

Natural Resources Defense Council
Climate Impacts from the Proposed Keystone XL Tar Sands Pipeline
Executive Summary
July 23, 2013

A new economic and environmental analysis makes it clear. The Keystone XL tar sands pipeline exacerbates climate change. Construction of the pipeline is not in our national interest and it should be denied a Presidential Permit.

President Obama said on June 25 that his administration would reject Keystone XL if the tar sands pipeline would significantly exacerbate the problem of carbon pollution. On multiple fronts, ranging from how the pipeline would drive tar sands expansion to the excessive greenhouse gas emissions generated by the production of tar sands, the pipeline fails the President's all-important test.

As detailed in the paper by the Natural Resources Defense Council, construction of the Keystone XL tar sands pipeline would trigger significant increases in carbon pollution. The analysis reviews the greenhouse gas emissions from tar sands oil production. The analysis shows how, if built, the Keystone XL tar sands pipeline would drive major increases in tar sands extraction:

- **Over the project's 50-year timeline, Keystone XL would add between 935 million and 1.2 billion metric tons of carbon pollution to our atmosphere.**
- **The extraction, production, and refining of tar sands oil is more carbon-intensive than extracting and refining conventional oil.** The State Department and the Environmental Protection Agency both concluded that from the tar sands mine to the gas tank, tar sands emissions are 81 percent greater than conventional oil. If tar sands extraction increases, extraction methods would continue to shift from strip-mining to the more carbon-intensive *in situ* drilling. What's more, changes to peatlands from currently approved mines would release 11 million to 47.3 million metric tons of CO₂e. Additional emissions would come from petroleum coke, a tar sands byproduct burned internationally as a high-carbon coal substitute.
- **Keystone XL's climate impact should be considered within the broader context of U.S. policy regarding high-carbon infrastructure.** In addition to Keystone XL, the State Department is considering other pipeline projects that could increase annual carbon emissions by 16.2 million metric tons. Furthermore, as a single, discrete decision, rejecting Keystone XL would avoid carbon emissions on a similar scale to some of the most ambitious emission reduction programs currently underway in the United States; it would save the U.S. 18.7 million to 24.3 million metric tons of CO₂e per year – savings that are comparable to new U.S. heavy duty truck emission and efficiency rules (27.4 million metric tons of annual savings).
- **Due to currently limited refining capacity, Keystone XL is a necessary component of expanding tar sands production – and its associated climate emissions.** The ability of refineries to take on additional tar sands is limited, both in Canada and in the United States. Keystone XL would deliver tar sands oil to the Texas Gulf Coast, which has the capacity to refine 6.1 million barrels per day of heavy crude oil, and also offers port access to lucrative overseas diesel markets.
- **Based on current expansion plans, export pipelines from the tar sands region are expected to reach capacity by 2015, and Keystone XL is the only major pipeline proposal for transporting**

bitumen in the near-term. Four separate proposed export pipeline projects would increase the crude export capacity from Western Canada. However, each of these projects face obstacles which render their ultimate viability uncertain, and none of these projects will come online in time to alleviate short-term transportation constraints facing tar sands expansion plans.

- **In the absence of pipelines, rail is not an economically viable alternative for heavy tar sands transport.** The State Department’s Draft Supplemental Impact Statement was flawed in its assertion that tar sands development and transportation would happen regardless of whether or not Keystone XL was approved. Rail is expensive for transporting tar sands crude, which is why tar sands crude has been largely absent in the current crude-by-rail boom.
- **Industry and market opinion confirm Keystone XL is a linchpin for tar sands expansion.** This statement from RBC Capital Markets is representative of other industry comments: “The ... decision regarding Keystone XL is critical because it constitutes a vital export link for Canadian oil production in the 2015-17 timeframe. Should Keystone XL be rejected, Canadian oil sands producers will need to rethink expansion plans, timelines, and export pipeline solutions.”
- **Canada is not pursuing climate policy that would effectively counteract significant growth in greenhouse gas emissions, or meet its international climate target.** The United States cannot expect Canada to reduce greenhouse gas emissions from the tar sands. Total greenhouse gas emissions from the tar sands have continued to grow. Current regulations in Alberta are inadequate, and despite promises from the last four Canadian federal environmental ministers, the Canadian federal government has not yet introduced rules to effectively limit greenhouse gas pollution from Canada’s oil and gas sector.

The Keystone XL tar sands pipeline would have a significant impact on the profitability and expansion plans of tar sands production. Its approval would send a clear market signal to the tar sands industry to expand, increasing carbon emissions that would significantly exacerbate the problem of climate change.

On the other hand, denial of a Presidential Permit for the Keystone XL tar sands pipeline would deliver significant carbon emissions savings. It would make industry’s planned expansion of tar sands oil development infeasible for want of an economic way to get the product to market. New tar sands production projects would be canceled or postponed.

Keystone XL fails the president’s test. It significantly exacerbates the problem of carbon pollution. It is not in the national interest, and Keystone XL’s Presidential Permit should be denied.

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