian Oil Sands: Life-Cycle Assessments of Greenhouse Gas Emissions, Congressional Research Service, March 15, 2013 at p. 27¹² Canada-National Inventory Report 1990-2011, Part 1, Figure 2-6, page 53

¹² Canada-National Inventory Report 1990-2011, Part 1, Figure 2-6, page 53

¹³ <http://www.solutionsstarthere.ca/24.asp>

¹⁴ Canada's Emissions Trends, August 2012

power plant. Approval or denial of the Keystone XL Pipeline will have no impact on the plans of the Canadian Government, Alberta Government or the industry in reducing GHG emissions and thus no impact on North American GHG emission levels. Again, of the major suppliers of oil to the US, only Canada has stringent and increasing GHG emission standards. In our view, choosing suppliers without GHG emission standards will lead to greater emissions in the future.

Whether it is shipped by pipeline, train, or ocean tanker, the transportation of crude oil accounts for a small fraction of the lifecycle GHG emissions of a barrel of oil. The Keystone XL Pipeline is powered by electric motors and therefore the pipeline itself has little or no direct emissions when in operation.¹⁵ The EPA has suggested Keystone be required to purchase a certain amount of that requirement from renewable energy sources. Keystone does not control the source of the power it purchases. Rather, local utilities and power corporations are subject to State rule for renewable portfolio standards requirements. In Montana, for example, Basin Electric's 2013 resource portfolio includes over 20% of its power from renewable sources including wind and hydro power. In Nebraska almost 40% of Nebraska Public Power District's generation resources, as of 2011, were renewable or nuclear. Moreover, TransCanada is also a large electric power producer in Canada and the United States. To date, TransCanada has invested over \$5 billion in emission-less energy sources, including the largest wind farm in Maine and 13 hydro power facilities in the US Northeast, along with solar, nuclear, and wind developments in Canada. Specifically, TransCanada produces about 11,800 MW of energy, of which 3,600 MW or 31% is generated from emission-less sources. That 3,600 MW represents seven times the power requirements of the Keystone XL project.

Keystone XL is a modern, safe and efficient way to transport crude oil from Canadian and US production sources to market. It is not the primary and certainly not the only option to transport production to market and certainly does not have any material impact on production, refining or GHG emissions. To put the 875 mile US portion of the Keystone XL project in perspective, it represents 0.5% of the 182,618 miles of liquid petroleum pipelines that currently exist in the US. These pipelines are supplemented by a robust rail infrastructure in Canada and the US that has seen crude oil movement increase rapidly from 140,000 bpd in 2011 to 920,000¹⁶ in 2013 and a forecast of 1.1 million bpd¹⁷ in 2014. This trend in shipping crude by rail is expected to continue if pipeline capacity is constrained.

¹⁵ Department of State, Draft SEIS, March 2013, Table 4.12-6, page 4.12-12

¹⁶ International Energy Agency, Canadian Pacific Railway and CN outlook

¹⁷ Morgan Stanley, Kootenay Capital Management

The key arguments for the Keystone Pipeline remain: it is a privately funded \$5.3 billion direct link between production and refineries which enhances energy security, creates employment and minimizes environmental impact. It does not significantly exacerbate carbon emissions. TransCanada is aligned with efforts to transition to a less carbon intensive energy future, while reducing US dependence on foreign oil and moving jobs back to the United States.

Sincerely,

A handwritten signature in black ink, appearing to read "Kristine Delkus", followed by a horizontal line.

Kristine Delkus
Senior Vice-President
Pipelines Law & Regulatory Affairs