

Debate: Keystone XL US-Canada oil pipeline

Background and context

TransCanada Keystone Pipeline filed an application in 2008 for a Presidential Permit with the Department of State to build and operate the Keystone XL Project. The original Keystone XL Project proposed a 1,700-mile crude oil pipeline and related facilities that would be used largely to transport Western Canadian Sedimentary Basin oil sands (tar sands) from an oil supply hub in Alberta, Canada to delivery points in Oklahoma and Texas. The Keystone project would be

capable of transporting up to 830,000 barrels of U.S. crude per day and is estimated to cost \$7 billion.



In the image to the left from Wikipedia, Phase 1 and 2 have already been completed. Phase 3 is currently under construction. It is Phase 4, through the Midwestern US states of Montana, South Dakota, and Nebraska that are currently being debated. As you can see, the XL extension would provide a sort of “short cut” that would accommodate the new flow of heavy oil sands from Canada.

The project has generated significant debate in the United States regarding the extraction and use of oil from Alberta's tar sands, which generally results in greater environmental issues and greenhouse gas emissions than conventional reservoir extraction. Pipelines are also fairly vulnerable to spills. In one scenario, a section of pipeline would

run through the Nebraska Sand Hills, a distinct eco-region that is perched atop the Ogallala Aquifer. It is the largest, most complex wetland ecosystem in the US.

Supporters argue it will create jobs, and strengthen US energy independence from foreign sources. As the cost of crude oil continues to rise, tensions around the world increase, and wide scale environmental changes are being observed, independent energy reliance is an important consideration for our future.

If the original proposal had passed, construction would have begun in 2013, with the actual date dependant on the necessary permits, approvals, and authorizations. A new proposal made this year reduces Keystone's path by 500 miles, reduces the number of states through which it passes, and tries to skirt around the Sand Hills. This new path is shown in the image on the right, from the New York Times. Construction dates are now being projected for 2015.



Watch Videos:

1. *The Oil Sands of Alberta:* <http://www.cbsnews.com/video/watch/?id=1225047n>
 - a. What are "oil sands"?

2. *Tar Sands Oil Extraction--The Dirty Truth:* <http://www.treehugger.com/fossil-fuels/canadas-tar-sands-so-destructive-it-makes-its-well-paid-workers-want-quit-video.html>
 - a. Is mining oil sands destructive to the environment? Provide several reasons to support your position.

3. *Senate Measure Approves Keystone Pipeline:* <http://video.msnbc.msn.com/msnbc/51305436#51305436>
 - a. What are two big concerns about the pipeline?

 - b. Why are we concerned about developed tar sands as an energy source?

 - c. What are benefits to building the pipeline?

 - d. How could the president keep his promise of a more sustainable energy future and still give permission for the pipeline project?

4. *TransCanada CEO defends Keystone Pipeline:*

<http://money.cnn.com/video/news/2013/03/07/keystone-pipeline-transcanada-ceo.cnnmoney/>

a. How does the CEO of TransCanada characterize the tar sands fuel source compared to conventional oil?

b. What is his reasoning for building the Keystone Pipeline, despite its unpopular status with many environmentalists?

Read WebPages:

5. *TransCanada's website for Keystone:* <http://keystone-xl.com/>

ABOUT: Give a brief description of the Keystone Pipeline project.

JOB: Where will the majority of Keystone jobs be found?

ENVIRONMENTAL RESPONSIBILITY: What are some safety measures that TransCanada will take to protect the environment?

ENERGY SECURITY: Who are the top suppliers of oil to the United States? How much will tar sands provide?

Read Articles:

6. *Pipelines Explained:* <http://www.propublica.org/article/pipelines-explained-how-safe-are-americas-2.5-million-miles-of-pipelines>

Name and describe 4 major problems associated with the current pipeline system in the US. Where applicable, discuss what problems are associated with Keystone specifically.

7. *Nebraska Sand Hills:* <http://www.mnn.com/earth-matters/wilderness-resources/blogs/sand-hills-vs-oil-sands>

What are the Nebraska Sand Hills? Give a description of the unique eco-region, and discuss 4 environmental services they provide.

8. *Exxon Oil Spill Cleanup Ongoing in Arkansas—pipeline shut down:*
<http://www.reuters.com/article/2013/04/01/us-exxon-pipeline-spill-idUSBRE92U00220130401>

- a. What happened to ExxonMobil's Pegasus Pipeline last week in March?

- b. What's a "smart pig"?
- c. Approximately how many barrels of Heavy Crude have been spilled, between ExxonMobil and Shell over the last several years?
- d. Briefly describe the unique problem of shipping heavy crude through the pipeline system.

9. *Read and comment on Exxon's latest stand on the oil spill in Arkansas:*
<http://www.treehugger.com/corporate-responsibility/exxon-wont-pay-cleanup-fund-because-arkansas-oil-spill-isnt-oil.html>

10. *Toronto Star: Keystone pipeline spill in Arkansas:*
http://www.thestar.com/news/world/2013/03/31/keystone_pipeline_plan_assailed_after_oil_spill_in_arkansas.html Watch the short video on the website!

- a. How many environmental problems can you name?

11. *A Dilbit Primer:* <http://insideclimatenews.org/news/20120626/dilbit-primer-diluted-bitumen-conventional-oil-tar-sands-Alberta-Kalamazoo-Keystone-XL-Enbridge>

What is "dilbit" and why is it so hard to clean up?

Analyze the Information:

1. Describe two environmental liabilities that result from building the Keystone XL extension.

2. Describe two economic or societal benefits that result from building the Keystone extension.

3. What is your final opinion about Keystone? Name the factors that influence your position.