



A Primer on the Status of the Keystone XL Pipeline Project

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National Regulatory Research Institute

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Executive Summary

Keystone XL is the last piece of TransCanada's Keystone pipeline system. The project, originally announced in 2005, connects Canada's oil sands to American refineries on the Gulf Coast and in Illinois. Other pipelines in the project have connected Hardisty, Alberta to Patoka and Wood River, Illinois and Nederland and Houston, Texas. Because the Keystone XL Pipeline crosses an international border, construction requires a Presidential Permit. Keystone XL has been under consideration by the U.S. Department of State since 2008, and the State Department's review process has taken place amidst significant controversy between supporters and opponents of the pipeline.

The Keystone XL Pipeline has gone through extensive review by multiple interest groups and government agencies. The major events in the project's history can be seen in **Table 1** on the next page. The State Department must determine that the pipeline serves the "national interest" before a Presidential Permit is granted. During the determination process, the route of Keystone XL has been changed multiple times, and the environmental and economic impacts of the pipeline have come under scrutiny. Keystone XL's national interest determination has been delayed indefinitely due to a recent ruling by Nebraska's Third Circuit court.

Keystone XL would travel through the states of Montana, North Dakota, South Dakota, and Nebraska. The pipeline would carry 830,000 barrels per day of crude oil from the Western Canadian Sedimentary Basin. This oil is extracted from Canada's oil sands, a resource with estimated oil reserves of 167.9 billion barrels. Oil producers in Canada are seeking an efficient path to market for their products.

The controversy surrounding the pipeline centers on environmental and economic issues. The project has significant environmental impacts, with oil spills, greenhouse gas emissions, and further development of fossil fuels among the primary concerns. However, the pipeline would also offer economic benefits through increased employment, energy security, and infrastructure development. Large political coalitions have formed around both sides, with little option for compromise.

The State Department's attempt to balance these issues must account for each of these topics. A Presidential Permit may be granted even when a project has adverse environmental impacts, and that determination comes down to the nebulous concept of "national interest." This paper details the arguments made for and against the pipeline, and attempts to supply context for the factors that the State Department has considered during the application process.

Table 1: Major Dates and Events in the Keystone Pipeline Projects

Month and Year	Event Description
April 2006	TransCanada applied for a Presidential Permit to build the Keystone Pipeline and Cushing Extension.
September 2006	The U.S. Department of State (DOS) began the environmental impact process for the Keystone Pipeline.
March 2008	DOS approved the Keystone Pipeline’s Presidential Permit.
September 2008	TransCanada applied for a Presidential Permit to build the Keystone XL Pipeline.
January 2010	DOS began the environmental impact process for the Keystone XL Pipeline.
April 2010	DOS’ draft environmental impact statement was released for public comment.
July 2010	The U.S. Environmental Protection Agency (EPA) rated the draft as “Inadequate Information.”
April 2011	DOS released a supplemental draft environmental impact statement, which addressed concerns raised by the EPA and public commenters.
June 2011	EPA classified the supplemental report as “Environmental Objections - Insufficient Information.”
August 2011	DOS released the final environmental impact statement, opening a final comment period.
November 2011	Nebraska’s state legislature enacted LB 1, requiring Nebraska’s Department of Environmental Quality (NDEQ) to collaborate with DOS in the review process of the Keystone XL Pipeline.
November 2011	DOS announced a delay in the permit process in order to address concerns raised by NDEQ.
December 2011	Congress passed the Payroll Tax Cut Continuation Act of 2011, which included instructions to the President to issue or deny Keystone XL a Presidential Permit within 60 days.
January 2012	DOS denied TransCanada’s Presidential Permit application.
May 2012	TransCanada applied again for a Presidential Permit for the Keystone XL Pipeline.
June 2012	DOS began the environmental impact process again.
March 2013	DOS released the supplemental draft environmental impact statement.
April 2013	EPA rated the report as “Environmental Objections – Insufficient Information.”
January 2014	DOS released the final environmental impact statement, opening a public comment period.
February 2014	Nebraska’s Third District Court ruled that LB 1161 violated Nebraska’s Constitution, leaving NDEQ no authority to cite the path of Keystone XL.
April 2014	DOS announced an indefinite delay in the application process.

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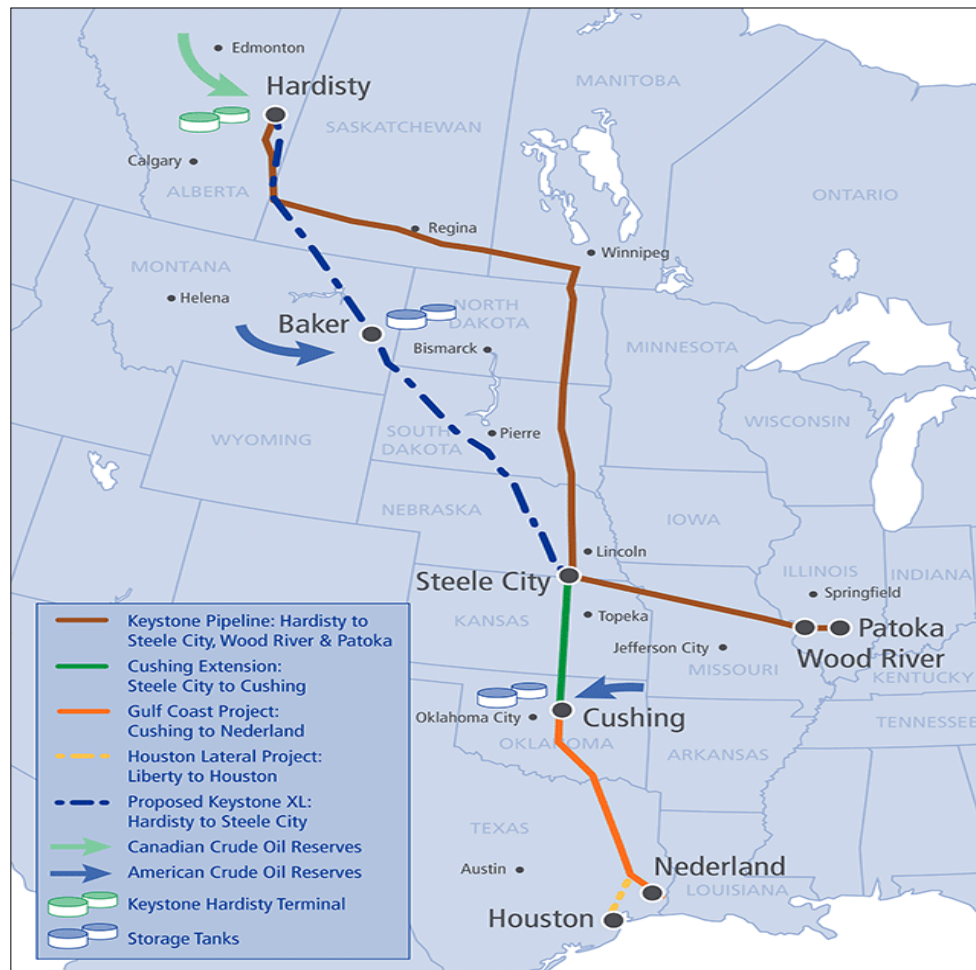
List of Acronyms

AER	Alberta Energy Regulator
Bpd	Barrels per day
CSS	Cyclic Steam Stimulation
DilBit	Diluted Bitumen
DOS	United States Department of State
DSEIS	Draft Supplemental Environmental Impact Statement
EIS	Environmental Impact Statement
EO	Executive Order
EPA	United States Environmental Protection Agency
FEIS	Final Environmental Impact Statement
FSEIS	Final Supplemental Environmental Impact Statement
GHG	Greenhouse Gas
NDEQ	Nebraska Department of Environmental Quality
NEPA	National Environmental Policy Act
NOI	Notice of Intent
NRDC	Natural Resources Defense Council
PSC	Public Service Commission
SAGD	Steam-Assisted Gravity Drainage
SCO	Synthetic Crude Oil
SDEIS	Supplemental Draft Environmental Impact Statement
Synbit	Synthetic Bitumen
TAN	Total Acid Number
WCSB	Western Canadian Sedimentary Basin
WTT	Well-to-Tank
WTW	Well-to-Wheel

I. Introduction

The Keystone Project, a four-phase pipeline project connecting Alberta to Texas and Illinois, was first proposed in 2005 by TransCanada,¹ a Canadian company based in Calgary, Alberta. TransCanada owns natural gas pipelines, oil pipelines, and various generating assets in Canada and the United States.² TransCanada's 2005 proposal consisted of both the Keystone and Keystone XL Pipeline projects. As seen in Figure 1 below, the Keystone Pipeline included the Keystone Pipeline, connecting Hardisty, Alberta to Patoka and Wood River, Illinois, and the connected Cushing Extension, from Steele City, Nebraska to Cushing, Oklahoma. As originally proposed in 2005, Keystone XL would have connected Alberta to the Cushing Extension, then the extension to the Gulf Coast.

Figure 1: 2005 Announced Pipelines



Source: Author's construct adapted from TransCanada, *Keystone Pipeline System: Overall map of the TransCanada Keystone Pipeline System*.

¹ TransCanada, 2005.

² TransCanada, 2013

Because the Keystone and Keystone XL Pipelines would cross the United States-Canada border, a Presidential Permit was needed to authorize construction of the border crossing. Under the authority of Executive Order 13337,³ the State Department must determine that such a project would suit the “national interest.”

The Keystone Pipeline was determined to be in the national interest, and received a Presidential Permit in March of 2008. Both the Keystone Pipeline and Cushing Extension are currently operational. However, TransCanada’s application for the Keystone XL Pipeline has not been approved; its 2008 proposal for Keystone XL was denied in 2012,⁴ and a revised proposal was made later that year.⁵

The Keystone XL Pipeline would carry 830,000 barrels per day (bpd) of crude oil, while the capacity of the Keystone Pipeline is 590,000 bpd.⁶ TransCanada determined that the southern pipeline from Cushing, Oklahoma to Nederland and Houston, Texas, now referred to as the Gulf Coast Pipeline, was financially viable independent of the Keystone XL project, and the Gulf Coast Pipeline entered service in January of 2014.⁷ The revised Keystone XL proposal avoids the controversial Sand Hills region of Nebraska, and only consists of the northern pipeline from Hardisty, Alberta to Steele City, Nebraska.

As expected, there are both opponents and supporters of this project. Opponents express concerns about the environmental impacts of both the pipeline and the oil production process associated with Canada’s oil sands. Pipeline spills threaten to contaminate near-by land and water resources. Producing crude oil from oil sands results in more greenhouse gas emissions than other production methods, and related oil recovery techniques have extreme impacts on land and water resources. Critics also contend that Keystone XL would encourage further development and usage of fossil fuels, and oppose the pipeline as part of a larger battle against climate change.

Supporters emphasize the economic impacts of the pipeline’s construction. The project would increase employment as the pipeline is built and operated, and would strengthen the United States’ position in the global oil market. TransCanada has also allotted 100,000 bpd of Keystone XL’s capacity to transport crude from the Bakken Formation in North Dakota and Montana, which would increase market access to the domestic resource. Supporters assert that the Canadian oil sands will be processed even without the existence of Keystone XL. The pipeline would therefore bolster the United States’ energy security by encouraging Canadian exports to the United States, rather than to other countries.

As the fate of Keystone XL’s Presidential Permit is determined, discussion of both the economic and environmental impacts of the project will continue. This paper describes the technical aspects and administrative history of the Keystone and Keystone XL Pipeline systems, as well as the arguments made for and against the pipeline. This paper does not attempt to pass

³ The White House, 2004.

⁴ Office of the Spokesperson, 2012.

⁵ TransCanada, 2012.

⁶ Ibid.

⁷ TransCanada, 2014.

judgment on the merits of each argument for and against the pipeline. Positions presented here are meant simply as an informational summary of major, publicly made arguments.

II. Technical Background

The technical and administrative history of the Keystone and Keystone XL Projects have included approval, rejection, and revision. The Presidential Permit and Environmental Impact Statement processes are instrumental to the history of these projects, and the inter-agency coordination required has created a lengthy record for both pipeline projects. This section details the Presidential Permit process, the Environmental Impact Statement process, and the pipeline permits applied for by TransCanada.

While the Keystone projects have gone through revision, the basic details have remained the same. The projects would transport crude oil produced in the Western Canadian Sedimentary Basin (WCSB) from Alberta to Illinois and refineries on the Gulf Coast. This crude is extracted from Canada's oil sands,⁸ which are a mixture of bitumen, sand, water, and other minerals. The pipelines would cross the United States-Canada border, and therefore require a Presidential Permit.

A. Presidential Permit Process

Executive Order (EO) 13337⁹ grants the U.S Department of State (DOS) the authority to grant Presidential Permits. These permits are granted for the construction, connection, operation, or maintenance of facilities for the exportation or importation of petroleum products, coal, or other fuels. DOS issues a Presidential Permit when such a project serves "national interest."

The term "national interest" is not defined in EO 13337. In DOS' 2014 Final Supplemental Environmental Impact Statement (FSEIS) of the Keystone XL Pipeline, the department listed some of many factors considered in the national interest determination, including: energy security; environmental, cultural, and economic impacts; foreign policy; and compliance with state and federal regulations.¹⁰

DOS must request the consultation of the following officials during its assessment:

1. The Secretary of Defense
2. The Attorney General
3. The Secretary of the Interior
4. The Secretary of Commerce
5. The Secretary of Transportation
6. The Secretary of Energy
7. The Secretary of Homeland Security

⁸ The "oil sands" are also referred to as "tar sands" by some, due to the appearance of the bitumen mixture. The mixture is black and sticky, like the man-made tar. The terms are interchangeable, and the use of "oil sands" in this report is intended to reflect DOS' usage of the term.

⁹ The White House, 2004.

¹⁰ These listed factors are not inclusive of all factors DOS may consider. These factors are relevant to Keystone XL's application, but other factors may be included when assessing other projects.

8. The Administrator of the Environmental Protection Agency

DOS must also discuss the permit with State, tribal, local, and appropriate foreign governments. These governments have 90 days to respond, excluding requests for further information. After these agencies and governments provide input, DOS notifies the agencies of its decision and allows 15 days for the agencies to object. Without objection, the permit is issued.

In determining national interest, DOS must also comply with the National Environmental Policy Act (NEPA). NEPA directs DOS to consider the environmental impacts of any project that would have a significant impact on the environment. DOS subsequently was required to prepare an Environmental Impact Statement (EIS) for each Keystone Project application. The EIS is produced through a Notice of Intent, Draft EIS, Final EIS, and Record of Decision. DOS, as the lead agency for the Keystone Projects, must seek input from “cooperating agencies.”¹¹

During the NEPA process, the U.S. Environmental Protection Agency (EPA) reviews and rates the adequacy of each prepared EIS, as well as the environmental impact of proposed projects. EPA may rate an EIS as Adequate, Insufficient Information, or Inadequate, with the associated environmental impacts of the project being rated as Lack of Objections, Environmental Concerns, Environmental Objections, or Environmentally Unsatisfactory. The EIS’ lead agency must then respond to the EPA’s rating by subsequently modifying the Draft EIS before releasing a Final EIS.

Once the Final EIS is issued, DOS has 90 days to make its national interest determination. This period opens the Final EIS to public comment, and comments may engender a supplemental EIS, resetting the national interest timeline. If DOS determines that further information is necessary, a Supplemental EIS may be drafted, which then undergoes the same review and comment process.

An EIS determined environmental impact does not, by itself, determine national interest. While the EIS may find adverse environmental impacts, NEPA only requires that agencies consider potential environmental impacts in their decision-making process. DOS’ national interest determination must take those environmental impacts into consideration, however, the ultimate issuance or denial of a Presidential Permit includes many other factors. A project that is determined to have adverse environmental impacts may still receive a Presidential Permit, if other factors cause it to be in the national interest.

B. Keystone Pipeline Project

TransCanada first applied for a Presidential Permit to construct the Keystone Pipeline Project in 2006. The application included the first two phases of the four-phase project, and would carry a smaller amount of crude oil than the Keystone XL project. The Keystone Project’s

¹¹ For the Keystone XL Project, these agencies include: U.S. Environmental Protection Agency, Pipeline and Hazardous Materials Safety Administration, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Farm Service Agency, Natural Resources Conservation Service, Rural Utilities Service, Western Area Power Administration, and state environmental agencies.

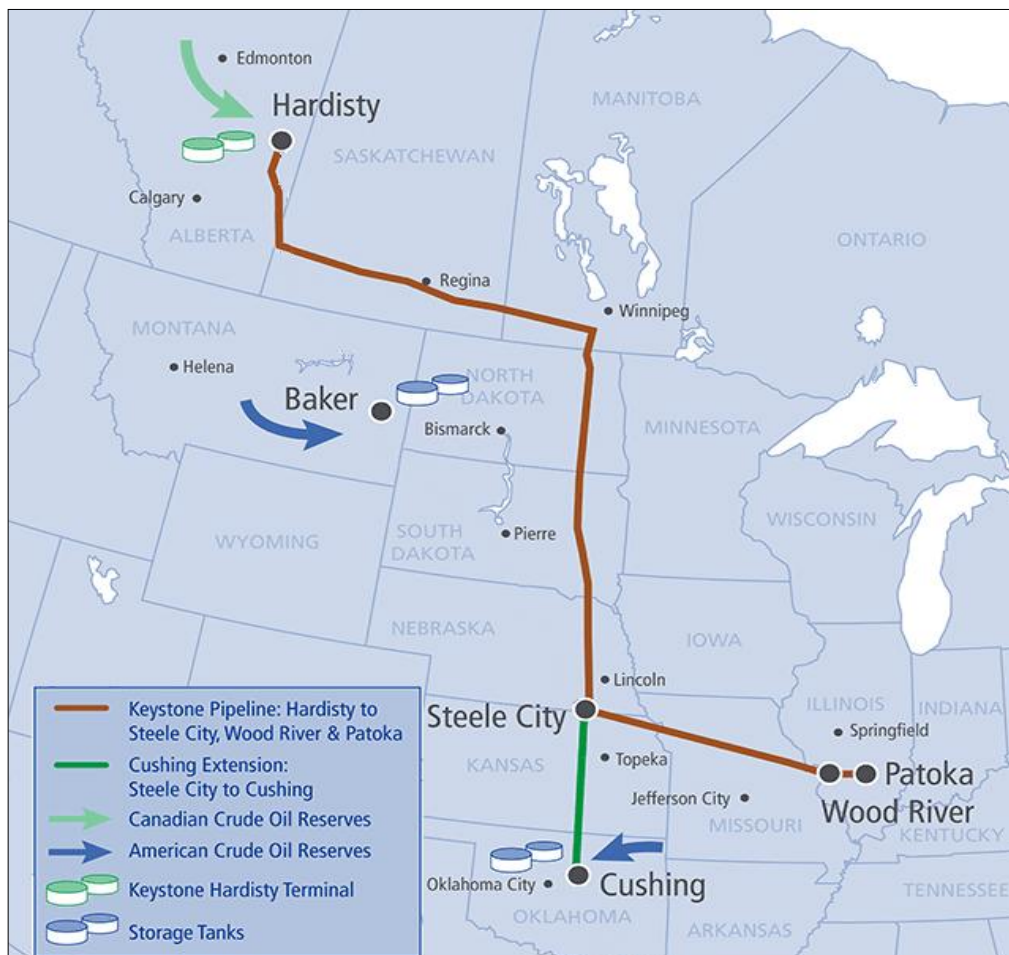
EIS found it to have limited environmental impacts, and its Presidential Permit was granted in 2008.

1. Pipelines Included

The Keystone Project included the Keystone Pipeline and the Cushing Extension. The Keystone Pipeline, which crosses the United States-Canada border in Cavalier County, North Dakota, traverses 1,082 miles within the United States. The pipeline has a capacity of 590,000 bpd, and delivers crude oil from the WCSB to Wood River and Patoka in Illinois.

The Cushing Extension connects to the Mainline pipeline. This connection occurs at Steele City, Nebraska, and travels 298 miles to crude oil terminals and tanks in Cushing, Oklahoma. Figure 2 shows the pipelines included in the Keystone Project.

Figure 2: 2006 Keystone Pipeline Project



Source: Author's construct adapted from TransCanada, *Keystone Pipeline System: Overall map of the TransCanada Keystone Pipeline System*.

2. Presidential Permit and Operational Status

DOS found that the construction and operation of the pipeline was in the national interest, and did meet environmental protection policies. The project served national interest by:

- (a) Increasing the diversity of the United States' available crude oil suppliers.
- (b) Shortening the pathway between crude supplies in the WCSB and domestic refineries.
- (c) Increasing crude oil supplies from a "stable and reliable trading partner of the United States."
- (d) Providing crude oil to supplement declining imports.

DOS also found that, with additional approaches and mitigation methods determined through the EIS process, the Keystone Pipeline would "result in limited adverse environmental impacts."¹²

The State Department issued a Presidential Permit for the Keystone Project on March 11, 2008. The Mainline subsequently began delivering crude in June 2010,¹³ and the Cushing Extension became operational in February 2011.¹⁴

C. Keystone XL Pipeline Project

After the Keystone Project received its Presidential Permit, TransCanada began the application process for the Keystone XL Project. While the application process for Keystone took just under two years, Keystone XL has been met with repeated delay and revision. TransCanada has applied for Keystone XL's Presidential Permit twice, once in 2008 and again in 2012. This section details these proposals, and the major events in each application's determination.

1. 2008 Proposal

TransCanada's original vision for the Keystone XL pipeline was embodied in its 2008 proposal. The Presidential Permit application was studied and revised multiple times before its eventual denial in 2012. DOS' EIS prompted substantial feedback from the public, with over 280,000 filed comments.¹⁵

i. Pipelines Included

Keystone XL's 2008 proposal included the Keystone XL Pipeline and the Gulf Coast Pipeline. These pipelines, which would connect to both ends of the Cushing Extension, would each have a capacity of 830,000 bpd. Figure 3 illustrates the pipelines included in the 2008 Keystone XL Project.

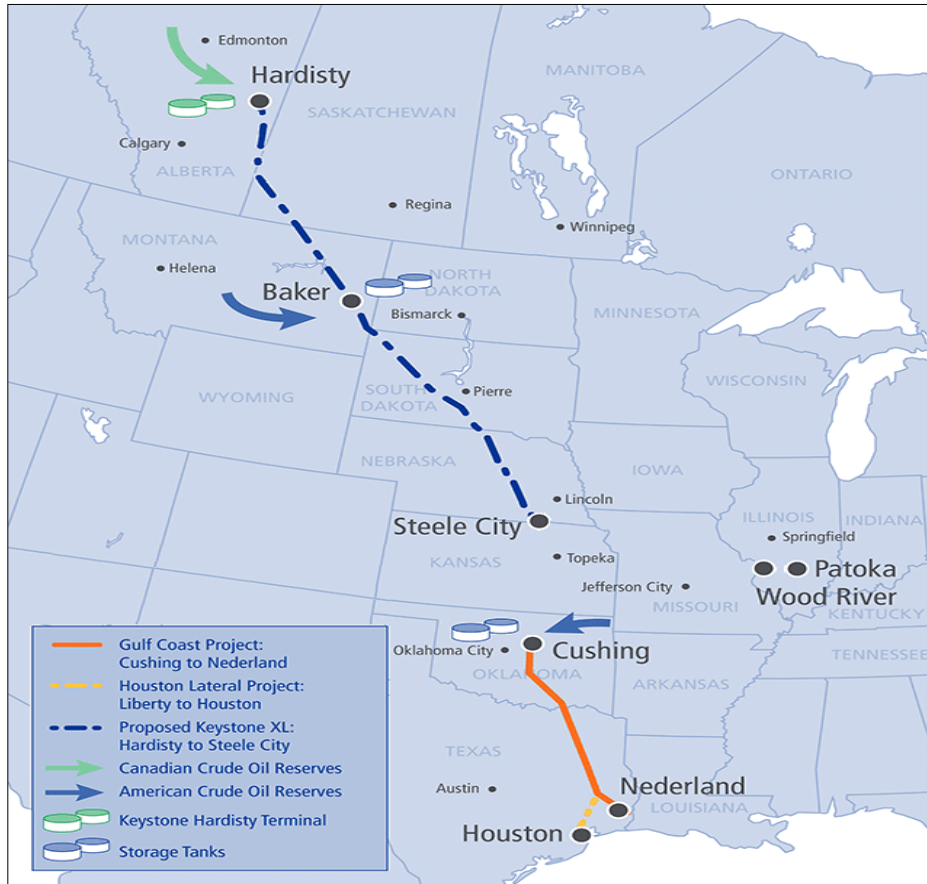
¹² United States Department of State, 2008.

¹³ TransCanada, 2010.

¹⁴ TransCanada, "Keystone's Cushing Extension Begins Deliveries to Oklahoma," 2011.

¹⁵ United States Department of State, 2011.

Figure 3: 2008 Keystone XL Pipeline Project



Source: Author’s construct adapted from TransCanada, *Keystone Pipeline System: Overall map of the TransCanada Keystone Pipeline System*.

ii. Presidential Permit Timeline

TransCanada submitted Keystone XL’s application for a Presidential Permit in September 2008.¹⁶ DOS published its Notice of Intent to conduct an EIS in January of 2010,¹⁷ and released the draft EIS in April of 2010.¹⁸ In July 2010, EPA rated the Draft EIS as “Category 3-Inadequate Information.”¹⁹

EPA felt additional information was needed in determining the purpose and need for the project; greenhouse gas emissions and air pollutant emissions related to the project; pipeline safety and spill response; and impacts on environmental justice communities, wetlands, and migratory birds. EPA’s rating instructed DOS to assess these issues and return a supplemental or revised draft EIS.

¹⁶ Delkus, 2008.
¹⁷ Gallogly, 2009.
¹⁸ Brakel, 2010.
¹⁹ Giles, 2010.

DOS released its Supplemental Draft EIS (SDEIS) in April 2011.²⁰ The SDEIS included revisions from both the EPA and public commenters. Expanded or newly addressed topics included project facilities, spill impacts on groundwater and land, alternative scenarios to the proposed project, environmental justice considerations, and greenhouse gas and air pollutant emissions related to the project. While EPA commended DOS' attempts to improve the SDEIS, they ultimately concluded that the SDEIS did not "...fully assess the environmental impacts of the proposed Project, including potential impacts to groundwater resources and communities that could be affected by potential increases in refinery emissions."²¹ EPA rated the SDEIS as "Environmental Objections - Insufficient Information (EO-2)."²² EPA recommended that these issues, as well as the level of Greenhouse Gas (GHG) emissions associated with the project, be further considered in the Final EIS (FEIS).

DOS released the FEIS on August 26, 2011.²³ This marked the beginning of the 90-day public comment period related to DOS' national interest determination. In November 2011, before the end of that comment period, Nebraska enacted LB 1,²⁴ which required Nebraska's Department of Environmental Quality (NDEQ) to collaborate with any federal agency conducting a review under NEPA for oil pipelines crossing the state. Citing concerns with Keystone XL's proposed route across the Sand Hills region of Nebraska,²⁵ NDEQ, DOS, and TransCanada set out to develop an alternative route through Nebraska. DOS announced that it would delay the national interest decision in order to further examine alternative routes on November 10, 2011.²⁶

Shortly thereafter, on December 23, 2011, Congress passed the Payroll Tax Cut Continuation Act of 2011.²⁷ This bill instructed the President to issue the Keystone XL Project its Presidential Permit within 60 days, unless the President found the project to not be in the national interest. Subsequently, citing insufficient time to address Nebraska's concerns, DOS denied TransCanada's application for a Presidential Permit on January 18, 2012.²⁸

The denial did not preclude another application for the Keystone XL Project or a similar project. TransCanada continued to work with NDEQ, and submitted a report to NDEQ assessing a Nebraska reroute in April of 2012.²⁹

2. 2012 Proposal

Shortly after denial of the 2008 project, TransCanada reapplied for a Presidential Permit. This project does not feature the same pipelines, and takes a different route through Nebraska. The 2012 application is still awaiting a national interest decision from DOS. At the same time, a

²⁰ Brakel, 2011.

²¹ Giles, 2011.

²² Ibid.

²³ Thompson, 2011.

²⁴ State of Nebraska, n.d.

²⁵ Nebraska Department of Environmental Quality, 2013, page 5.

²⁶ Office of the Spokesperson, 2011.

²⁷ 112th Congress, 2011.

²⁸ Office of the Spokesperson, 2012.

²⁹ exp Energy Services Inc, 2012.

Nebraska District Court ruling has further clouded the approval of Keystone XL’s Presidential Permit by calling into question the constitutionality of Nebraska’s LB 1161, which had been passed to exempt TransCanada from some of the requirements of LB 1. DOS has announced that no national interest determination will be made before the constitutionality of LB 1161 is determined, and has announced no official timeline for its final decision.³⁰

i. Pipelines Included

The 2012 Keystone XL proposal features a different route for the pipeline. As a result of coordination between TransCanada and NDEQ, the 2012 route avoids the Sand Hills region of Nebraska. Figure 4 shows Keystone XL’s proposed 2012 route.

Figure 4: 2012 Keystone XL Pipeline Project



Source: Author’s construct adapted from TransCanada, *Keystone Pipeline System: Overall map of the TransCanada Keystone Pipeline System*.

The revised Keystone XL project no longer includes the Gulf Coast Pipeline. After the 2012 refusal of the Presidential Permit, TransCanada elected to separate the Gulf Coast Pipeline from the Keystone XL project. Because the Gulf Coast Pipeline does not cross international

³⁰ Office of the Spokesperson, 2014.

borders, no Presidential Permit was required for its construction. The Gulf Coast Pipeline began delivering crude oil in January 2014.³¹

ii. Presidential Permit Timeline

TransCanada submitted the revised Keystone XL application in May 2012.³² DOS published an NOI to conduct an SEIS in June of 2012,³³ and released the DSEIS in March of 2013.³⁴

EPA rated the DSEIS as EO-2, Environmental Objections — Insufficient Information.³⁵ EPA suggested that DOS expand their discussion of GHG emissions, pipeline safety, alternative pipeline routes, and community and environmental justice impacts. DOS' FSEIS expanded its analysis of oil spills, climate change, oil markets, and the impacts of rail transportation under its No Action Alternative scenario. The FSEIS was released in January of 2014.³⁶

Within the FSEIS, DOS examined No Action Alternatives and alternative route scenarios. DOS made an attempt to examine three scenarios under the No Action Alternative: direct rail transportation to the Gulf Coast, rail/pipeline transportation, and rail/tanker transportation. In addition, two alternative routes were examined: the 2011 Steele City Alternative and the I-90 Corridor Alternative. These scenarios were evaluated on physical disturbance, GHG emissions, and spill risk.

DOS found that the No Action Alternative scenarios would affect fewer acres of land, but cautioned that No Action Alternatives would result in more concentrated permanent impacts. The Steele City Alternative would traverse the sensitive Nebraskan Sand Hills region, but would be shorter than the proposed route. The I-90 Corridor Alternative would be longer than the proposed route, but would cross fewer miles of highly erodible soil.

The GHG emissions of each of the No Action Alternative scenarios were found to be higher than the proposed project. The rail/tanker scenario was the least impactful of the alternative scenarios, but still emitted 27.8% more GHG emissions.³⁷ Emissions from the Steele City Alternative were similar to the proposal, and the I-90 Corridor Alternative saw an estimated 2.8% more GHG emissions. These estimations stem from the conclusion that neither denial nor approval of Keystone XL will have a significant impact on the rate of oil extraction from the WCSB.³⁸ Therefore, the No Action Alternatives still include GHG emissions related to oil sands extraction.

³¹ TransCanada, 2014.

³² TransCanada, 2012.

³³ Walker, 2012.

³⁴ United States Department of State, 2013.

³⁵ Giles, 2013.

³⁶ United States Department of State, 2014.

³⁷ The rail/pipeline scenario emitted 39.7% more GHG emissions, and the direct rail scenario emitted 41.8% more GHG emissions.

³⁸ United States Department of State, 2014, chapter 5.3, page 6.

DOS estimated the impact of oil spills to be much greater in the No Action Alternative scenarios. The proposed route would lead to release of an estimated 518 barrels per year. The alternative routes would release similar amounts of oil; the Steele City Alternative would release 513 barrels per year, and the I-90 Corridor Alternative would release 533 barrels per year. The rail/pipeline scenario to the Gulf Coast, the least impactful No Action Alternative, would release 1,227 barrels per year.³⁹

The FSEIS does not provide a recommendation between the evaluated scenarios. It states only that: “The Final Supplemental EIS does not specify a Departmental preference between these two alternatives because no final United States position has been established on the application before the Department.”⁴⁰

The release of the FSEIS started a public comment period that ended on March 7th, 2014 and received nearly 125,000 comments.⁴¹ DOS entered a 90-day window to release its decision, which would end on May 6th, 2014.

After the release of the FSEIS, Nebraska’s Third District Court ruled that LB 1161 violated Nebraska’s Constitution because the law removed the Public Service Commission (PSC)’s authority over the routing of oil pipelines.⁴² The case is currently awaiting appeal in Nebraska’s Supreme Court, and, if the PSC’s authority is upheld, the path of Keystone XL may be changed yet again. This ruling prompted DOS to announce that it would not release its decision before Nebraska’s Supreme Court could hear an appeal, as a potential route change could alter the environmental impacts of the project. DOS has not announced when it now expects to approve or deny Keystone XL’s Presidential Permit.⁴³

III. Environmental Concerns

Opponents of Keystone XL come from a wide variety of backgrounds, with differing challenges to the pipeline. The opposition is based largely on environmental concerns. Pipeline spills threaten to contaminate near-by land and water resources. Oil sands extraction emits more GHG emissions than traditional oil recovery methods, and the process has extreme impacts on land and water resources. The firm connection of WCSB’s resource to the Gulf Coast would encourage further development and usage of fossil fuels, countering efforts to mitigate climate change. Collectively, the pipeline’s opponents express the belief that the pipeline will cause irreparable harm to the environment.⁴⁴

³⁹ The direct rail scenario would release 1,335 barrels per year, and the rail/tanker scenario would release 4,633 barrels per year.

⁴⁰ United States Department of State, 2014, chapter 5.3, page 12.

⁴¹ United States Department of State, “Presidential Permit Applications: TransCanada Keystone Pipeline, L.P, National Interest Determination,” 2014.

⁴² *Thompson vs. Heineman*.

⁴³ Office of the Spokesperson, 2014.

⁴⁴ See Swift, et al., 2011, Yeh, et al., 2010, Rooney, et al., 2012, and Kelly, et al., 2010.

A. Oil Sands Extraction

The WCSB's oil resource is made of natural bitumen, the most dense and viscous type of petroleum.⁴⁵ Before transportation, bitumen must be processed or diluted into synthetic crude oil (SCO), diluted bitumen (DilBit), or synthetic bitumen (Synbit). Critics of Keystone XL have brought attention to the bitumen extraction process, which takes the form of either mining or in situ recovery methods. According to opponents, the environmental impact of oil sands recovery is too substantial and should not be encouraged. Their opposition to the pipeline, then, stems from a desire to limit development of the WCSB's oil resource. Opponents hope that preventing oil sands producers from selling oil to the Gulf Coast will discourage oil sands recovery.⁴⁶

The Alberta Energy Regulator (AER) estimates that 167.9 billion barrels of bitumen reserves remain to be produced from the WCSB.⁴⁷ AER reported 340 million barrels recovered through mining methods in 2012, and 363 million barrels recovered through in situ production. This made 2012 the first year that in situ methods recovered more bitumen than mining. AER expects in situ production to continue to outpace mining production.⁴⁸

While DOS is not required to address the environmental effect of activities taken outside the United States in granting a Presidential Permit, DOS has made efforts to include information assessing the impact of oil sands extraction. Opponents of the Keystone XL pipeline point to two major issues associated with the process: land disturbance and water usage.

1. Oil Sands Land Disturbance

In situ and mining extractions disrupt land. Mining requires clearing and excavating a large area, storage of the removed overburden, and the construction of tailings ponds. The extraction site associated with in situ recovery is smaller than required by mining, but the resources, particularly the natural gas used to power in situ methods, used in the process have significant land impacts.⁴⁹ Studies of energy yields compared to land usage describe both mining and in situ recovery as producing less energy per unit of land disturbed than oil resources recovered conventionally in California.⁵⁰

Land usage of oil sands recovery takes on particular importance due to the location of the resource. The WCSB's oil resource is located in Alberta's dense boreal forest. Opponents contend that the land supplanted by oil sands development has extraordinary value in natural CO₂ storage.

Alberta requires that land used in oil sands development must be reclaimed to an "equivalent land capability."⁵¹ This recovery does not require that reclaimed land have identical

⁴⁵ Meyer and Attanasi, 2003.

⁴⁶ Yeh, et al., 2010.

⁴⁷ Energy Resources Conservation Board, 2012.

⁴⁸ Ibid.

⁴⁹ These land impacts are not localized to the extraction site, but rather to the recovery site of the used natural gas.

⁵⁰ Yeh, et al., 2010.

⁵¹ Province of Alberta, 2013.

usage capability, but that the land has similar usage abilities. The development of Alberta's oil sands has so far outpaced land reclamation. Only eight percent of disturbed land had been reclaimed in 2010, and, of that eight percent, only two percent had been certified to meet Alberta's requirements.⁵² Opponents of further oil sands development emphasize the importance of Alberta's boreal forest, and are concerned that further development will result in a loss of natural carbon storage and sequestration.⁵³ The slow pace of land reclamation further concerns opponents, who then oppose the Keystone XL's pipeline's propensity to encourage development of the oil sands.

2. Water Usage and Quality

Surface mining and in situ recovery both involve extensive use of water resources. Mining requires the usage of water from nearby rivers, which is heated to extract oil from the oil sands. Mining also necessitates the capture and disposal of surface water and groundwater near the mining site. Tailing ponds are constructed to contain displaced water, and these ponds have the potential to disrupt wetlands and associated wildlife. Opponents of oil sands development question how effectively local wetlands can be restored after the mining process concludes.

In situ mining recovers oil deposits deeper than 75 meters, and involves the methods of primary production, cyclic steam stimulation (CSS), or steam-assisted gravity drainage (SAGD). All of these methods involve injecting water into the oil sands deposit, and SAGD is the most popular in situ recovery method.⁵⁴ SAGD injects steam into the oil sands reservoir, which heats the bitumen. The bitumen, now more viscous, seeps into a collection pipe below the steam injector.

The high concentration of water usage in oil sands recovery causes concern for groundwater depletion and reduced river flow. Oil sands developers must adhere to a water management framework intended to limit effects on river flows, but there is no framework in place for groundwater depletion. Studies addressing the water quality of oil sands operations have varied in their conclusions, but some point to higher levels of toxic elements in rivers surrounding the oil sands. One study found that the Athabasca River, from which surface mining operations draw water, contains cadmium, copper, lead, mercury, nickel, silver, and zinc at levels that exceed Alberta's guidelines for aquatic life protection.⁵⁵

B. Pipeline Safety

Opponents of Keystone XL have expressed concerns about pipeline safety, particularly near water resources. Oil spills have negative and costly effects on the surrounding environment, and can affect the health of both wildlife and human populations. Keystone XL will carry heavy crude oil in the form of DilBit, which is more corrosive than conventional crude oil due to its total acid number and sulfur content. Opponents are also wary of Keystone XL's operating parameters, which differ from those of conventional oil pipelines.

⁵² Ramseur, et al., 2012.

⁵³ Rooney, 2012.

⁵⁴ Ramseur, et al., 2012.

⁵⁵ Kelly, 2010.

These factors lead opponents to believe that Keystone XL will have a greater spill frequency than the historical averages used in DOS' EIS. This risk, and the potential subsequent damage to local environments and economies, impacts those in the immediate vicinity of the pipeline.

1. Oil Spills

Oil spills are a primary concern of Keystone XL's opponents. The pipeline's path crosses 56 perennial water bodies with 62 major water crossings, creating ample opportunity for releases to impact the local population's drinking water. Concerns over the proposed 2008 route have encouraged TransCanada to reroute the pipeline around Nebraska's Sand Hills, but the new route still passes within one mile of 2,537 wells.⁵⁶ A pipeline release could also affect water in four major aquifers: the Northern High Plains Aquifer, the Great Plains Aquifer, the Northern Great Plains Aquifer, and the Western Interior Plains Aquifer.

Oil spills are both economically and environmentally costly. Economic costs result from cleanup costs and impacts on local resources. An oil spill can disrupt businesses that depend on those local resources, as well as other business in the area surrounding the spill.⁵⁷ The environmental costs of a spill vary by location, oil type, and spill volume.⁵⁸ Opponents of Keystone XL note that the pipeline would carry viscous oil, which would be more difficult to clean than conventional crude oils. A spill near water could have far-reaching effects on wildlife, and would require extensive efforts to restore the local ecosystem.

2. Effects of Oil Sands Crude on Pipelines

DOS' FSEIS of the Keystone XL pipeline estimated that the pipeline would release an average of 518 barrels per year, with 0.46 releases per year. These figures were reached by examining average historical pipeline releases. Opponents contend that DilBit's characteristics will lead to more frequent, more impactful pipeline leaks.

Critics point to API Gravity, sulfur content, and Total Acid Number (TAN) as key characteristics. API Gravity measures the weight of crude with respect to the weight of water. It is measured in degrees, and a weight above 10° means that the oil will float in water. The U.S. Energy Information Administration identifies heavy crudes as those with an API gravity of 22° or below.⁵⁹

Sulfur content is a measure of free sulfur and sulfur compounds found in crude oil. Crudes with a sulfur content of less than 0.5% are generally referred to as "sweet," while crudes

⁵⁶ United States Department of State, 2014.

⁵⁷ Ramseur, 2012

⁵⁸ Ibid.

⁵⁹ U.S. Energy Information Administration, "Definitions, Sources and Explanatory Notes."

with greater than 1.0% sulfur content are “sour.”⁶⁰ Sulfur content is a measure of a crude’s potential corrosiveness.⁶¹

TAN is another measure of acidity. It is measured in number of milligrams of potassium hydroxide needed to neutralize the acid in one gram of oil. Crudes with a TAN greater than 0.5 are potentially corrosive.⁶²

Opponents of the Keystone XL pipeline note that DilBit possesses a lower API Gravity, with higher sulfur content and TAN. In addition, DilBit blends may carry a higher concentration of abrasive solids, such as quartz and silicates. These characteristics can increase pipeline deterioration, making an oil spill more likely. The comparable Alberta Clipper pipeline, which also carries crude from the WCSB, has had a high rate of large spills in its operational history.⁶³

3. Keystone XL Operating Parameters

In addition to the effects of DilBit on the pipeline, opponents of Keystone XL contend that the operating conditions necessary to transport DilBit will increase the likelihood of a spill. They note that Keystone XL will operate at significantly higher temperature and pressure than other oil pipelines, which increases the possibility of corrosion and pipeline ruptures.

As proposed, the Keystone XL pipeline would have a maximum operating temperature of 150°. ⁶⁴ The Natural Resources Defense Council (NRDC) notes that conventional crude pipelines operate at less than 100°. ⁶⁵ The pipeline would operate at a higher temperature due to the highly viscous nature of DilBit; the high temperature makes DilBit easier to move through the pipeline. However, NRDC claims that this high temperature also increases the speed at which acids and other chemicals travel the pipeline, increasing the rate of corrosion. This would lead to more frequent pipeline spills.

Additionally, NRDC takes issue with the high pressure that the pipeline would operate under. While NRDC states that conventional crude pipelines operate at 600 psi, the Keystone XL pipeline would operate at 1,308 psi. ⁶⁶ NRDC asserts that:

Variations in pipeline pressure can cause the natural gas liquid condensate to change from liquid to gas form. This creates gas bubbles within the pipeline. When these bubbles form and collapse they release bursts of high pressure that can deform pipeline metal. The instability of DilBit can render pipelines particularly susceptible to ruptures caused by pressure spikes. ⁶⁷

⁶⁰ Definitions of sweet and sour vary according to source. These enumerated percentages are representative of definitions in Ramseur, et al., 2012.

⁶¹ Ramseur, et al., 2012, page 10.

⁶² Ibid.

⁶³ Swift, 2011.

⁶⁴ United States Department of State, 2014.

⁶⁵ Swift, 2011.

⁶⁶ United States Department of State, 2014.

⁶⁷ Swift, 2011.

Opponents of the pipeline insist that the combination of high temperature and high pressure, as well as the corrosive nature of DilBit, make oil spills more likely than traditional oil pipelines.

C. Climate Change Policy

Both opponents and DOS agree that the building and operation of the Keystone XL pipeline would increase GHG emissions. Crude oil extracted from oil sands emits more GHG emissions than conventional crude oils because of the emissions generated during production. Opponents of the pipeline also seek to limit GHG emissions in general, and therefore oppose further development of fossil fuels. Construction of Keystone XL would secure sales of a large amount of oil, which would run counter to efforts made to limit GHG emissions.

1. Emissions of Oil Sands vs. Other Crudes

Crude oils extracted from oil sands emit more GHG over their life-cycle. Quantification of excess GHG emissions varies based on methods used in calculations. Opponents of the pipeline primarily present Well-to-Tank (WTT) assessments, which show larger differences than Well-to-Wheel (WTW) assessments. WTT assessments measure GHG emissions from production to distribution, while WTW assessments also include combustion of the fuel. Both measures include extraction, transportation, upgrading or refining, and distribution.

DOE's FSEIS examined a number of life-cycle analyses, meta-analyses, and supplementary studies of oil sands GHG emissions. These studies gave DOS confidence that GHG emissions would increase as oil sands crude replaced crude from other sources.

i. Well-to-Tank

WTT life-cycle assessments do not measure GHG emissions resulting from combustion of the fuel. These assessments are very critical of oil sands gas, placing emissions at 81% greater than emission from 2005's U.S. average crude.⁶⁸ The studies examined in DOE's FSEIS found that average WTT measurements of GHG emissions were 70%-110% higher than emissions from the U.S. average crude.

Combustion, however, accounts for approximately 70%-80% of total emissions. WTW assessments include these emissions, and therefore reflect a smaller comparative difference between oil sands crude and the average crude.

ii. Well-to-Wheel

Emissions released during combustion do not vary between types of crude. The studies examined by DOS estimated these emissions to account for 73-75 grams CO₂ equivalent per mega-joule lower heating value (gCO₂e/MJ LHV). Total emissions ranged from 101-120 gCO₂e/MJ LHV. Oil sands crudes analyzed included a variety of surface-mined crudes, as well

⁶⁸ National Energy Technology Laboratory, 2009.

as in situ DilBit, Synbit, and SCO. In situ crudes emit more GHG than surface-mined crudes, with in situ SCO averaging the highest overall emissions. These assessments predict 14%-20% greater GHG emissions for oil sands crude when compared to the 2005 U.S. average.

DOS used these assessments to estimate incremental emissions resulting from the sale of oil sands crude equivalent to the capacity of Keystone XL. The Canadian oil sands crudes would replace reference crudes currently refined on the Gulf Coast:

The range of incremental GHG emissions (i.e., the amount by which the emissions would be greater than the reference crudes) for crude oil that would be transported by the proposed Project is estimated to be 1.3 to 27.4 [million metric tons of CO₂ equivalent] annually. This is equivalent to annual GHG emissions from combusting fuels in approximately 270,833 to 5,708,333 passenger vehicles, the CO₂ emissions from combusting fuels used to provide the energy consumed by approximately 64,935 to 1,368,631 homes for 1 year, or the annual CO₂ emission of 0.4 to 7.8 coal fired power plants.⁶⁹

These increased GHG emissions give cause to opponents who have concerns about the pipeline's climate change impacts.

2. Development and Usage of Fossil Fuels

Climate change concerns also engender opposition to the further development of Canada's oil sands. Keystone XL would provide a secure sales path for the WCSB, which would encourage companies to expand operations in the region. TransCanada has firm commitments for 550,000 bpd from the WCSB and 65,000 bpd from the Bakken.⁷⁰ These resources, opponents say, would not be further developed without Keystone XL's ability to provide paths-to-market. The pipeline will have the capacity to carry an additional 180,000 bpd from the WCSB, and an additional 35,000 bpd from the Bakken. Opponents contend that this available capacity would encourage companies to further extract bitumen from the oil sands, which would continue the inherent negative environmental impacts.

Securing the delivery of 830,000 bpd to the Gulf Coast would also serve to reinforce the role of oil products in the United States' energy mix. Some opponents prefer other, less GHG intensive energy sources, and therefore oppose the pipeline's ability to deliver a "dirty" energy resource.

IV. Economic Potential

Supporters of the Keystone XL pipeline emphasize the economic impact of the pipeline, in both its construction and continued operation. The project would increase employment, and would continually provide tax benefits to local governments. The jobs created by Keystone XL's

⁶⁹ United States Department of State, 2014, chapter 4.14, page 4.

⁷⁰ United States Department of State, 2014, Executive Summary, page 7.

construction would benefit a large geographic area, as workers would be brought in from around the country. The pipeline would also have a variety of trade impacts for the United States, most notably encouraging Canadian oil exports to the United States. The Keystone XL pipeline would also carry 100,000 bpd of oil from the Bakken Formation in North Dakota and Montana, increasing access to domestic oil resources. This increased access to the Bakken formation would alleviate infrastructure constraints currently affecting the Midwest.

A. Immediate Economic Impact

Keystone XL's construction would take one-to-two years, and would, according to the FSEIS, contribute \$3.4 billion to U.S. gross domestic product. This would be spread over a number of economic categories, including construction, manufacturing, and other indirect services. The pipeline would also offer tax revenues for localized county and state governments. Earnings would not be limited to the local area of the pipeline, as national firms would supply resources and specialized labor for the construction process. Supporters of the pipeline favor the contributions that would be made to both the local and national economy.

1. Construction and Permanent Jobs

DOS estimates that approximately 42,100 average annual jobs will be created during the construction of Keystone XL, resulting in an estimated \$2 billion in wages. TransCanada would directly contract 16,100 of these jobs, and the additional 26,000 jobs would stem from indirect spending.⁷¹

Due to the specialized knowledge needed, TransCanada estimates that only 10% of construction jobs would be hired from local areas.⁷² Temporary housing structures would be built in the immediate project area in order to provide accommodations for non-local construction workers. TransCanada has proposed building eight construction camps, and DOS estimated that accommodations and food services would account for 5,700 jobs and roughly \$100 million in earnings.⁷³

The number of jobs created by the pipeline's construction would not be exclusive to the immediate project area. DOS estimates that 6,600 jobs would be created in the states of Montana, South Dakota, Nebraska, and Kansas. Jobs filled by the rest of the United States would number 19,400.⁷⁴ Supporters of the pipeline emphasize the particular need for these jobs in light of the United States' recent economic recession. DOS notes the major beneficiaries located outside of the immediate project area as construction workers with the specialized skill set required, national firms that would be awarded construction contracts, and national firms that would provide material purchases.

⁷¹ United States Department of State, 2014, chapter 4.10.

⁷² Ibid.

⁷³ Ibid.

⁷⁴ Ibid.

TransCanada estimates that the pipeline's continued operations would require a total of 50 employees. Of these, 35 would be permanent, while 15 would be temporary contractors. These permanent employees would be spread across the pipeline's route.⁷⁵

Supporters claim that DOS' estimates of economic benefit are conservative. Reports estimate an additional benefit from improved efficiencies in the transportation and processing of oil totaling \$100 million to \$600 million annually.⁷⁶ Other supporters contend that the pipeline will have lasting effects by increasing economic activity in Canada. Canadian demand for American goods and services would correspondingly increase.⁷⁷

2. Tax Impact

In addition to wage earnings, the pipeline would generate significant tax revenue for Montana, South Dakota, and Nebraska. Property taxes resulting from the project would generate roughly \$55.6 million through these states. DOS notes that this revenue impact would represent 10% or greater of local property taxes in 17 of the 27 local counties.

DOS also examined temporary impacts of sales, excise, and other taxes. These revenues would coincide with Keystone XL's construction. Over the two years of construction, \$65.7 million would be generated for state governments. This number would vary according to state laws, and could change if additional taxes were passed by the states.

B. Trade Impact

Keystone XL would have impacts reaching further than local construction and taxes. Supporters contend that the pipeline plays an important role in the world's energy markets. The United States' oil imports, while decreasing, totaled 9.8 billion bpd in 2013.⁷⁸ The oil market displays particular volatility due to political instability in a number of oil-exporting regions. Keystone XL and its link to relatively stable Canadian exports would shield the United States from global price fluctuations, and ensure that the demand of Gulf Coast refineries would be met. In addition, the construction of Keystone XL would give oil producers in the WCSB a strong link to the Gulf Coast, discouraging exports to other markets. In particular, this would deter exports to Asian markets, and a subsequent displacement of Asia's current imports.

1. Energy Security

TransCanada's Presidential Permit application notes explicitly that Keystone XL will "provide a secure and reliable source of Canadian crude oil to meet the demand from refineries and markets in the United States..."⁷⁹ Currently, Mexico and Venezuela are the largest exporters to the Gulf Coast. TransCanada claims that the oil from Keystone XL will displace supplies from Venezuela, Mexico, the Middle East, and Africa. Supporters argue that oil purchases from Canada would be more reliable than purchases from such politically tumultuous regions.

⁷⁵ Ibid.

⁷⁶ Energy Policy Research Foundation, 2010.

⁷⁷ EnSys Energy & Systems, Inc., 2010.

⁷⁸ U.S. Energy Information Administration, "U.S. Imports by Country of Origin."

⁷⁹ TransCanada, 2012, page 1.

Supporters also argue that the security of Keystone XL's oil sales would help protect Gulf Coast refineries, and, in turn, the United States' energy markets, from price fluctuations of the global market. The United States' oil imports have undergone changes in recent years due to the shifting political environment surrounding oil and the development of domestic shale resources. Canadian exports have become a larger part of the United States' energy mix, as exports from Mexico and Venezuela to the United States have decreased. Canada exports its energy products primarily to the United States, and supporters contend that Keystone XL would supplant decreasing supplies from other regions.

2. Exports to Other Markets

The pipeline would ensure that Canadian oil exports would not be sold to other markets. Without Keystone XL, WCSB oil producers would look to alternative transportation options. While some of these options, including those evaluated by DOS' FSEIS, would export oil to Gulf Coast refineries, WCSB producers would also look to meet rising demand for oil products in Asia. Pipeline transportation projects to the Canadian coasts are being pursued in anticipation of Canada's increasing oil production. Without Keystone XL, supporters say, oil produced in the oil sands will simply find other markets. Production will continue to increase, but the U.S. will not receive the economic benefit from the cheaper, secure Canadian resource.

The environmental impacts of oil sands extraction are, therefore, unlikely to differ with or without the construction of Keystone XL. The GHG emissions resulting from oil sands extraction will still occur, as the resource will be developed for sale to other markets. Further, supporters note that the increased likelihood of oil spills associated with rail and water transport may cause a greater environmental impact than the construction of the pipeline itself.

If WCSB crude were to be sold in Asian markets, it would displace oil exported there by Middle Eastern and African countries. These countries would then turn their exports to the U.S. Supporters of the pipeline note that this would further expose the U.S. to volatile global oil markets. The pipeline would, again, limit the impacts of the global oil market on U.S. energy prices.

C. Existing Pipeline Constraints

Keystone XL would serve to meet a number of infrastructure requirements for the United States. Connections are limited between the Midwest and Gulf Coast. Refineries, primarily located on the Gulf Coast, therefore are struggling to acquire crude oil for refining, and new plays in the Midwest have difficulty selling their oil. Existing infrastructure does not adequately support the connection of these two regions. Supporters of Keystone XL note that the project can both support Gulf Coast demand and provide new paths to market for Midwest oil resources.

1. Meeting Demand of Gulf Coast Refineries

The Gulf Coast is responsible for a majority of the United States' oil refining capacity. However, infrastructure limitations have resulted in an overabundance of crude imports being located in the Midwest. The Gulf Coast has been unable to receive crude from the Midwest,

because, historically, the Gulf Coast would send crude to the Midwest. Efforts have begun to reverse some of these pipelines,⁸⁰ and Keystone XL would increase the supply of crude oil available to Gulf Coast refineries.

Currently, refineries with the technological capability to refine crude from the WCSB rely on imports primarily from Venezuela and Mexico. TransCanada's pipeline application identifies 58 refineries on the Gulf Coast that could process the crude carried by Keystone XL. Oil sands producers have interest in expanding their ability to sell crude to the Gulf Coast, and Gulf Coast refineries are hopeful that the resulting increase in supply will lower the cost of crudes available for refining. Supporters assert that with the pipeline, Gulf Coast refineries would be able to replace more expensive waterborne crudes with Canadian oil, lowering energy costs for the United States.

2. Access to the Bakken Formation

The pipeline would also expand the Midwest's market capabilities. TransCanada has reserved 100,000 bpd of the Keystone XL pipeline's capacity for crude oil from the Bakken Formation in Montana and North Dakota. The pipeline would include the Bakken Marketlink Project, a \$140 million lateral pipeline.⁸¹ This project would support the steadily expanding Bakken oil market.

The USGS has estimated that the Bakken Formation holds 7.4 billion barrels of oil.⁸² Oil production in the region has steadily increased to 863,000 bpd in December of 2013.⁸³ Infrastructure constraints currently limit production, and Keystone XL would help transport the region's oil to refineries on the Gulf Coast. The Bakken Marketlink is one of a number of efforts to expand access to the region, which include rail transport and Enbridge's Bakken Pipeline.⁸⁴ Better access to markets would allow for further development of the Bakken region, and the potential for increased domestic earnings.

⁸⁰ Parfomak, et al., 2013, page 21.

⁸¹ TransCanada, 2012.

⁸² U.S. Geological Survey, 2013.

⁸³ North Dakota Department of Mineral Resources, 2014.

⁸⁴ Enbridge, 2014.

V. Conclusion

The Keystone XL Project offers tradeoffs, with environmental concerns coming into conflict with economic potential. The political controversy surrounding the pipeline has served to cloud the technical details of the project, including what has and has not been built. The related Keystone Project has come into service, and the Gulf Coast Pipeline, once a piece of Keystone XL, is also operational. Keystone XL is the last piece of TransCanada's pipeline system, but DOS does not have an active timeline for the pipeline's approval.

This decision will inevitably cause significant political discussion, as the environmental and economic concerns surrounding the project will not both be satisfied. If the permit is approved, the environmental impact of oil sands extraction, oil spills, and GHG emissions may be realized. Without the pipeline's approval, the United States may not gain the economic benefits, positive trade impacts, and infrastructure developments associated with the project. DOS will weigh these factors, and more, before its national interest decision is reached.

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