To: U.S. Department of State <u>keystonecomments@state.gov</u> Re: Comments From 29 Climate Scientists, Ecologists And Environmental Health Scientists on the Supplementary EIS for the Keystone XL Pipeline Proposal Date: April 2, 2013

The 29 undersigned climate scientists, ecologists and health scientists are submitting the following comments on the supplementary environmental impact statement on the Keystone XL Pipeline proposal.

We have reviewed the draft Supplemental EIS, and find its assertions to be without merit in many critical areas. Also, it is disingenuous to claim that the revised proposal shortens the pipeline by 509 miles, since the southern portion is being built as a separate project, and the impacts of that portion are not included in this EIS. The full project still extends from more than 300 miles within Canada to the Gulf of Mexico. Furthermore, it is clearly designed to pick up additional heavy crude from the Bakken Marketlink projects in Montana and North Dakota, and these impacts are not adequately accounted for.

While we question many aspects of the EIS we are particularly concerned with four issues related to the proposed pipeline: the claim that additional oil is needed in the United States from tar sand production in Canada, contribution to climate change, destructive ecological impacts and adverse human health consequences.

No Need for Additional Oil

The assertion that the additional oil will be needed by the US seems unlikely in light of the growing oil production within the US and declining demand. In fact, an International Energy Agency analysis demonstrates that the US could be self sufficient in oil in the near future. With imports declining, the need for additional petroleum imports does not seem to be necessary. Alternatively, it is argued that this oil will be sent to idle refineries (another sign that petroleum use has declined) and then exported. Either way, it is unclear what the benefit will be to the United States.

Contribution to Climate Change

The assertion that even if the pipeline were not built, the oil would still be produced is inconsistent with the eagerness of the producers and refiners of this very dirty, high carbon product to have the pipeline built. This argument contradicts Administration claims in other cases that "infrastructure" to move products to market is essential for economic growth. Yet, in this case, the argument is just the opposite, this oil will be produced even if the pipeline is not built. Proponents argue that building the pipeline will allow the production of substantially more heavy oil from the tar sands. Looking at rail transport as an alternative that would have higher emissions simply ignores the best alternative of not building the pipeline at all. Hence, the ability to export more tar sands crude will increase carbon dioxide in production and in end use.

The assertion that the tar sands will not significantly increase global warming is simply not supported by the facts. While this might be said of any single project, this is simply false over the lifetime of the pipeline as even the calculations in the EIS demonstrate. Furthermore, the increase in emissions from tar sand oil reported in the EIS is at the very low end of estimates of the additional carbon dioxide released through the lifecycle of producing and refining tar sands-based petroleum products. These heavy oils are extracted by burning large quantities of relatively clean natural gas to liquefy the heavy bitumen. The EIS also ignores the additional emissions from "petcoke" an even more carbon intensive fuel that is simultaneously being produced from the tar sands and used like high carbon coal in power plants.

Utilizing tar sands oil and petcoke will significantly increase carbon dioxide emissions over the life of the project, and this is amplified by the loss of carbon storage capacity as the boreal forest is removed to access this resource.

There is no proof provided in the EIS that the oil will be burned by others if the United States does not take it, but even if it were, that is no reason for the United States to be the facilitator of all of the environmental and health impacts cited in these comments. Addressing climate change is an urgent priority as President Obama stated both in his inaugural address and in his State of the Union speech. How is importing the world's highest carbon content crude consistent with national policy goals?

Destructive Ecological Impacts

If addressing climate change were not a sufficient reason to halt the XL Pipeline, the devastating destruction of Canada's large and pristine boreal forests to extract bitumen, and the impacts of the pipeline itself should be sufficient. Rejecting the XL Pipeline will avoid direct damage to terrestrial ecosystems and water bodies and protect multiple species that live in and pass through these habitats, including tens of millions of migrating North American birds. In addition to these threats, the EIS identifies 13 endangered and threatened species that might be adversely affected by the pipeline within the US.

We encourage you to watch the TedX talk by photographer Garth Lenz to understand the full scope of the environmental devastation involved http://www.ted.com/talks/garth-lenz images of beauty and devastation.html

According to the EIS, the pipeline will cross 1,073 surface bodies of water, numerous aquifers, wetlands and flood planes. The EIS states that the likelihood of spills is "small." Data quoted in the EIS from the Pipeline and Hazardous Materials Safety Administration analyzed all oil pipeline spills during a ten-year period. What has not been done is to evaluate the performance of pipelines carrying tar sands crude, or those operated by the firm proposing the XL pipeline, which has a demonstrated higher rate of failure. Hence, the EIS fails to justify why potential spills of tar sands crude are a "small risk" and ignores the on going damage and extraordinary high cost of clean up of the 2010 spill in the Kalamazoo River in Michigan.

Adverse Human Health Consequences

Climate change has been called "the biggest global health threat of the 21st Century" by the American College of Physicians, the Royal College of Physicians and Surgeons of Canada, the Royal College of Physicians of London, along with the colleges and academies of medicine in 13 other countries. In addition, this project has serious local and regional human health impacts from tar sands extraction and refining: downstream toxic exposures, including carcinogens, for members of the Athabasca Chipewyan and Mikisew Cree First Nations in Alberta. Processing this crude significantly increases air pollution within the United States from the multiple refineries of the highly toxic tar sands bitumen. This places

large numbers of Americans with cardiac disease, asthma, and other chronic pulmonary disease at greater risk. The EIS fails even to consider environmental justice issues.

Conclusions

In short, we conclude that the XL pipeline project poses a number of environmental and human health threats, in addition to exacerbating climate change. The building of this dedicated, inflexible infrastructure assures the continued use of this destructively produced, high emissions oil far into the future. This at a time when the United States must reduce its emissions, not increase them.

An "All of the Above Energy Policy" will not address climate change as this case illustrates. What is required is an "All of the Above Climate Policy" that will reduce greenhouse gas emissions, and a "Selective Energy Policy" that avoids options that are destructive of the environment, human health and the climate system. Now is the time to make a serious commitment to place the United States on a lower carbon trajectory. If not now, when? If not here, where? Nations watch the actions of the United States and take notice. This is an opportunity for our government to enhance its international reputation and establish leadership on reducing emissions.

We understand the complexity of this decision, politically, economically, and diplomatically. But despite the claims of the EIS that the environmental impacts are minor, these assertions are not supported by the science. Our scientific judgment is that the actual and potential environmental damage are sufficiently severe to reject the Keystone XL Pipeline proposal in order to protect the climate, human health and the multiple ecosystems this project threatens. A group from the undersigned is willing to meet with anyone in the State Department or within the Administration at your convenience to discuss this important issue, and the decision that you face.

Submitted on behalf of the scientists listed below,

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