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Keystone XL Pipeline Project: Key Issues

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Summary

TransCanada's proposed Keystone XL Pipeline would transport oil sands crude from Canada and shale oil produced in North Dakota and Montana to a market hub in Nebraska for further delivery to Gulf Coast refineries. The pipeline would consist of 875 miles of 36-inch pipe with the capacity to transport 830,000 barrels per day. Because it would cross the Canadian-U.S. border, construction of Keystone XL requires a Presidential Permit from the State Department. A decision to issue or deny a Presidential Permit is based on a determination that a project would serve the national interest, considering potential impacts on the environment, the economy, energy security, foreign policy, and other factors. Environmental impacts are evaluated and documented in an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA).

TransCanada originally applied for a Presidential Permit for the Keystone XL Pipeline in 2008. The initial proposal included a southern segment from Oklahoma to the Gulf Coast. A key issue that arose during the permit review was concern over environmental impacts in the Sand Hills region of Nebraska. This concern led the Nebraska legislature to enact new state pipeline siting requirements that would alter the pipeline route through Nebraska. In January 2012, the State Department concluded that it would not have sufficient information to evaluate an altered pipeline route before a deadline imposed by Congress and denied the permit. The southern segment of the original Keystone XL proposal, now called the Gulf Coast Project, was subsequently separated from the original proposal because it did not require a Presidential Permit. It has been approved by the relevant states and is currently under construction.

In May 2012, TransCanada reapplied to the State Department for a Presidential Permit to build the northern, cross-border segment of Keystone XL. The new permit application initiated a new NEPA process. The governor of Nebraska approved a new route through the state avoiding the Sand Hills on January 22, 2013. On March 6, 2013, notice was published in the *Federal Register* that the State Department draft EIS for the reconfigured Keystone XL Project was available for public comment. The department is in the process of addressing these comments as it prepares a final EIS. When the final EIS is issued, a 90-day public review period for the national interest determination begins. The department has not stated when it plans to complete this process.

Development of Keystone XL has been controversial. Proponents base their arguments primarily on increasing the diversity of the U.S. petroleum supply and economic benefits, especially jobs. Pipeline opposition stems in part from concern regarding the greenhouse gas emissions associated with the development of Canadian oil sands, continued U.S. dependency on fossil fuels, and the risk of a potential release of heavy crude.

In light of the State Department's denial of the 2008 permit application, some in Congress seek other means to support development of the pipeline. The Energy Production and Project Delivery Act of 2013 (S. 17) would eliminate the Presidential Permit requirement for the reconfigured Keystone XL Project. The Keystone for a Secure Tomorrow Act (H.R. 334) and a Senate bill to approve the Keystone XL Project (S. 582) would directly approve Keystone XL under the authority of Congress to regulate foreign commerce. The Northern Route Approval Act (H.R. 3) would eliminate the Presidential Permit requirement for Keystone XL, among other provisions. The Senate passed an amendment to the Fiscal 2014 Senate Budget Resolution (S.Con.Res. 8) that would provide for the approval and construction of the Keystone XL Project (S.Amdt. 494). The North American Energy Infrastructure Act (H.R. 3301) would transfer permit authority for oil pipelines from the State Department to the Department of Commerce and would make other changes to the pipeline permitting process.

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Introduction¹

In 2008, TransCanada (a Canadian company) submitted to the U.S. Department of State an application for a Presidential Permit authorizing construction and operation of pipeline facilities for the importation of crude oil at the United States-Canada border. The Keystone XL Pipeline system would transport Canadian oil sands crude extracted in Alberta, Canada, and crude produced from the Bakken region in North Dakota and Montana to a market hub in Nebraska for further delivery to Gulf Coast refineries. A decision to issue or deny the Presidential Permit would be based on the State Department's determination of whether the pipeline system would serve the national interest.

By August 2011, the State Department had compiled data necessary to begin the required 90-day public review period for making its national interest determination. During that period, one key issue that arose pertained to potential impacts associated with the construction and operation of the proposed pipeline segment across the Sand Hills region of Nebraska. This concern led the Nebraska legislature to enact new state pipeline siting requirements that would alter the pipeline route through Nebraska. As a result, in November 2011, the State Department announced that it would need additional time to gather information needed to assess a new pipeline route avoiding the Sand Hills. However, the Temporary Payroll Tax Cut Continuation Act of 2011 (P.L. 112-78), enacted on December 23, 2011, included provisions requiring the Secretary of State (hereinafter the Secretary) to issue a permit for the project within 60 days, unless the President determined the project not to be in the national interest. Citing insufficient time to meet the deadline established by Congress, the State Department, with the President's consent, denied the permit for the Keystone XL Project.

TransCanada and Nebraska have since agreed upon an alternative pipeline route avoiding the Sand Hills. In May 2012, TransCanada submitted an application to the State Department for a Presidential Permit to build a newly configured cross-border segment of Keystone XL Pipeline system.² This report describes the Keystone XL Project as it is proposed in the 2012 Presidential Permit application and the process that the State Department is obligated to complete to issue or deny that application. To the extent that they may affect the State Department's decision to issue or deny the current permit application, this report discusses selected issues related to the project proposed in 2008 and issues that have arisen since the State Department denied the initial permit application in 2012. This report also summarizes key arguments that have been raised, both for and against the pipeline, by the pipeline's developers, state and federal agencies, environmental groups, private property owners, and other stakeholders. Finally, the report discusses the constitutional basis for the State Department's authority to issue a Presidential Permit, and opponents' possible challenges to this authority.

¹ This report provides an overview of the Keystone XL project, permit review process, and general policy issues. For more detailed legal analysis, see CRS Report R42124, *Proposed Keystone XL Pipeline: Legal Issues*, by Adam Vann, Kristina Alexander, and Kenneth R. Thomas. For more analysis of U.S.-Canada energy trade, see CRS Report R41875, *The U.S.-Canada Energy Relationship: Joined at the Well*, by Paul W. Parfomak and Michael Ratner. For additional environmental analysis associated with Canadian oil sands, see CRS Report R42537, *Canadian Oil Sands: Life-Cycle Assessments of Greenhouse Gas Emissions*, by Richard K. Lattanzio. For more analysis of Presidential Permits, see CRS Report R43261, *Presidential Permits for Border Crossing Energy Facilities*, by Adam Vann and Paul W. Parfomak.

² The southern segment of the original Keystone XL proposal, now called the Gulf Coast Project, was separated from the original proposal because it does not require a Presidential Permit. It is currently under construction.

Description of the Keystone Pipeline System

In 2005, TransCanada announced a plan to address expected increases in Western Canadian Sedimentary Basin production by constructing the Keystone Pipeline System. When complete, the system would transport crude oil from Hardisty, Alberta, to U.S. markets in the Midwest and Gulf Coast. The pipeline system was proposed as two distinct phases—the Keystone Pipeline (complete and in service) and the Keystone XL Pipeline.

The Keystone and Keystone XL Pipelines

The Keystone Pipeline was completed in two segments—the Keystone Mainline and the Cushing Extension. The Mainline is 1,353 miles of 30-inch pipeline from Hardisty, Alberta, to the United States refineries in Wood River and Patoka, Illinois. The U.S. portion of the pipeline runs 1,086 miles and begins at the international border in Cavalier County, ND, and has been in service since June 2010. The Cushing Extension is 298 miles of 36-inch pipeline and associated facilities that run from Steele City, NE (near the Kansas border), to existing crude oil terminals and tanks farms in Cushing, OK. The Cushing Extension has been in service since February 2011.

The original Keystone XL Pipeline Project is now also being developed in two project segments, as follows:

- **The Gulf Coast Pipeline Project**, 485 miles of 36-inch pipeline and associated facilities linking the Cushing, OK, tank farms to refineries in Houston and Port Arthur, TX. This segment includes the Cushing Marketlink project that will provide receipt facilities to transport U.S. crude oil to the Gulf Coast. TransCanada anticipates this segment to be in service by 2014.
- **The Keystone XL Pipeline Project**, 875 miles of 36-inch pipeline and associated facilities linking Hardisty, Alberta, to Steele City, NE. This segment also includes the Bakken Marketlink in Baker, MT—a pipeline lateral that can transport crude oil from the Williston Basin to Steele City (further discussed below).

In the 2008 Presidential Permit application, the “Keystone XL Project” referred to both pipeline segments. For the 2012 Presidential Permit application, the “Keystone XL Project” refers to only the northern, cross-border pipeline segment.

The existing Keystone Pipeline has the capacity to deliver up to 590,000 bpd of Canadian crude oil to U.S. refineries and export terminals. Both the Keystone XL and Gulf Coast pipelines would have a capacity of 830,000 bpd. As a result, the entire Keystone Pipeline System may ultimately have the capacity to deliver up to 1.3 million bpd of crude oil. The existing Keystone Pipeline and proposed expansions are illustrated in **Figure 1**. The proposed Keystone XL Project and associated pipeline segments are illustrated in **Figure 2**.

Figure I. Existing Keystone Pipeline and Proposed Keystone Expansions



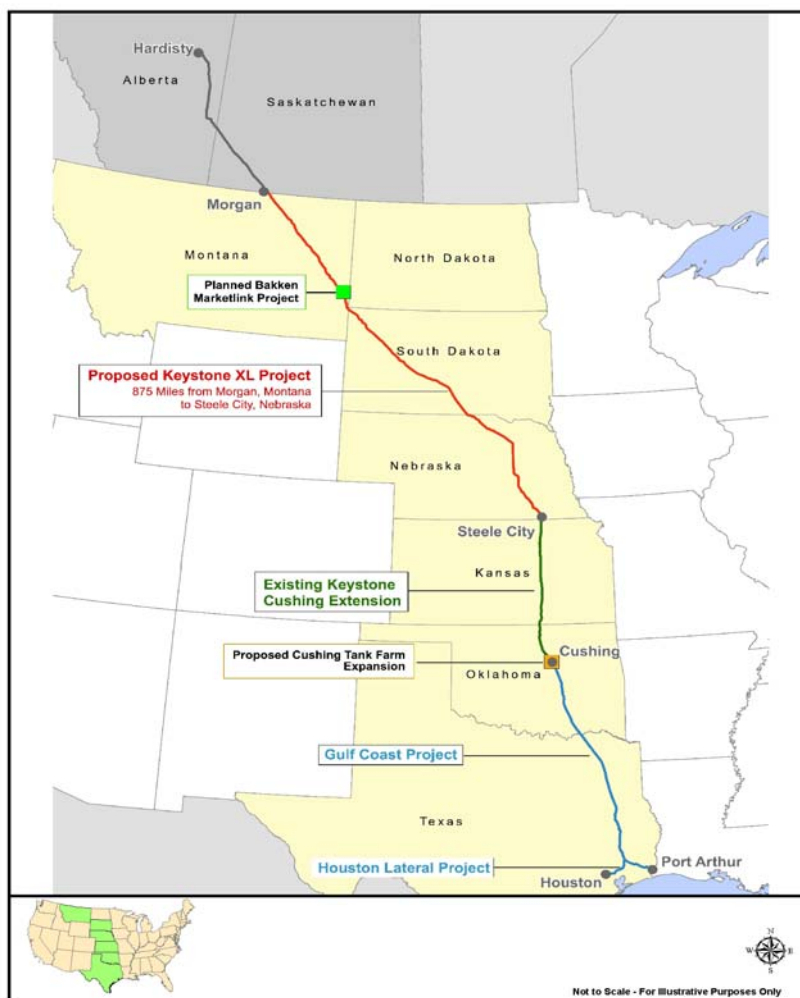
Source: U.S. State Department, March 2013, Draft EIS for the Keystone XL Project, Section 1.2 “Overview of Proposed Project,” p. 1.2-5.

TransCanada has estimated the capital cost of the U.S. portion of the 2012 Keystone XL Project, from the U.S. border to Steele City, NE, would be \$5.3 billion.³ This figure is higher than the cost estimate when the 2008 permit application was filed, reportedly due to currency swings, changing regulatory requirements, and permitting delays.⁴

³ TransCanada Keystone Pipeline, L.P., “Application of TransCanada Keystone Pipeline L.P. for a Presidential Permit Authorizing the Construction, Operation, and Maintenance of Pipeline Facilities for the Importation of Crude Oil to be Located at the United States-Canada Border,” submitted to the U.S. Department of State, May 4, 2012, p. 39, available at http://keystonepipeline-xl.state.gov/proj_docs/permitapplication/index.htm.

⁴ “TransCanada Expects \$1-Billion Cost Escalation for Keystone XL Pipeline,” Canadian Press, February 17, 2011.

Figure 2. The Keystone XL Project and Gulf Coast Pipeline



Source: U.S. State Department, March 2013, Draft EIS for the Keystone XL Project. Section 1.2 “Overview of Proposed Project,” p. 1.2-3.

Marketlink for Bakken Oil Production

The Bakken Formation is a large unconventional petroleum and natural gas resource underlying parts of North Dakota, Montana, and the Canadian provinces of Saskatchewan and Manitoba. Although the region has been producing since 1951, it is only since 2006 that prices and technology have made it economic for industry to increase production. In March 2012, Bakken production exceeded 500,000 bpd the first time.⁵ However, production has been increasing steadily, with average daily output in August 2013 exceeding 900,000 bpd.⁶ To date, infrastructure to transport oil produced from the Bakken Formation has not kept up with the

⁵ North Dakota Department of Mineral Resources, “North Dakota Monthly Oil Production Statistics,” Bismarck, ND, November 2013, <https://www.dmr.nd.gov/oilgas/stats/historicaloilprodstats.pdf>.

⁶ Ibid.

increased production. Bakken crude oil is transported to refineries by rail and truck, in addition to more economical transport by pipeline.⁷

As stated earlier, the proposed Keystone XL Project would include a lateral pipeline, the Bakken Marketlink, to provide crude oil transportation service from Baker, MT, to Cushing, OK, via the proposed Keystone XL Pipeline and from Cushing to Texas via the proposed Gulf Coast Pipeline.⁸ Keystone Marketlink⁹ estimates that the project will cost \$140 million and have the ability to deliver approximately 100,000 bpd of crude oil to the proposed Keystone XL Pipeline.¹⁰ Thus, of the Keystone Pipeline's 830,000 bpd ultimate capacity, up to 12% has been set aside to transport Bakken crude oil. Keystone Marketlink currently has firm, long-term contracts to transport 65,000 bpd of the 100,000 bpd.¹¹

The Bakken contracts improve the economics for Keystone XL Pipeline, raising the amount of oil slated to flow through the pipeline.¹² Lower transportation costs and access to new markets may support further investment in the Bakken. However, TransCanada is not the only company adding pipeline capacity in the region. Notably, Enbridge, another Canadian pipeline company, has proposed the Bakken Pipeline Project, which would add 120,000 bpd of transport capacity to move Bakken oil to Midwest markets.¹³ According to Enbridge, sufficient pipeline capacity has been slow to emerge in the region because "they're smaller players in the Bakken. They are not able to make the 20-year commitments and it's been a lot of work to get them to commit to the level that [is] required to underwrite a major project out of the Bakken."¹⁴ Rail transport capacity has also been expanding.¹⁵

Presidential Permit Applications

Federal agencies ordinarily have no authority to site oil pipelines, even interstate pipelines.¹⁶ The primary siting authority for oil pipelines generally would be established under applicable state law. However, the construction, connection, operation, and maintenance of a pipeline that connects the United States with a foreign country requires executive permission conveyed through a Presidential Permit.

⁷ For more analysis, see CRS Report R42032, *The Bakken Formation: Leading Unconventional Oil Development*, by Michael Ratner et al.

⁸ The Bakken Marketlink project is described in the August 2011 final EIS for the 2008 Presidential Permit application in Section 2.5.3, available at <http://keystonepipeline-xl.state.gov/documents/organization/182012.pdf>.

⁹ Keystone Marketlink, LLC, is a wholly owned subsidiary of TransCanada Pipelines Limited.

¹⁰ 2012 Application of TransCanada Keystone Pipeline, L.P. for a Presidential Permit (footnote 3), p. 16.

¹¹ Ibid.

¹² Vanderklippe, 2011.

¹³ Enbridge, "Bakken Pipeline Project—Project Overview," press release, <http://www.enbridge.com/BakkenPipelineProjects/BakkenPipelineProjectUS.aspx>.

¹⁴ Lauren Krugel, "TransCanada attracts support for Montana-to-Oklahoma crude pipeline," *The Canadian Press*, January 20, 2011.

¹⁵ Energy Information Administration, "Rail Delivery of U.S. Oil and Petroleum Products Continues to Increase, but Pace Slows," July 10, 2013, <http://www.eia.gov/todayinenergy/detail.cfm?id=12031>.

¹⁶ This is in contrast to interstate natural gas pipelines, which, under Section 7(c) (15 USC §717f(c)) of the Natural Gas Act, must obtain a "certificate of public convenience and necessity" from the Federal Energy Regulatory Commission.

Executive Order 13337 delegates to the Secretary the President's authority to receive applications for Presidential Permits.¹⁷ Issuance of a Presidential Permit depends on a State Department determination that the project would serve the "national interest." The term is not defined in the Executive Orders or elsewhere. Regarding its interpretation of the term, the State Department has asserted that, consistent with the President's broad discretion in the conduct of foreign affairs, it has significant discretion in deciding the factors it will examine in making a national interest determination.¹⁸ The State Department will not necessarily evaluate the same factors for each project seeking a permit. However, for the 2008 Keystone XL Project, the State Department identified the following as key factors it considered when making determinations for previous applications for pipeline permits:

- Environmental impacts of the proposed projects;
- Impacts of the proposed projects on the diversity of supply to meet U.S. crude oil demand and energy needs;
- The security of transport pathways for crude oil supplies to the United States through import facilities constructed at the border relative to other modes of transport;
- Stability of trading partners from whom the United States obtains crude oil;
- Relationship between the United States and various foreign suppliers of crude oil and the ability of the United States to work with those countries to meet overall environmental and energy security goals;
- Impact of proposed projects on broader foreign policy objectives, including a comprehensive strategy to address climate change;
- Economic benefits to the United States of constructing and operating proposed projects; and
- Relationships between proposed projects and goals to reduce reliance on fossil fuels and to increase use of alternative and renewable energy sources.¹⁹

The State Department identifies and considers environmental impacts of a project within the context of its obligation to comply with the National Environmental Policy Act (NEPA).²⁰ NEPA requires federal agencies to consider the environmental impacts of an action (e.g., granting or denying a Presidential Permit) before proceeding with them and to inform the public of those potential impacts.

¹⁷ See Executive Order 13337, "Issuance of Permits With Respect to Certain Energy-Related Facilities and Land Transportation Crossings on the International Boundaries of the United States," 69 *Federal Register* 25299, May 5, 2004, as amended, and Department of State Delegation of Authority No. 118-2 of January 26, 2006. The source of Permitting Authority for relevant Executive Orders is discussed further in the 0.

¹⁸ U.S. Department of State, "Final Environmental Impact Statement for the Proposed Keystone XL Project," August 2011, p. 1-4.

¹⁹ *Ibid.* It was noted that this list is not exhaustive and that the State Department may consider additional factors in its national interest determination process.

²⁰ In processing Presidential Permit applications, the State Department is also explicitly directed to review the project's compliance with the National Historic Preservation Act (16 U.S.C. §470f), the Endangered Species Act (16 U.S.C. §1531 et seq.), and Executive Order 12898 of February 11, 1994 (59 *Federal Register* 7629), concerning environmental justice.

The State Department has discretion in determining what additional factors it will examine to inform its national interest determination and, ultimately, whether a proposed project is in the national interest. However, the State Department is required to consult with and seek the views of the Secretaries of Defense, the Interior, Commerce, Transportation, Energy, and Homeland Security; the Attorney General; and the Administrator of the Environmental Protection Agency. The department is also required to solicit input from affected local, tribal, and state agencies and to invite public comment in arriving at its determination.

Consideration of Environmental Impacts Under NEPA

To ensure that environmental impacts are considered before final agency decisions are made, an Environmental Impact Statement (EIS) must be prepared for every major federal action that may have a “significant” impact upon the environment.²¹ With respect to the Presidential Permit applications submitted by TransCanada for Keystone XL, the State Department concluded that approval of a permit requires the preparation of an EIS.²²

Preparing an EIS is the responsibility of a designated “lead agency,” in this case, the State Department. In developing an EIS for a private party applicant (TransCanada) the State Department may use a third-party contractor. Consistent with regulations implementing NEPA, such a contractor is one that is selected by and works under the direction of the State Department, but is being paid by the applicant.²³

An EIS is generally prepared in two stages resulting in a draft and final EIS. Among other requirements, an EIS must include a statement of the purpose and need for an action, a description of all reasonable alternatives to meet that purpose and need, a description of the environment to be affected by those alternatives, and an analysis of the direct and indirect effects of the alternatives, including cumulative impacts.²⁴ Accordingly, the State Department EIS must demonstrate that it has identified and considered potential environmental impacts of the entire pipeline project (including the construction, operation, and maintenance of the pipeline and its associated facilities), not just the facilities at the border crossing.

For the 2008 Presidential Permit application, the State Department prepared a draft, supplemental draft, and final EIS. If the State Department modified its final EIS for the 2008 Presidential Permit application and continued its national interest determination, as it originally proposed in November 2011, it could have completed the NEPA process with only the publication of a supplemental final EIS that included analysis of new routes through Nebraska. However, denial of the Presidential Permit ended the NEPA process for the 2008 project. With the new Presidential

²¹ 42 U.S.C. §4332(2)(C).

²² U.S. Department of State, “Notice of Intent to Prepare a Supplemental Environmental Impact Statement (SEIS) and To Conduct Scoping and To Initiate Consultation Under Section 106 of the National Historic Preservation Act for the Proposed TransCanada Keystone XL Pipeline Proposed To Extend From Phillips, MT (the Border Crossing) to Steele City, NE,” 77 *Federal Register* 36032, June 15, 2012.

²³ U.S. Department of State, “Interim Guidance for the Use of Third-Party Contractors in Preparation of Environmental Documents by the Department of State,” available online at <http://www.state.gov/documents/organization/190304.pdf>.

²⁴ In preparing an EIS associated with a Presidential Permit, NEPA regulations promulgated by both the Council of Environmental Quality (CEQ) and the State Department would apply. CEQ regulations implementing NEPA (under 40 C.F.R. §§1500-1508) apply to all federal agencies. NEPA regulations applicable to State Department actions, which supplement the CEQ regulations, are found at 22 C.F.R. Part 161.

Permit application, the State Department was required to begin a new NEPA process and, eventually, determine whether that project would serve the national interest.

To prepare an EIS, the State Department is required to obtain input from “cooperating agencies,” which include any agency with jurisdiction by law or with special expertise regarding any environmental impact associated with the project.²⁵ Cooperating agencies for the Keystone XL Project include the U.S. Environmental Protection Agency (EPA); the Department of Transportation’s Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS); the Department of the Interior’s Bureau of Land Management, U.S. Fish and Wildlife Service, and National Park Service; the U.S. Army Corps of Engineers; the U.S. Department of Agriculture’s Farm Service Agency, Natural Resources Conservation Service, and Rural Utilities Service; the Department of Energy’s Western Area Power Administration; and state environmental agencies.

On March 1, 2013, the State Department released the draft EIS for the 2012-proposed Keystone XL Project as a supplement to the final EIS prepared for the 2008 Presidential Permit application (released in August 2011).²⁶ The draft EIS evaluates potential impacts associated with the route from Montana to Steele City, NE, that avoids the Nebraska Sand Hills and excludes the proposed Gulf Coast Project. According to the State Department, the 2013 draft EIS includes a “comprehensive review of the new route in Nebraska as well as any significant new circumstances or information that is now available on the largely unchanged route in Montana and South Dakota. It also expands and updates information that had been included in the 2011 Final Environmental Impact Statement that was prepared for the previous Keystone XL application.”²⁷

EPA Rating of the Environmental Impact Statement

In addition to its role as a cooperating agency, EPA is also required to review and comment publicly on the EIS and rate both the adequacy of the EIS itself and the level of environmental impact of the proposed project.²⁸ Rating the EIS takes place after the draft is issued. The EIS could be rated either “Adequate,” “Insufficient Information,” or “Inadequate.” EPA’s rating of a project’s environmental impacts may range from “Lack of Objections” to “Environmentally Unsatisfactory.” In rating the impact of the action itself, EPA would specify one of the following: “Lack of Objections,” “Environmental Concerns,” “Environmental Objections,” or

²⁵ 40 C.F.R. §1508.5. Also, Executive Order 13337 directs the Secretary to refer an application for a Presidential Permit to other specifically identified federal departments and agencies on whether granting the application would be in the national interest.

²⁶ See U.S. Department of State, “New Keystone XL Pipeline Application” webpage at <http://www.keystonepipeline-xl.state.gov/>. On March 8, 2013, EPA listed the draft EIS in its weekly “Environmental Impacts Statements; Notice of Availability,” in the *Federal Register*, see 78 *Federal Register* 15012. The State Department refers to the EIS released in March 2013 as a “Draft Supplemental” EIS. This reference apparently reflects the fact that the 2013 draft EIS draws largely from (or supplements) documentation and analysis included in the final EIS issued for the Keystone XL Project in 2011. However, for purposes of NEPA compliance, the submission of a new permit application in May 2012 started the NEPA process anew. While it may draw from the 2011 final EIS, the 2013 draft EIS is a new NEPA document—not a supplement to an EIS prepared for a different, albeit similar, Presidential Permit application.

²⁷ See footnote 26.

²⁸ For more information, see the U.S. Environmental Protection Agency’s “Environmental Impact Statement (EIS) Rating System Criteria” at <http://www.epa.gov/compliance/nepa/comments/ratings.html>.

“Environmentally Unsatisfactory.” The federal agency, in this case the Department of State, would then be required to respond to EPA’s rating, as appropriate.

The State Department accepted public comments on the draft EIS until April 22, 2013. “Public” comments could come from a range of interested stakeholders, including local, state, tribal, or federal agencies. EPA reviewed the draft EIS and submitted comments on it to the State Department.²⁹ EPA’s comments are on its assessment of the proposed project’s impacts and the adequacy of the draft EIS itself. It rated the draft EIS as “EO-2” (Environmental Objections—Inadequate Information). EPA states that, while the agency believes the draft EIS strengthens the analysis presented to date in the NEPA process, it recommends several improvements to the analysis of the proposed project’s impacts and to mitigate certain impacts. Specifically, EPA recommended the following:

- **Greenhouse Gas Emissions**—use monetized estimates of the social cost of the greenhouse gas (GHG) emissions from a barrel of oil sands crude compared to average U.S. crude. EPA noted that TransCanada’s market analysis and its conclusion that oil sands crude will find a way to market with or without the Project are central to the draft EIS conclusions regarding the Project’s potential GHG emissions. As a result, the agency asserts that the final EIS should be based on an updated energy-economic modeling effort. The final EIS should also explore specific ways the United States might work with Canada to promote efforts to reduce GHG emissions from oil sands crude production.
- **Pipeline Safety**—in the wake of a 2010 Enbridge spill of oil sands crude in Michigan, incorporate into its permit conditions various steps intended to improve potential oil spill response and cleanup.
- **Pipeline Routes Across the Ogallala Aquifer**—provide in the final EIS more detail on pipeline route alternatives that would parallel the existing Keystone Pipeline, and likely further reduce potential environmental impacts to groundwater resources, or explain why these alternatives were not considered.
- **Community and Environmental Justice Impacts**—document in its permit conditions TransCanada’s commitments to conduct cleanup and restoration and to provide alternative water supplies to affected communities in the event of an oil discharge affecting surface waters or groundwater.

Now that EPA and other public and agency comments have been submitted, the State Department must respond to those comments and possibly modify the draft EIS to address them. After it does so, the State Department may issue a final EIS. The time it may take the department to do so will depend on various factors, including the scope and the nature of the comments to which it must respond. After the final EIS is issued, the State Department may begin the 90-day period to make the national interest determination.

Major milestones in the NEPA process, for both the 2008 and 2012 Presidential Permit applications, are listed in **Table 1**, below. (For discussion of NEPA milestones associated with the 2008 permit application, see **Appendix B**.)

²⁹ Letter from the U.S. Environmental Protection Agency’s Cynthia Giles, Assistant Administrator for Enforcement and Compliance Assurance to Jose Fernandez and Kerri-Ann Jones, Assistant Secretaries, U.S. Department of State, available online at <http://epa.gov/compliance/nepa/keystone-xl-project-epa-comment-letter-20130056.pdf>.

Table I. Milestones in the NEPA process for the Keystone XL Project
Federal, State, and Company Actions Relevant to the NEPA Compliance Process

Date	Party	Description
NEPA Compliance Milestones Relevant to TransCanada's 2008 Presidential Permit Application		
Sept. 2008	TransCanada	Application for a Presidential Permit submitted to the State Department to authorize the Keystone XL Pipeline Project.
Apr. 16, 2010	State Department	Draft EIS for the proposed Keystone XL Pipeline project released for public comment.
July 16, 2010	EPA	Agency rates the draft EIS as "Inadequate," noting that potentially significant impacts were not evaluated, that more information and analysis was needed, and the draft EIS would need revision and again be made available for public review.
Apr. 15, 2011	State Department	Supplemental draft EIS issued.
June 6, 2011	EPA	Agency rates the supplemental draft EIS as having "Insufficient Information" and the action as having "Environmental Objections"; recommends additional analysis on a range of issues to be addressed in the final EIS.
Aug. 26, 2011	State Department	Final EIS issued; 90-day public comment related to the national interest determination process begins.
Nov. 22, 2011	Governor of Nebraska	Signed legislation passed during special session directing the Nebraska Department of Environmental Quality (DEQ) to collaborate with the State Department to gather information necessary for a supplemental EIS.
Nov. 2011	Nebraska DEQ/State Department	Agencies begin to negotiate a Memorandum of Understanding (MOU) regarding their collaboration on the supplemental final EIS. Nebraska DEQ hires a contractor to delineate the "Sand Hills" region alternative routes must avoid.
Dec. 23, 2011	Congress	The Temporary Payroll Tax Cut Continuation Act of 2011 (P.L. 112-78) requires the Secretary to issue a permit for the project within 60 days, unless the President determines the project is not in the national interest.
Jan. 18, 2012	State Department	Department denies the Presidential Permit for Keystone XL asserting that the 60-day deadline under P.L. 112-78 did not provide sufficient time to obtain information necessary to assess the project's national interest.
Feb. 3, 2012	State Department	Formal permit denial issued; State Department and Nebraska DEQ suspend work on MOU regarding a supplemental EIS.
Feb. 2012	TransCanada	State Department is informed of the company's intent to continue with the Gulf Coast Project (a pipeline that would <i>not</i> require an EIS if constructed apart from the larger project that requires authorization via a Presidential Permit).
April 19, 2012	TransCanada	Submits to Nebraska DEQ, <i>Initial Report Identifying Alternative and Preferred Corridors for Nebraska Reroute</i> ; public meetings on newly proposed routes follow.
NEPA Compliance Milestones Relevant to TransCanada's 2013 Presidential Permit Application		
May 4, 2012	TransCanada	Application for a Presidential Permit submitted to the State Department to authorize the reconfigured Keystone XL Pipeline Project with a Nebraska route.
June 15, 2012	State Department	Publishes in the <i>Federal Register</i> : "Notice of Intent To Prepare a Supplemental Environmental Impact Statement (SEIS) and To Conduct Scoping and To Initiate Consultation Under Section 106 of the National Historic Preservation Act for the Proposed TransCanada Keystone XL Pipeline Proposed To Extend From Phillips, MT (the Border Crossing) to Steele City, NE."
March 1, 2013	State Department	Releases draft EIS for the 2012 Keystone XL Project for public comment.

Date	Party	Description
April 22, 2013	State Department	Deadline for submission of public comments on the draft EIS.
April 23, 2012	EPA	The proposed project and draft EIS is rated “EO-2,” meaning EPA has “Environmental Objections,” regarding the project’s impacts, and that the draft EIS includes “Insufficient Information”; recommends mitigation efforts to address project impacts and additional analysis that should be included in the final EIS.

Source: Congressional Research Service, based on a review of events during, and affecting, the NEPA process conducted for the 2008 and 2012 Presidential permit applications for the Keystone XL Project.

The National Interest Determination

Generally, after a final EIS is issued, a federal agency may issue a final record of decision (ROD) for the project. However, for a Presidential Permit, issuance of the final EIS represents the beginning of a 90-day public review period during which the State Department gathers information from those necessary to inform its national interest determination. Ultimately, a decision regarding issuance of a Presidential Permit for a pipeline project would be reflected in a combined “Record of Decision and National Interest Determination,” issued by the State Department.³⁰ That document, required under elements of both NEPA and E.O. 11424, formalizes the selection of a project alternative.

During the 90-day public review period for the 2008 Presidential Permit application, the State Department held public meetings in each of the six states through which the proposed pipeline would pass and in Washington, DC.³¹ The meetings were intended to give members of the public additional opportunity to voice their opinions on issues they thought should be taken into account in determining whether granting or denying the Presidential Permit would be in the national interest. During the review period, the State Department received input from state, local, and tribal officials as well as members of the public.

On November 10, 2011, during the public review period for the 2008 permit application, the State Department stated that it received public comments on a wide range of issues including the project’s potential impact on jobs, pipeline safety, health concerns, the societal impact of the project, and oil extraction in Canada.³² Concern regarding the proposed pipeline route through the Sand Hills area of Nebraska was identified as one of the most common issues raised. Comments regarding that pipeline route were consistent with the environmental impacts identified in the final EIS with regard to the unique combination of characteristics of the Sand Hills region (e.g., a high concentration of wetlands of special concern, a sensitive ecosystem, and extensive areas of very shallow groundwater). Further, the Nebraska legislature convened a special session to consider the legislation that would establish regulations applicable to pipeline siting within the state.

³⁰ For example, see U.S. Department of State, “Record of Decision and National Interest Determination, TransCanada Keystone Pipeline, LP Application for Presidential Permit,” February 25, 2008, <http://www.cardnoentrix.com/keystone/project/SignedROD.pdf>.

³¹ U.S. Department of State press release, “Keystone XL Final Environmental Impact Statement Released; Public Meetings Set,” August 26, 2011, <http://www.state.gov/r/pa/prs/ps/2011/08/171082.htm>.

³² U.S. Department of State, “Keystone XL Pipeline Project Review Process: Decision to Seek Additional Information,” Media Note, PRN 2011/1909, Office of the Spokesperson, November 10, 2011.

Facing the prospect of new state pipeline siting regulations applicable to the Sand Hills, together with the concern about the Keystone XL pipeline's specific "preferred" route, the State Department announced that it needed additional information about alternative pipeline routes avoiding the environmentally sensitive Sand Hills area in Nebraska before moving forward with its national interest determination.³³ Although the State Department did not decide that environmental issues led to a determination that the proposed project was not in the national interest, environmental issues identified in the final EIS, and further stressed in public comments, led to its decision to delay that determination until it gathered this information. In a concurrent press release, President Obama stated

Because this permit decision could affect the health and safety of the American people as well as the environment, and because a number of concerns have been raised through a public process, we should take the time to ensure that all questions are properly addressed and all the potential impacts are properly understood.³⁴

Subsequently, TransCanada announced that it would work with the State Department and the Nebraska Department of Environmental Quality (DEQ) to conduct an environmental assessment to define the best location for the Keystone XL pipeline in Nebraska. Further, the company stated that it would "cooperate with these agencies and provide them with the information they need to complete a thorough review that addresses concerns regarding the Sandhills region."³⁵

As noted previously, on December 23, 2011, the Temporary Payroll Tax Cut Continuation Act of 2011 was enacted (P.L. 112-78). Under Section 501, "Permit for Keystone XL Pipeline," the Secretary was required to grant the Presidential Permit for the Keystone XL pipeline project within 60 days, unless the President determined that the pipeline would not be in the national interest. On January 18, 2012, the State Department announced, with the President's concurrence, that the Presidential Permit for the proposed Keystone XL Pipeline would be denied at that time because it was determined not to serve the national interest. That recommendation "was predicated on the fact that the Department does not have sufficient time to obtain the information necessary to assess whether the project, in its current state, is in the national interest."³⁶

The process of determining a project's national interest illustrates the distinctly different, yet interrelated requirements applicable to the NEPA process and the Presidential Permit application process. Under NEPA, the State Department (or any other federal agency considering an action) must fully assess the environmental consequences of an action and potential project alternatives *before* making a final decision. NEPA does not prohibit a federal action that has adverse environment impacts; it requires only that a federal agency be fully *aware of* and *consider* those adverse impacts before selecting a final project alternative. That is, NEPA is intended to be part of the decision-making process, not dictate a particular outcome. By contrast, issuance of a Presidential Permit is predicated on the Secretary's finding that the proposed project would serve the national interest. Milestones in the State Department's process to make its national interest determination for the 2008 permit application are summarized in **Table 2**.

³³ Ibid.

³⁴ The White House, Office of the Press Secretary, "Statement by the President on the State Department's Keystone XL Pipeline Announcement," November 10, 2011.

³⁵ See TransCanada Corp., Media Advisory, "State of Nebraska to Play Major Role in Defining New Keystone XL Route Away From the Sandhills," November 14, 2011, available at <http://www.transcanada.com/5896.html>.

³⁶ U.S. Department of State, Media Note, "Denial of the Keystone XL Pipeline Application," January 18, 2012, available at <http://www.state.gov/r/pa/prs/ps/2012/01/181473.htm>.

Table 2. Milestones in National Interest Determination Process for the 2008 Keystone XL Pipeline

Date	Party	Description
Aug.- Oct. 2011	State Department	The 90-day public review period for national interest determination begins; State Department holds public meetings in the six states through which the proposed pipeline would pass and in Washington, DC.
Oct. 2011	Congress	Fourteen Members of Congress request the State Department Office of Inspector General (IG) to investigate the department's handling of the EIS and national interest determination for the Keystone XL project.
Oct. 24, 2011	Governor of Nebraska	The governor calls the Nebraska legislature into a special session to determine if siting legislation can be crafted and passed for pipeline routing in Nebraska.
Nov. 4, 2011	State Department	IG announces it is initiating a special review to determine to what extent the department and all other parties involved complied with Federal laws and regulations relating to the Keystone XL pipeline permit process.
Nov. 10, 2011	State Department	The agency announces that additional information will be needed regarding alternative pipeline routes that would avoid the Nebraska Sand Hills before national interest determination can be made. Officials suggest that analysis needed to prepare the supplemental EIS, including additional public comment, could be completed as early as the first quarter of 2013.
Nov. 14, 2011	TransCanada	The company announces that it will work with the Nebraska Department of Environmental Quality (DEQ) to identify a potential pipeline route that would avoid the Nebraska Sand Hills.
Nov. 22, 2011	Governor of Nebraska	The governor signs legislation passed during the special session directing the Nebraska DEQ to work collaboratively with the State Department to gather information necessary for a supplemental EIS.
Nov. 2011	Nebraska DEQ/State Department	The agencies begin negotiating a Memorandum of Understanding (MOU) to collaborate on the supplemental EIS. Nebraska DEQ hires a contractor to delineate the "Sand Hills" region that alternative routes must avoid.
Dec. 23, 2011	Congress	The Temporary Payroll Tax Cut Continuation Act of 2011 (P.L. 112-78) requires the Secretary to issue a permit for the project within 60 days, unless the President determines the project is not in the national interest.
Jan. 18, 2012	State Department	The agency announces that it will deny the Keystone XL permit.

Source: Congressional Research Service, based on a review of events during, and affecting, the State Department's national interest determination for the 2008 Presidential Permit application for the Keystone XL pipeline project.

State Siting and Additional Environmental Requirements

As the NEPA compliance process for TransCanada's permit application moves forward, it is helpful to understand the distinction between what is required under NEPA itself and what may be required pursuant to other environmental requirements identified within the context of the NEPA process. NEPA itself requires federal agencies to identify the environmental impacts of an action before proceeding with them and to involve the public in that process when environmental impacts are significant. In the process of identifying a proposed project's environmental impacts, within the context of preparing the EIS, the lead agency should identify any compliance obligations (licenses, permits, or approvals) established under additional state, tribal, and federal law applicable to the portion of the project constructed in the United States.

As noted above, the federal government does not currently exercise siting authority over oil pipelines. Instead, pipeline siting for the Keystone XL Project must comply with any applicable state law—which can vary from state to state. South Dakota, for example, required TransCanada to apply for a permit for the Keystone XL Project from the state public utility commission, which issued the permit on April 25, 2010.³⁷ Montana requires a certificate from the state’s Department of Environmental Quality.³⁸

At the time of TransCanada’s initial application for a Presidential Permit, Nebraska did not have any permitting requirements that applied specifically to the construction and operation of oil pipelines, although a state statute did include an “eminent domain” provision to grant eminent domain authority to oil pipeline companies unable to obtain the necessary property rights from the relevant property owners.³⁹ However, due to the controversy surrounding the Keystone XL Project, Nebraska’s governor called a special session of its legislature to enact legislation to assert state authority over pipeline siting. Subsequently, the state enacted two laws—one that would affect the siting of the Keystone XL pipeline and one that outlines procedures for siting any future oil pipeline in Nebraska.⁴⁰ The latter requires an oil pipeline carrier proposing to construct a major oil pipeline in Nebraska to file an application with the state’s Public Service Commission and receive approval before beginning construction. Additionally, the law authorized the commission to follow certain procedures before deciding whether a proposed oil pipeline would serve the public interest.

Although there are limited federal requirements applicable to oil pipeline *siting*, there are numerous local, state, tribal, and federal requirements applicable to pipeline construction, operation, and maintenance. For example, the 2013 draft EIS for the Keystone XL Project lists major permits, licenses, approvals, and consultation requirements for the proposed project that would be required by federal, state, and local agencies prior to implementation of the project.⁴¹ Following are selected requirements included on that list:

- The U.S. Army Corps of Engineers—issuance of a permit for sections of the project that require placement of dredge and fill material in waters of the United States, including wetlands (pursuant to Section 404 of the Clean Water Act), or for pipeline crossings of navigable waters (pursuant to Section 10 of the Rivers and Harbors Act);
- The Environmental Protection Agency—review and issue National Pollutant Discharge Elimination System permits for the discharge of pollutants in state waters (pursuant to Section 402 of the Clean Water Act);
- The Bureau of Land Management—grant temporary use permits for portions of the project that would encroach on federal lands;

³⁷ South Dakota Public Utilities Commission, Final Decision and Order; Notice of Entry Before the Public Utilities Commission of the State of South Dakota, In the Matter of the Application by TransCanada Keystone Pipeline, LP for a Permit Under the South Dakota Energy Conversion and Transmission Facilities Act to Construct the Keystone Pipeline Project, HP07-001, <http://puc.sd.gov/commission/orders/HydrocarbonPipeline/2008/hp07-001.pdf>.

³⁸ Montana Major Facility Siting Act, Title 75, Chapter 20.

³⁹ Nebraska Rev. Stat. §57-1101.

⁴⁰ See Nebraska governor Dave Heineman’s November 23, 2011, statement “Common Sense Solution,” available at http://www.governor.nebraska.gov/columns/2011/11/23_solution.html.

⁴¹ U.S. Department of State, March 2013, Draft EIS, Section 1.9, “Permits, Approvals, and Regulatory Requirements.”

- U.S. Fish and Wildlife Service—consider impacts to federally listed endangered species (pursuant to the Endangered Species Act) and provide a Biological Opinion if the project is likely to adversely affect federally listed species.
- Multiple state/county agencies—consult on and/or consider issuance of permits for projects that cross navigable waters or state highways, or involve work potentially affecting state streams, cultural resources, or natural resources.

The time it took to complete the NEPA process was a focus of attention for the 2008 Presidential Permit application. However, for past pipeline projects, obtaining all required local, state, tribal, and federal permits, approvals, and licenses took a similar amount of time. By way of example, for the Alberta Clipper pipeline project (another oil sands pipeline) completion of the NEPA process, the national interest determination, and issuance of a Presidential Permit took approximately two years. Obtaining the necessary permits, approvals, and licenses for construction of the pipeline took an additional two years.

Legislative Efforts to Change Permitting Authority

In light of the State Department’s denial of the 2008 permit application for the Keystone XL Project, some in Congress have sought alternative means to support development of the pipeline. There were a number of legislative proposals in the 112th Congress to change the federal permitting authority for the pipeline. H.R. 3548 would have transferred the permitting authority over the Keystone XL Project from the State Department to the Federal Energy Regulatory Commission (FERC), requiring the commission to issue a permit for the project within 30 days of enactment.⁴² Other proposals, such as H.R. 3811 and S. 3445, would have directly shifted permitting authority to Congress, effectively approving upon enactment the permit applications filed by TransCanada in 2008 and 2012, respectively.

Similar legislation has been proposed in the 113th Congress, including legislative proposals from the prior Congress that have been reintroduced. The Energy Production and Project Delivery Act of 2013 (S. 17) would eliminate the Presidential Permit requirement for the reconfigured Keystone XL Project. The Keystone for a Secure Tomorrow Act (H.R. 334) and a Senate bill to approve the Keystone XL Project (S. 582) would directly approve the Keystone XL Project under the authority of Congress to regulate foreign commerce. The Northern Route Approval Act (H.R. 3) would eliminate the Presidential Permit requirement for Keystone XL and require issuance of permits for water crossings by the Army Corps of Engineers within 90 days of an application, among other provisions. The Senate passed an amendment to the Fiscal 2014 Senate Budget Resolution (S.Con.Res. 8) that would provide for the approval and construction of the Keystone XL Project (S.Amdt. 494). The North American Energy Infrastructure Act (H.R. 3301) would transfer permit authority for oil pipelines from the State Department to the Department of Commerce; would require agencies to approve applications within 120 days of submission unless they determine the project is not in the national *security* interest (as opposed to “national interest” more generally); and would eliminate the need for new or revised Presidential Permits for pipeline modifications (e.g., reversal of flow direction), among other provisions.

⁴² The Surface Transportation Extension Act of 2012, Part II (H.R. 4348), which passed in the House on April 18, 2012, also contained these provisions, but they were subsequently dropped from the bill in conference committee with the Senate.

Changing, or eliminating altogether, the State Department’s role in issuing cross-border infrastructure permits may raise questions about the President’s executive authority (further discussed in **Appendix A**). In response to H.R. 3548, for example, the State Department’s key official on Keystone XL testified before Congress:

The legislation raises serious questions about existing legal authorities, questions the continuing force of much of the federal and all of the state and local environmental and land use management authority over the pipeline, and overrides foreign policy and national security considerations implicated by a cross border permit, which are properly assessed by the State Department.⁴³

Such proposals may also raise some administrative and legal challenges for FERC or other federal agencies. A senior FERC official testified that a proposal like H.R. 3548 would not provide enough time for an “adequate” public record, provides no clear authority for enforcing measures required in the EIS, does not articulate a process for authorizing alterations to the pipeline route, and is unclear about permits required from other federal agencies, among other concerns.⁴⁴ For additional analysis of associated legal issues, see CRS Report R42124, *Proposed Keystone XL Pipeline: Legal Issues*, by Adam Vann, Kristina Alexander, and Kenneth R. Thomas; and CRS Report R43261, *Presidential Permits for Border Crossing Energy Facilities*, by Adam Vann and Paul W. Parfomak.

Given the State Department’s initial permit denial, and opposition from various environmental groups and stakeholders along the pipeline route, legal challenges are a possibility. However, in the event of a challenge based on an environmental issue, the distinction between State Department actions required under NEPA and those required under its authority to issue a Presidential Permit would be relevant. NEPA does not create a private right of action. Instead, judicial challenges to a federal agency action under NEPA are brought pursuant to the Administrative Procedure Act (APA, 5 U.S.C. §§706 et seq.). Presidential actions, however, are not subject to judicial review under the APA.⁴⁵ That is, the final agency action reflected in an ROD is subject to judicial review, but the State Department’s national interest determination, made under its authority to issue a Presidential Permit, is not. For more analysis of the State Department’s authority to grant a Presidential Permit, see **Appendix A**.

Arguments For and Against the Pipeline

Proponents of the Keystone XL Pipeline, including Canadian agencies and U.S. and Canadian petroleum industry stakeholders, base their arguments supporting the pipeline primarily on increasing the security and diversity of the U.S. petroleum supply and economic benefits,

⁴³ Kerri-Ann Jones, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs, Testimony before the House Energy and Commerce Committee, Subcommittee on Energy and Power Hearing on the North American Energy Access Act, January 25, 2012.

⁴⁴ Jeff Wright, Director, Office of Energy Projects, Federal Energy Regulatory Commission, Testimony before the House Energy and Commerce Committee, Subcommittee on Energy and Power Hearing on the North American Energy Access Act, January 25, 2012.

⁴⁵ While the APA’s definition of “agency” does not specifically exclude or include the president, the Supreme Court has held that exercises of presidential authority are not subject to judicial review because the president is not an agency (*Dalton v. Specter*, 511 U.S. 462, 470 (1994)). The Court has also held that the APA does not apply to the president based on separation of powers principles (*Franklin v. Massachusetts*, 505 U.S. 788, 800-01 (1992)).

especially jobs. Pipeline opponents are generally environmental organizations and community groups. Their concerns stem from issues that can be broadly categorized as the pipeline's global or community environmental impacts. "Global" impacts stem primarily from concern regarding the lifecycle greenhouse gas (GHG) emissions associated with the development of Canadian oil sands, compared to conventional oil or renewable fuels.⁴⁶ Although the concern regarding GHG emissions is focused primarily on the extraction process, opponents also argue that use of the oil sands crude promotes continued U.S. dependency on fossil fuels. Concern over adverse community impacts of the pipeline stems primarily from the risk of a potential release of heavy crude, and the operators' ability to respond to a release, particularly in remote areas. Communities along the pipeline route are also concerned about impacts associated with the pipeline's construction and long-term use on private land—particularly its potential to affect farming and cattle grazing.

Impact on U.S. Energy Security

In its Presidential Permit application, TransCanada asserts that constructing the proposed Keystone XL Pipeline is in the U.S. national interest to maintain adequate crude oil supplies for U.S. refineries. The application argues that the pipeline will allow U.S. refiners to substitute Canadian supply for other foreign crude supply and to obtain direct pipeline access to secure and growing Canadian crude output. In particular, the application asserts that the pipeline would allow the United States to decrease its dependence on crude oil from Mexico and Venezuela, the two largest oil exporters into the U.S. Gulf Coast.⁴⁷ Consistent with this argument, some proposals would seek to ensure that any crude oil and bitumen transported by the Keystone XL Pipeline, or any resulting refined products, would have to remain in U.S. markets subject to a presidential waiver allowing foreign export.⁴⁸ Depending upon the circumstances, however, such restrictions could raise concerns with respect to international trade agreements, among other considerations.

Energy security arguments have taken on additional weight in light of the recent geopolitical tensions in the Middle East and North Africa. However, it is worth noting that even if Keystone XL is built, prices for the crude oil it carries as well as for domestically produced oil from elsewhere will continue to be affected by international events. The oil market is globally integrated and events in major producer and consumer countries can affect prices everywhere.⁴⁹ For example, the disruption of Libyan supply in early 2011 contributed to higher crude oil prices in the United States, even though the United States imported almost no oil from Libya before the unrest broke out.⁵⁰

⁴⁶ For additional analysis of greenhouse gas issues associated with Canadian oil sands crudes, see CRS Report R42537, *Canadian Oil Sands: Life-Cycle Assessments of Greenhouse Gas Emissions*, by Richard K. Lattanzio.

⁴⁷ TransCanada Keystone Pipeline, L.P., September 19, 2008, pp. 6-8.

⁴⁸ On February 7, 2012, the House Energy and Committee rejected an amendment to H.R. 3548 offered by Representative Edward Markey containing export restrictions.

⁴⁹ This is the case unless the oil is stranded due to transport bottlenecks. Ironically, the bottleneck for crude oil flowing south from the Midwest to the Gulf Coast—which Keystone XL would help alleviate—helped insulate Midwestern crude oil prices from the impacts of unrest in the Middle East and North Africa. However, as is discussed below, this may have benefited Midwestern refiners but probably did not significantly reduce costs for U.S. consumers.

⁵⁰ For more about this, see CRS Report R41683, *Middle East and North Africa Unrest: Implications for Oil and Natural Gas Markets*, by Michael Ratner.

Canadian Oil Imports in the Overall U.S. Supply Context⁵¹

Gross U.S. imports of crude oil and petroleum products averaged 10.6 million bpd (Mbpd) in 2012.⁵² U.S. oil exports averaged 3.2 Mbpd (almost entirely refined petroleum products), leaving net imports at 7.4 Mbpd.⁵³ U.S. net imports have fallen by 5.1 Mbpd or 41% since they peaked in 2005 as a result of lower total oil consumption and higher domestic production. Some of this decline could be mitigated in the near term as oil demand recovers from the recession. However, there is increasing sentiment among forecasters that U.S. oil imports have passed their high water mark already and may remain relatively flat or fall in the foreseeable future.⁵⁴

Among the largest sources of U.S. gross oil imports are Canada (2.9 Mbpd), the Persian Gulf (2.1 Mbpd), Mexico (1.0 Mbpd), and Venezuela (0.9 Mbpd). Imports from the latter two sources have decreased in recent years in part due to lower need for imports described above and in part due to developments in those countries. Mexican production has been falling since 2004 because new oil developments have not been able to offset depletion at Mexico's giant Cantarell field. Imports from Venezuela, another key source of U.S. imports, have also fallen. Venezuelan production never fully recovered after a strike at its national oil company, *Petróleos de Venezuela*, in 2002-2003. Venezuelan production today is nearly 1 Mbpd less than that achieved in 2001. In recent years, Venezuela has also been trying to diversify business away from the United States, for example, by increasing exports to China.⁵⁵

Meanwhile, Canadian production and exports to the United States have increased, primarily due to growing output from the oil sands in western Canada. Energy markets in the United States and Canada are well integrated by pipeline infrastructure; nearly all Canadian energy exports go to the United States.⁵⁶ Canadian oil production has increased about 0.7 Mbpd since 2005 and exports to the United States have increased by 0.77 Mbpd (see **Table 3**).⁵⁷ Some expect Canadian oil production to grow by nearly 2 Mbpd by 2025 due to increased output from the oil sands.⁵⁸

⁵¹ For a primer on the oil market, see CRS Video Brief *Introduction to the Oil Market*, at <http://www.crs.gov/analysis/Pages/WVB00002.aspx>.

⁵² All data in this section are from the U.S. Energy Information Administration's (EIA's) *Petroleum & Other Liquids* (<http://www.eia.gov/petroleum/data.cfm>), *International Energy Statistics* (<http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm>), and the *Short Term Energy Outlook* (<http://www.eia.gov/forecasts/steo/>).

⁵³ For context, the United States consumed 18.8 Mbpd in 2011, more than 20% of the world's oil market. Net imports are gross or total imports less total exports. This section will focus on gross imports, though it should be noted that among U.S. petroleum exports about 0.2 Mbpd of petroleum products go to Canada and 0.4 Mbpd to Mexico.

⁵⁴ For more analysis, see CRS Report R42465, *U.S. Oil Imports and Exports*, by Robert Pirog.

⁵⁵ U.S. Energy Information Administration, "Country Analysis Brief: Venezuela," February 2010, <http://www.eia.doe.gov/emeu/cabs/Venezuela/Oil.html>.

⁵⁶ For further analysis of U.S.-Canada energy trade, see CRS Report R41875, *The U.S.-Canada Energy Relationship: Joined at the Well*, by Paul W. Parfomak and Michael Ratner.

⁵⁷ As in the United States, Canadian consumption fell due to economic downturn. This allowed the increment in exports to be higher than the increment in production.

⁵⁸ Canadian Association of Petroleum Producers (CAPP), *Crude Oil: Forecast, Markets, and Pipelines*, June 2011, p. 2, <http://www.capp.ca/forecast/Pages/default.aspx>.

Table 3. U.S. Oil Imports
(millions of barrels per day)

	2005	2006	2007	2008	2009	2010	2011	2012
Canada	2.18	2.35	2.45	2.49	2.47	2.53	2.79	2.95
Mexico	1.66	1.70	1.53	1.30	1.21	1.28	1.20	1.03
Persian Gulf OPEC	2.33	2.21	2.16	2.37	1.68	1.71	1.86	2.15
Other OPEC	3.25	3.30	3.82	3.58	3.09	3.19	2.69	2.10
Rest of the World	4.29	4.14	3.50	3.17	3.24	3.08	2.96	2.36
Total	13.71	13.70	13.46	12.91	11.69	11.79	11.50	10.59

Source: Energy Information Administration, <http://www.eia.doe.gov>

Notes: Table 3 contains data for gross oil and petroleum product imports.

Oil Sands, Keystone XL, and the U.S. Oil Market

Oil sands (also referred to as tar sands) are a mixture of clay, sand, water, and heavy black viscous oil known as bitumen. Oil sands require more processing than conventional crude oil. Oil sands are processed to extract the bitumen, which can then be sent to refineries in one of two forms. Bitumen can be upgraded into “syncrude,” a light crude that is suitable for pipeline transport and is relatively easy to refine. Alternatively, bitumen can be blended with lighter hydrocarbons to form a heavy crude (diluted bitumen or “dilbit”) that can be transported by pipeline. The bulk of oil sands supply growth is expected to be in the form of the latter.⁵⁹

Most oil sands imports into the United States currently go to the Midwest, where refineries have been investing in complex refining capacity to process growing volumes of heavy Canadian crude.⁶⁰ The U.S. Gulf Coast region already has a large amount of complex refining capacity and is well suited for processing Canadian heavy crude oil. Gulf Coast refiners currently process heavy crudes from Venezuela, Mexico, and elsewhere. Complex refineries in the Gulf Coast may be best equipped to handle a large increase of heavy oil sands crude, though some may still need to adjust processes and make new capital investments in equipment to accommodate particular crudes’ characteristics,⁶¹ especially if the new Canadian crudes will be used in large amounts.⁶² There are 58 refineries in the Gulf Coast region (potentially served by the proposed Gulf Coast Project) that could process heavy crude oil similar in composition to the oil that Keystone XL pipeline would carry from Alberta.⁶³ Crudes from the U.S. Bakken formation are light crudes.

⁵⁹ CAPP, 2011, p. 7.

⁶⁰ CAPP, 2011, p. 13. According to CAPP, refineries adding capacity to process more heavy oil in the Midwest include those in Roxana, IL; Whiting, IN, and Detroit, MI.

⁶¹ Baker Hughes, *Planning Ahead for Effective Canadian Crude Processing*, Baker Petrolite White Paper, 2010, http://www.bakerhughes.com/assets/media/whitepapers/4c2a3c8ffa7e1c3c7400001d/file/28271-canadian_crudeoil_update_whitepaper_06-10.pdf&fs=1497549.

⁶² For a description of which units refineries may need to add (or have added) to be able to process more Canadian oil sands supply, see Praveen Gunaseelan and Christopher Buehler, “Changing US Crude Imports Are Driving Refinery Upgrades,” *Oil and Gas Journal*, August 10, 2009.

⁶³ TransCanada Keystone Pipeline, L.P., May 2012 Presidential Permit application submitted to the U.S. Department of State (see footnote 3), p. 14.

Oil production from the oil sands is increasing, as is production from the Bakken and other areas of the U.S. Midwest.⁶⁴ Transport options to carry crude from the Midwest to the Gulf Coast are limited. (In the past, crude oil had been shipped up from the Gulf Coast to Midwestern refineries.) The resulting abundance of crude oil in the Midwest has driven down crude oil prices in that region relative to Gulf Coast and international crude markets. Midwestern refiners benefit from the lower cost of crude, but it does not translate to substantially lower consumer prices for gasoline or other products in the region. The Midwest still brings in refined products from the Gulf Coast, which keeps refined products prices in line with national and international levels.⁶⁵

Oil sands producers are interested in Keystone XL because it would expand their market reach into the Gulf Coast. The Gulf Coast region holds half of U.S. refining capacity, including a substantial amount of technologically advanced capacity capable of processing heavy sour crudes in large volumes. Reaching a larger market and one with more advanced refining capacity could increase the price these producers receive for their crude. For their part, Gulf Coast refiners are interested in the Keystone XL pipeline because it increases the supply of heavy sour crude in the Gulf Coast region, potentially bringing down their input costs relative to the options they currently have available. Canadian Natural Resources Limited, an oil sands producer, and Valero Energy Corporation, a large U.S. refiner, are among those that contracted for shipping capacity on the Keystone XL pipeline.

With expanded pipeline capacity extending to the U.S. Gulf Coast, Canadian oil sands crude may compete with other heavy crudes such as those from Mexico, Venezuela, and elsewhere.⁶⁶ It is difficult to predict precisely how this competition will play out, but it may take place through shifting discounts or premiums on crude oils from various sources.⁶⁷ It may be possible for Canadian oil supplies to effectively “push out” waterborne shipments from other countries, although this depends on a wide range of market conditions. Waterborne crudes may more easily go to other destinations than Canadian crudes, though like Canadian crudes they can be tied to specialized refining capacity, as is true for Venezuelan heavy crudes.

There is concern that increased supply of crude to the Gulf Coast may result in larger petroleum product exports rather than contributing to lower domestic fuel cost. Although the United States is a net importer of oil and petroleum products, it does export some petroleum products. U.S. petroleum product exports rose when domestic demand declined in the wake of the recession while foreign demand for certain fuels, such as diesel, remained relatively robust. Issues around potential export of Canadian crude oil carried on Keystone XL or export of products made from that crude oil are addressed in CRS Report R42465, *U.S. Oil Imports and Exports*, by Robert Pirog.

If Keystone XL secures growing oil sands output for the United States, it could push out seaborne crudes from elsewhere, regardless of where the product is ultimately sold. If the absence of the pipeline encourages Canadian oil sands producers and pipeline companies to find an alternate

⁶⁴ See increased U.S. crude oil production in the Midwest under the PADD2 heading at the following source: Energy Information Administration, U.S. Department of Energy, *Crude Oil Production (by PADD)*, Petroleum & Other Liquids, http://www.eia.gov/dnav/pet/pet_crud_crpdn_adc_mbbldpd_a.htm.

⁶⁵ Adjusted for transport costs and other regional differences.

⁶⁶ Center for Energy Economics and Bureau of Economic Geology, *Overview of the Alberta Oil Sands*, University of Texas at Austin, 2006, p. 16, http://www.beg.utexas.edu/energyecon/documents/overview_of_alberta_oil_sands.pdf.

⁶⁷ For more about the U.S. refining system, see CRS Report R41478, *The U.S. Oil Refining Industry: Background in Changing Markets and Fuel Policies*, by Anthony Andrews et al.

export route through the Canadian West Coast, Canadian supplies may displace heavy oil supplies in other markets and potentially allow relatively more overseas imports coming into the Gulf Coast. This possibility is discussed further below.

It should be noted that Keystone XL aims to alleviate two potential bottlenecks in the pipeline transportation system: Between Western Canada and the United States, and between the U.S. Midwest and the Gulf Coast. Existing pipelines between Canada and the United States have spare capacity to carry rising Canadian production for the time being. According to some estimates, additional capacity, such as Keystone XL, may not be needed until 2019.⁶⁸ The latter bottleneck, between the Midwest and the Gulf Coast, is already at capacity and, as described above, has resulted in a discount for crude oil in the Midwest (though not for petroleum products). The Gulf Coast Pipeline Project, the lower leg of originally proposed Keystone XL pipeline, would address this second bottleneck and help alleviate the discount for Midwestern crudes.

Other Pipeline Projects

Apart from Keystone XL, several other pipeline proposals could help carry growing Canadian crude oil supplies to the U.S. Gulf Coast. On October 16, 2011, Enbridge announced it would purchase ConocoPhillips' share of the Seaway pipeline and reverse its direction to bring crude oil from the Midwest to the Gulf Coast. ConocoPhillips had kept the pipeline running northward to serve its refinery in Ponca City, OK. However, the glut of oil in the Midwest had resulted in the pipeline running at low volumes. Nonetheless, ConocoPhillips had been uninterested in reversing the pipeline. ConocoPhillips, which is spinning off its refining business,⁶⁹ sold its share of Seaway to Enbridge. Enbridge and Seaway shareholder Enterprise Products Partners L.P. reversed the direction of crude oil flows on the Seaway pipeline to enable it to transport oil from Cushing, OK, to the U.S. Gulf Coast. The pipeline began running southward at an initial capacity of 150,000 bpd in 2012, with capacity expected to increase to 400,000 bpd in 2013. The reversal and expansion are expected to reduce the glut of crude oil in the Midwest and reconnect Midwestern crude prices to global prices (driving the U.S. Benchmark West Texas Intermediate crude higher).⁷⁰

Prior to the Seaway sale, Enbridge had reported significant commitments for two new pipeline projects: Flanagan South, which would carry oil from Illinois to Oklahoma, and Wrangler, which would carry oil from Oklahoma to Texas.⁷¹ According to Enbridge, the project would duplicate existing routes and would not cross an international border, so it would not require a Presidential Permit. Enbridge already has cross border pipeline capacity connecting Alberta to Illinois. However, according to press reports, Wrangler has been canceled in light of the Seaway purchase and reversal.⁷² Enbridge is moving forward with the Flanagan South project, which will have an initial capacity of about 600,000 bpd and run alongside Enbridge's existing Spearhead pipeline

⁶⁸ Testimony of Jim Burkhard, U.S. Congress, Senate Committee on Energy and Natural Resources, *US and Global Energy Outlook for 2012*, 112th Cong., 2nd sess., January 31, 2012.

⁶⁹ ConocoPhillips, "ConocoPhillips Pursuing Plan to Separate into Two Stand-Alone, Publicly Traded Companies," press release, July 14, 2011, http://www.conocophillips.com/EN/newsroom/news_releases/2011news/Pages/07-14-2011.aspx.

⁷⁰ Jenny Gross, "NYMEX Oil Gets Boost From Pipeline Reversal," *Wall Street Journal*, April 22, 2012.

⁷¹ Bradley Olson, "Enbridge Pursuing Alternative to Transcanada's Keystone XL," *Bloomberg*, November 9, 2011.

⁷² Ben Lefebvre, "Enterprise Products Cancels Wrangler Pipeline," *Dow Jones Newswires*, November 16, 2011.

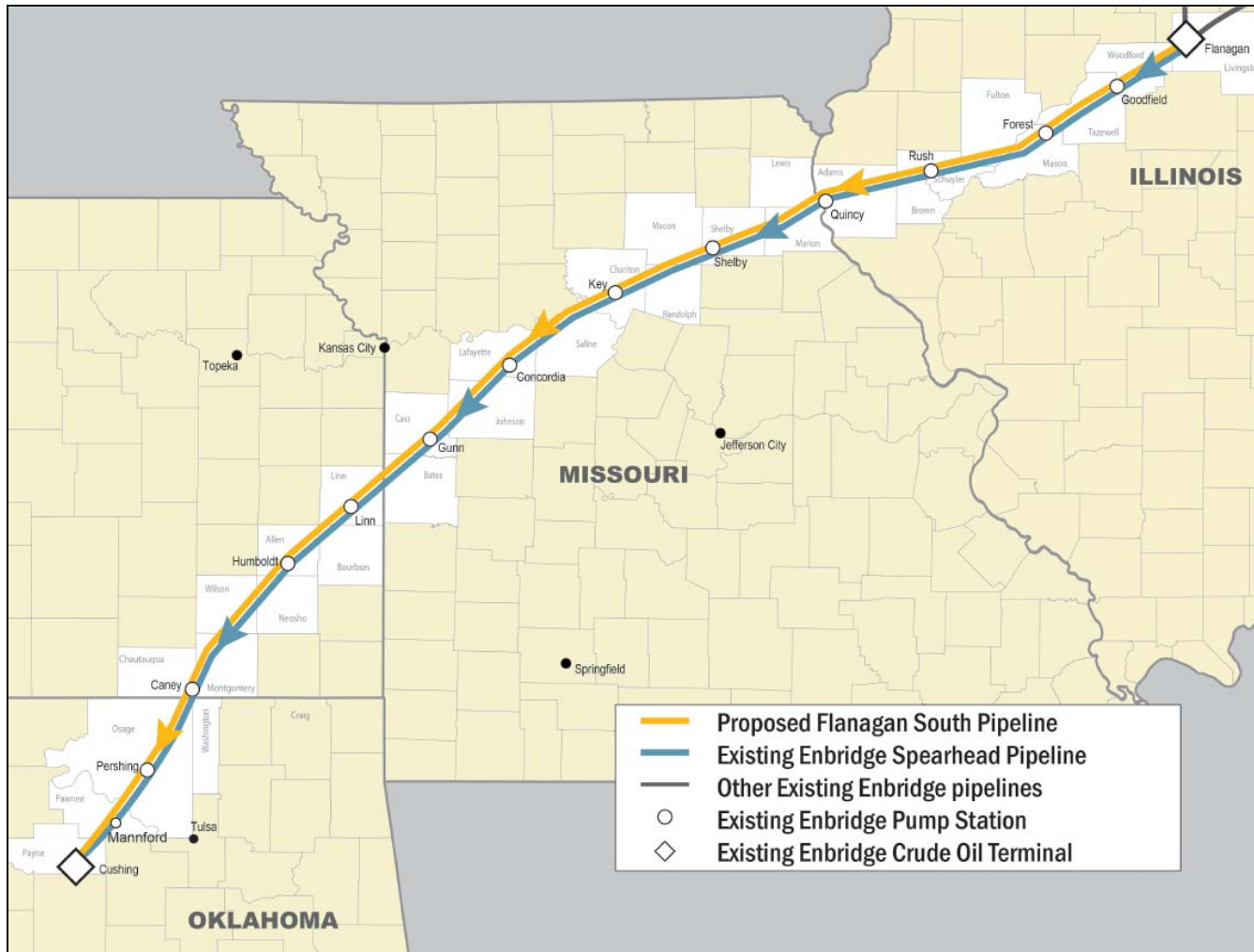
(see **Figure 3**).⁷³ Like Keystone XL/Gulf Coast Project, Flanagan South and a southbound Seaway may facilitate increased flow of Canadian crude to the U.S. Gulf Coast.

In February 2013, Enbridge also announced a proposal to convert segments of existing natural gas pipeline owned by Trunkline Gas Company to carry crude oil from western Canada and North Dakota to refineries in the eastern Gulf of Mexico. The pipeline conversion could potentially carry up to 660,000 bpd from the market hub at Patoka, IL, more than 700 miles to St. James, LA.⁷⁴

⁷³ Enbridge, “Flanagan South Project Fact Sheet,” April 1, 2012, <http://www.enbridge.com/FlanaganSouthPipeline.aspx>.

⁷⁴ Enbridge, “Enbridge and Energy Transfer Join to Provide Crude Oil Pipeline Access to Eastern Gulf Coast Market,” press release, February 15, 2013.

Figure 3. Proposed Enbridge Flanagan South Pipeline Route



Source: Enbridge, "Flanagan South Project Fact Sheet," April 1, 2012, <http://www.enbridge.com/FlanaganSouthPipeline.aspx>.

Rail Transportation

While the oil industry has been making substantial investments in pipeline capacity to relieve transportation bottlenecks for Canadian crudes, there has also been a substantial increase in oil transportation from the region by rail. As the State Department's 2013 DEIS for the Keystone XL project states:

In the past 2 years, there has been exponential growth in the use of rail to transport crude oil throughout North America, primarily originating from the Bakken in North Dakota and Montana, but also increasingly utilized in other production areas, including the [Western Canadian Sedimentary Basin]. Because of the flexibility of rail delivery points, once loaded onto trains the crude oil could be delivered to refineries, terminals, and/or port facilities throughout North America, including the Gulf Coast area.⁷⁵

Consistent with this view, both Canadian National Railway and Canadian Pacific Railway reportedly have long been pursuing a “pipeline on rails” business strategy, including new track investments, to move Canadian crudes to new markets throughout North America.⁷⁶ While the potential volumes associated with rail transportation of crude would likely be lower than pipeline volumes, they could still be significant. Increasing cross-border movements of crude oil by rail does not require State Department approval, so such an approach seeks to avoid regulatory delays.

As rail volumes have increased, some policy makers have expressed concern about the potential safety of crude transport by rail compared to pipelines. These concerns have been exacerbated by several significant accidents in the United States and Canada involving rail transport of crude oil.⁷⁷ The most serious accident was the July 2013 derailment and explosion of a rail-borne crude oil shipment through Lac-Mégantic, Quebec, Canada, which killed 47 people and burned much of the downtown area.⁷⁸ Some analysts in the Keystone XL Pipeline debate have asserted that these rail accidents underscore the need for a new pipeline as, in their view, a safer mode of transportation for Canadian crudes.⁷⁹ However, safety comparisons between the two transportation modes are complicated by spill frequency vs. spill volume issues, which leave assertions about relative safety open to debate.⁸⁰

Canadian Oil to East and West Coast Markets

There are proposals to increase the capacity for oil from Alberta to reach the Canadian east and west coast. Currently, nearly all of Canada's oil exports go to the United States, mostly through

⁷⁵ U.S. Department of State, March 2013, Draft EIS, Section 5.1, “No Action Alternatives.”

⁷⁶ Nathan Vanderklippe, “CN, CP Push for a ‘Pipeline on Rails,’” *The Globe and Mail*, February 7, 2011.

⁷⁷ See, for example, David Sheppard and Jeffrey Jones, “Train Hauling Canadian Oil Derails in Minnesota,” *Reuters*, March 27, 2013.

⁷⁸ Brian Mann, “Lac-Mégantic Blast Leaves Impact on Town, Rail Industry,” National Public Radio, October 14, 2013.

⁷⁹ Diana Furchtgott-Roth and Kenneth P. Green, *Intermodal Safety in the Transport of Oil*, Fraser Institute, October 2013, <http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/intermodal-safety-in-the-transport-of-oil.pdf>.

⁸⁰ See, for example: Rory Johnston, “Train vs. Pipeline: What’s the Safest Way to Transport Oil?” *Christian Science Monitor*, Energy Voices blog, October 22, 2013, <http://www.csmonitor.com/Environment/Energy-Voices/2013/1022/Train-vs.-pipeline-What-s-the-safest-way-to-transport-oil>.

north-south pipelines. Only one major oil pipeline extends from Alberta to Canada's west coast: the Trans Mountain Pipeline, which is owned by Houston-based Kinder Morgan and has a capacity of 300,000 bpd. Some of the oil from the Trans Mountain Pipeline is loaded onto tankers and shipped from Vancouver. Nearly all of the quantities shipped by sea go to the United States, with a small amount going to China and other Asian countries.⁸¹ Proposals for additional east and westbound capacity include the following.

- Kinder Morgan has plans to expand the Trans Mountain Pipeline to 850,000 bpd by 2017, more than doubling its existing capacity, and expanding west coast shipping facilities.⁸² The expansion has received the necessary commitments from parties interested in shipping additional crude volumes. Some shippers are interested in using the additional capacity to export more Canadian crude oil to Asia. Kinder Morgan still needs regulatory approvals from Canadian authorities and is working to gain the support of stakeholders.⁸³ There is some opposition to the project, including from groups concerned about additional tanker traffic near Vancouver and potential oil spill risks.⁸⁴
- Enbridge has proposed a new pipeline: the Northern Gateway project would have a 525,000 bpd capacity to send oil from Edmonton to Kitimat, British Columbia.⁸⁵ However, Northern Gateway faces opposition from groups including some First Nations communities and environmental groups.⁸⁶
- Several projects are considering moving oil east rather than to the west coast. According to reports, TransCanada is considering a pipeline project sending oil east from Alberta to Quebec and New Brunswick, which could also carry crude bound for export.⁸⁷ Enbridge is also interested in expanding eastbound capacity by reversing its Line 9 Pipeline.⁸⁸ Some suggest this could potentially lead to oil sands crude traveling east, through Montreal and then through another pipeline to Portland, ME, from which point it could be exported.⁸⁹ As with other pipeline projects, these also face opposition from environmental groups concerned about oil spill risks and/or generally opposed to oil sands development.

⁸¹ According to the Global Trade Atlas, about 0.5% of Canadian crude exports went to China in 2011 (accessed April 25, 2012).

⁸² Christopher Smith, "KMEP Advances Trans Mountain Crude Pipeline Expansion," *Oil & Gas Journal*, April 6, 2012.

⁸³ David Ebner and Justine Hunter, "U.S. Company Plans Billion-Dollar Expansion of Trans Mountain Pipeline," *The Global and Mail*, April 13, 2012.

⁸⁴ Jeff Lee, "Vancouver Council, Park Board to Formally Oppose Kinder Morgan Pipeline Expansion," *Vancouver Sun*, April 24, 2012.

⁸⁵ Enbridge, "Northern Gateway at a Glance," press release, 2011, <http://www.northerngateway.ca/project-info/northern-gateway-at-a-glance>. The project would also include a pipeline to allow the import of 193,000 bpd of condensate, a light hydrocarbon that can be blended with bitumen to allow pipeline transport.

⁸⁶ "Northern Gateway Pipeline: Alberta, B.C. Agree to Drop Compensation Issue from their Talks," Canadian Press, November 5, 2013.

⁸⁷ Nathan Vanderklippe and Shawn McCarthy, "TransCanada Looks East as Gateway Pipeline Gets Bugged Down," *The Globe and Mail*, March 22, 2012.

⁸⁸ "Enbridge Pipelines Inc. - Line 9 Reversal Phase I Project (OH-005-2011)," (Project Application), National Energy Board (Government of Canada), <http://www.neb-one.gc.ca/clf-nsi/rthnb/pplctnsbfrthnb/nbrdgl9phs1/nbrdgl9phs1-eng.html>.

⁸⁹ Matt Dodge, "Court Decision Affects South Portland-Montreal Pipeline," *Maine Biz*, April 3, 2012; Yadullah Hussain, "Pipeline Plan to Send Crude from Montreal to Maine Raises Ire in New England," *Financial Post*, May 22, 2013.

These projects reflect anticipated growth of western Canadian oil production and an interest by Canadian oil producers to diversify their available markets beyond U.S. customers, especially to reach rapidly growing Asian oil demand.

Canadian interests assert that Canadian oil sales to Asian markets, where oil demand is growing rapidly, are more likely if greater shipments to the United States are not possible.⁹⁰ A study commissioned by the U.S. Department of Energy suggested that

if pipeline projects to the [British Columbia] coast are built, they are likely to be utilized. This is because of the relatively short marine distances to major northeast Asia markets, future expected growth there in refining capacity and increasing ownership interests by Chinese companies especially in oil sands production. Such increased capacity would alter global crude trade patterns. Western Canadian Sedimentary Basin (WCSB) crudes would be “lost” from the USA, going instead to Asia. There they would displace the world’s balancing crude oils, Middle Eastern and African predominantly OPEC grades, which would in turn move to the USA. The net effect would be substantially higher U.S. dependency on crude oils from those sources versus scenarios where capacity to move WCSB crudes to Asia was limited.⁹¹

Economic Impact of the Pipeline

In addition to supply diversity arguments, some Keystone XL pipeline proponents support the project based on economic benefits associated with expanding U.S. pipeline infrastructure. A study by the Energy Policy Research Foundation, for example, concludes that “the Keystone expansion would provide net economic benefits from improved efficiencies in both the transportation and processing of crude oil of \$100 million-\$600 million annually, in addition to an immediate boost in construction employment.”⁹² A 2009 report from the Canadian Energy Research Institute (CERI) commissioned by the American Petroleum Institute similarly concludes that

As investment and production in oil sands ramps up in Canada, the pace of economic activity quickens and demand for US goods and services increase rapidly, resulting in an estimated 343 thousand new US jobs between 2011 and 2015. Demand for U.S. goods and services continues to climb throughout the period, adding an estimated \$34 billion to US GDP in 2015, \$40.4 billion in 2020, and \$42.2 billion in 2025.⁹³

These CERI estimates apply to the entire oil sands industry, however, not only the Keystone XL project, and they are derived from a proprietary economic analysis which has not been subject to external review. Some stakeholders point to State Department and other studies reporting much lower anticipated economic benefits.⁹⁴ In July 2013, President Obama reportedly stated that the

⁹⁰ Edward Welsch, “TransCanada: Oil Sands Exports Will Go to Asia if Blocked in U.S.,” Dow Jones Newswires, June 30, 2010.

⁹¹ EnSys Energy & Systems, Inc., *Keystone XL Assessment: Final Report*, Prepared for the U.S. Department of Energy, Office of Policy & International Affairs, December 23, 2010, p. 118.

⁹² Energy Policy Research Foundation, Inc., *The Value of the Canadian Oil Sands (...to the United States): An Assessment of the Keystone Proposal to Expand Oil Sands Shipments to Gulf Coast Refiners*, Washington, DC, November 29, 2010, p. 2, <http://www.eprinc.org/pdf/oilsandsvalue.pdf>.

⁹³ Canadian Energy Research Institute, *The Impacts of Canadian Oil Sands Development on the United States’ Economy, Final Report*, Calgary, Alberta, October 2009, p. vii.

⁹⁴ See, for example, Cornell University Global Labor Institute, *Pipe Dreams? Jobs Gained, Jobs Lost by the* (continued...)

Keystone XL pipeline might create 2,000 temporary construction jobs and 50 to 100 permanent jobs.⁹⁵ With the separation of the Gulf Coast Project from the northern segment of the original proposal, the potential economic impact of the reconfigured Keystone XL project has clearly changed. Consequently, it is difficult to determine what specific economic and employment impacts may ultimately be attributable to the Keystone XL pipeline. Nonetheless, given the physical scale of the project, it could be expected to increase employment and investment at least during construction.

Lifecycle Greenhouse Gas Emissions

Oil production from oil sands is controversial because it has significant environmental impacts, including emissions of greenhouse gases during extraction and processing, disturbance of mined land, and impacts on wildlife and water quality.⁹⁶ In a June 2013 speech about climate change, President Obama remarked

Allowing the Keystone [XL] pipeline to be built requires a finding that doing so would be in our nation's interest. And our national interest will be served only if this project does not significantly exacerbate the problem of carbon pollution.⁹⁷

Thus, of the environmental factors under consideration, greenhouse gas emissions attributed to the development of Keystone XL may be the key determinant of whether the project will be granted a Presidential Permit.

Because bitumen in oil sands cannot be pumped from a conventional well, it must be either mined, usually using strip mining or open pit techniques, or extracted with underground heating methods.⁹⁸ Large amounts of water and natural gas are also required (for heating) during the extraction process.⁹⁹ The magnitude of the environmental impacts of oil sands production, in absolute terms and compared to conventional oil production, has been the subject of numerous, and sometimes conflicting, studies and policy papers.¹⁰⁰ Some stakeholders who object to oil sands projects oppose the Keystone XL pipeline because it expands access to new markets for the oil produced by those projects, thereby encouraging what they consider to be further environmentally destructive oil sands development. As discussed earlier, however, if oil sands

(...continued)

Construction of Keystone XL, September 28, 2011; National Wildlife Federation, "TransCanada Exaggerating Jobs Claims for Keystone XL," November 9, 2010, http://www.dirtyoilsands.org/files/Keystone_XL_Jobs_11-09-10.pdf.

⁹⁵ Glenn Kessler, "President Obama's Low-Ball Estimate for Keystone XL Jobs," *Washington Post*, July 30, 2013.

⁹⁶ For more analysis of oil sands and their environmental impacts, see CRS Report RL34258, *North American Oil Sands: History of Development, Prospects for the Future*, by Marc Humphries.

⁹⁷ President Barack Obama, "Remarks by the President on Climate Change," Georgetown University, Washington, DC, June 25, 2013, <http://www.whitehouse.gov/the-press-office/2013/06/25/remarks-president-climate-change>.

⁹⁸ U.S. Bureau of Land Management, "About Tar Sands," web page, January 11, 2011, <http://ostseis.anl.gov/guide/tarsands/index.cfm>.

⁹⁹ Cecilia Jamasmie, "The Challenges and Potential of Canada's Oil Sands," *Mining*, September-October 2010, pp. 7-8.

¹⁰⁰ For an example of contrasting views, see IHS CERA Inc., *Oil Sands, Greenhouse Gases, and US Oil Supply, Getting the Numbers Right*, 2010; and Natural Resources Defense Council, "Setting the Record Straight: Lifecycle Emissions of Tar Sands," November 2010.

production can be diverted to other markets (e.g., Asia), preventing the Keystone XL project may not necessarily limit oil sands development.¹⁰¹

Some stakeholders object to the Keystone XL pipeline because it would increase U.S. supplies of oil, and thereby perpetuate the nation's dependence on imported fossil fuels and increase carbon emissions from the transportation sector.¹⁰² Acknowledging this concern, in a public forum on October 20, 2010, Secretary of State Clinton reportedly remarked that “we’re either going to be dependent on dirty oil from the [Persian] Gulf or dirty oil from Canada ... until we can get our act together as a country and figure out that clean, renewable energy is in both our economic interests and the interests of our planet.”¹⁰³ Critics of the State Department’s draft and supplemental draft EIS assert that the environmental review overlooks the pipeline project’s overall impact on greenhouse gas emissions, for example, from the extraction and refining processes. To address those potential emissions, EPA recommended that the final EIS include discussion of mitigation approaches for greenhouse gas emissions from extraction activities that are either currently used or could be employed to help lower lifecycle greenhouse gas emissions.¹⁰⁴ However, others have argued that whether the Keystone XL Pipeline is constructed would have little bearing on greenhouse gas emissions as there are likely to be other export routes available for Canadian oil sands crude, and therefore, the same crude oils would still be transported and refined, albeit in different locations.¹⁰⁵ For further analysis of greenhouse gas emissions associated with the Canadian oil sands, see CRS Report R42537, *Canadian Oil Sands: Life-Cycle Assessments of Greenhouse Gas Emissions*, by Richard K. Lattanzio.

Private Land Use and Oil Spill Impacts

For the proposed Keystone XL Project, approximately 88% of the land affected by pipeline construction and operation would be privately owned, with the remaining 12% primarily state and federal land.¹⁰⁶ Private land uses along the proposed pipeline routes are primarily agricultural—farming and cattle ranching. The pipeline’s construction and continued operation would involve a 50-foot-wide permanent right-of-way along the length of the pipeline. Keystone agreed to compensate landowners for losses on a case-by-case basis. However, a concern among landowners and communities along the route is the potential for their land or water (used for drinking, irrigation, or recreation) to be contaminated by an accidental release (spill) of oil. That concern is heightened in areas where the pipeline will be located near or would cross water or is in a remote location.

¹⁰¹ For more analysis of oil sands, including the environmental effects of its extraction, see CRS Report RL34258, *North American Oil Sands: History of Development, Prospects for the Future*, by Marc Humphries.

¹⁰² See, for example: Natural Resources Defense Council, *Tar Sands Invasion: How Dirty and Expensive Oil from Canada Threatens America’s New Energy Economy*, May 2010.

¹⁰³ See Secretary of State Hillary Clinton’s “Remarks on Innovation and American Leadership to the Commonwealth Club,” San Francisco, CA, October 15, 2010, available at <http://www.state.gov/secretary/rm/2010/10/149542.htm>.

¹⁰⁴ See EPA’s July 16, 2010, letter to the U.S. Department of State rating the supplemental EIS for the Keystone XL pipeline project, available at [http://yosemite.epa.gov/oeca/webeis.nsf/%28PDFView%29/20100126/\\$file/20100126.PDF](http://yosemite.epa.gov/oeca/webeis.nsf/%28PDFView%29/20100126/$file/20100126.PDF). Discussion of the analysis of GHG emissions is included on pp. 3-4.

¹⁰⁵ EnSys Energy & Systems 2010, p. 116.

¹⁰⁶ U.S. Department of State, March 2013, Draft EIS: “Section 4.9, Land Use, Recreation, and Visual Resources,” p. 4.9-2.

A primary environmental concern of any oil pipeline is the risk of an oil spill. In estimating potential environmental impacts, several factors will be important—including the size and location of the release, leak, or spill, and how quickly it is remediated. An oil spill on land would not necessarily result in surface or groundwater contamination. The potential for a spill to reach water would depend on factors such as its proximity to a water source (e.g., on or near a creek or stream or located on land where the groundwater table is close to the surface) and the characteristics of the environment into which the crude oil is released (e.g., porous underlying soils), and the volume of the spill, its duration, and the viscosity and density of the crude oil involved.

The size of potential spills and the type of oil that would likely be released from the Keystone XL Pipeline have been issues of concern to opponents of the project. In its July 16, 2010, comments on the draft EIS for the Keystone XL Project, EPA expressed particular concern over the potential adverse impacts to surface and ground water from pipeline leaks or spills. That concern stemmed from two areas—the toxicity of chemical diluents that may be used to allow bitumen to be transported by pipeline and the lack of risk assessment for potential “serious or significant spills,” including an evaluation of spill response procedures in the wake of such a spill.

Concerns reflected in EPA’s letter were realized 10 days later when the Enbridge Energy Partners’ Alberta Pipeline ruptured near Marshall, MI. The resulting spill released crude into a tributary creek of the Kalamazoo River and traveled approximately 40 miles downstream in the Kalamazoo River. Initially estimated by Enbridge as a release of approximately 800,000 gallons of crude, EPA subsequently estimated that over 1.1 million gallons were released. The spill resulted in over 220 areas of moderate-to-heavy contamination, including over 200 acres of submerged oil on the river bottom and over 300 solidified oil deposits.¹⁰⁷ Enbridge estimates that cleanup will cost approximately \$700 million.

The Enbridge spill highlighted several issues of concern among environmental groups and communities along the pipeline route—in particular, the nature of the heavy crude likely carried by the Keystone XL Pipeline. The heavy crude (diluted bitumen, or dilbit) in the Enbridge spill had been diluted with benzene and other hazardous constituents. Following the spill, high levels of benzene in the air prompted the issuance of voluntary evacuation of residents in the area. Concern over the presence of similarly toxic constituents, particularly the degree to which the level of toxic constituents may be unknown at the time of a release, has been an ongoing concern among environmental and community groups.

The Enbridge spill was considered a “very large spill” and not necessarily one that would be likely along the Keystone XL pipeline route. However, in its first year of operation, TransCanada’s Keystone pipeline experienced 14 spills. Although mostly minor, one spill at the Ludden, ND, pump station resulted in the release of 21,000 gallons of oil. Like the Enbridge release, that release was first reported by local citizens, not as a result of the Keystone’s release detection equipment. A March 29, 2013, release of oil sands crude from an Exxon Mobil pipeline in Mayflower, AR, has continued to draw attention to the risk of potential spills from crude oil pipelines.¹⁰⁸ These incidents have made pipeline opponents concerned that such spills may be

¹⁰⁷ For more information see EPA’s regarding the response to the Enbridge oil spill at <http://www.epa.gov/enbridgespill/>.

¹⁰⁸ Arkansas Department of Environmental Quality, “Mayflower Oil Spill Response,” fact sheet, March 30, 2013, http://www.adeq.state.ar.us/hazwaste/mayflower_oil_spill_2013/files/mayflower_pipeline-_fact_sheet.pdf.

significant and that, absent a witness to a spill, a leak in a remote area could potentially go undetected for a long period.

The Enbridge spill also demonstrates that cleanup of oil sands dilbit presents certain challenges. Dilbit is a relatively heavy crude oil mixture compared to other crude oils. In general, heavier oils are more persistent and present greater technical challenges in removal after a spill compared to lighter oils. Over two years after the Enbridge spill, cleanup efforts continue. After the spill, public access to 39 miles of the river system was banned to protect public health and safety. In March 2013, the EPA ordered Enbridge to implement containment and dredging of submerged oil to prevent continued migration of oil downstream to the Kalamazoo River.¹⁰⁹ The first three-mile segment of river reopened to the public on April 27, 2012. Elements of the cleanup are expected to last until 2015. For further analysis of environmental issues associated with the Keystone XL project, see CRS Report R42611, *Oil Sands and the Keystone XL Pipeline: Background and Selected Environmental Issues*, coordinated by Jonathan L. Ramseur.

Regardless of design, construction, and safety measures, the Keystone XL pipeline will likely have some number of spills over the course of its operating life. The unique oil spill response efforts necessary for heavy crudes like dilbit make an accurate assessment of potential oil spill risk particularly relevant when addressing concerns expressed by opponents to the Keystone XL Pipeline. The need for more conclusive analysis of potential risks associated with the transport of dilbit was addressed, in part, in the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (P.L. 112-90, enacted January 16, 2012). In particular, under Section 16, “Study of transportation of diluted bitumen,” the Secretary of Transportation is required to conduct an analysis to determine whether there is any increased risk of a release for pipeline facilities transporting diluted bitumen. In response to that directive, the PHMSA contracted with the National Academy of Sciences to conduct a full and independent study of this topic. The Academy’s report “did not find any pipeline failures unique to the transportation of diluted bitumen or evidence of physical or chemical properties of diluted bitumen shipments that are outside the range of those of other crude oil shipments.”¹¹⁰

Issues with the Original Pipeline Route Across the Sand Hills

In the process of examining factors necessary to determine whether the Presidential Permit for the original Keystone XL Project was in the national interest, the State Department decided that it needed to assess potential alternative pipeline routes that would avoid the Sand Hills region of Nebraska. Unique characteristics of the Sand Hills—including its high concentration of wetlands, extensive areas of very shallow groundwater, and its sensitive ecosystem—were identified as factors that resulted in increasing public concern over the proposed pipeline location. For these reasons, TransCanada announced it would work with the Nebraska DEQ to identify a potential pipeline route that would avoid the Sand Hills. New pipeline routes through Nebraska, identified in the 2013 draft EIS, reflect the work between TransCanada and Nebraska DEQ.

¹⁰⁹ Environmental Protection Agency, “Re: Order pursuant to §311(c) of the Clean Water Act (Docket No. CWA 1321-5-13-001) for Recovery of Submerged Oil from the En bridge Line 6B Discharge near Marshall, MI,” Cover letter, March 14, 2013, <http://www.epa.gov/enbridgespill/ar/enbridge-AR-1719.pdf>.

¹¹⁰ National Research Council, *Effects of Diluted Bitumen on Crude Oil Transmission Pipelines*, TRB Special Report 311, June 25, 2013.

To understand concerns about the potential environmental impacts of a pipeline crossing the Sand Hills (also referred to as the Sandhills), an understanding of the unique size and structure of the region is useful. The Sand Hills region is a 19,600 square mile sand dune formation stabilized by native grasslands that cover 95% of its surface. The surface is highly susceptible to wind erosion if the grassland is disturbed.¹¹¹ Below its surface lie hundreds of feet of coarse sand and gravel. Essentially, the porous soil acts like a giant sponge that quickly absorbs precipitation, allowing very little to run off. In some areas, the water table reaches the land surface—a characteristic that creates lakes that dot the region as well as 1.3 million acres of wetlands. The loose, porous soil and sensitivity to wind erosion have been factors contributing to a lack of development on the Sand Hills. As a result, the region contains the most intact natural habitat of the Great Plains of the United States. The porosity of the soil is also relevant because the Sand Hills sits atop the Ogallala Aquifer—one of the largest freshwater aquifer systems in the world.¹¹²

The highly porous soil of the Sand Hills makes it a significant recharge zone in the northern Ogallala Aquifer. That is, the sandy, porous soil of the Sand Hills allows a significant amount of surface water to enter (recharge) the aquifer system. Water from the aquifer also accounts for a significant amount of water use—78% of the region’s public water, 83% of irrigation water in Nebraska, and 30% of water used in the United States for irrigation and agriculture.

Potential impacts to the Ogallala Aquifer and the Sand Hills identified in the final EIS for TransCanada’s original permit application included groundwater contamination after an accidental spill or leak of crude oil during the construction or operation of the proposed pipeline. Along the preferred route of the originally proposed pipeline configuration, areas in the Sand Hills region were identified as locations where the water table may be close to the surface. The depth to groundwater was less than 10 feet for approximately 65 miles of the preferred pipeline route in Nebraska. Both the soil porosity and the close proximity of groundwater to the surface increase the potential that a release of oil from the pipeline could contaminate groundwater in the region.¹¹³

On January 13, 2013, the governor of Nebraska approved a proposed reroute of the Keystone XL pipeline through Nebraska.¹¹⁴ The new route alternatives proposed for the Nebraska section of the Keystone XL pipeline avoids the Sand Hills and certain areas nearby with similar soil properties.

¹¹¹ For more information, see the Department of the Interior’s U.S. Fish and Wildlife Service web page on the Sand Hills at <http://www.fws.gov/mountain-prairie/pfw/ne/ne4.htm>.

¹¹² The entire Ogallala Aquifer system stretches across eight states generally from north to south to include South Dakota, Nebraska, Wyoming, Colorado, Kansas, Oklahoma, New Mexico, and Texas and underlies about 174,000 square miles.

¹¹³ Generally, a release of crude oil to land would not necessarily result in groundwater contamination. In addition to the depth from the land surface to groundwater and the characteristics of the environment into which the crude oil is released (e.g., characteristics of the underlying soils), the potential for crude oil to reach groundwater would depend on factors such as the volume of the spill, the duration of the release, and the viscosity and density of the crude oil.

¹¹⁴ See U.S. Department of State, March 2013, Draft EIS: “Volume III. Appendix A. Governor Approval of the Keystone XL Project in Nebraska.”

Figure 4. Keystone XL Project—Pipeline Route in Nebraska
Comparison of Currently and Previously Proposed Project Segments



Source: State Department, March 2013, “Draft Supplemental Environmental Impact Statement for the Keystone XL Project: Executive Summary,” p. ES-7.

Appendix A. Presidential Permitting Authority¹¹⁵

The executive branch has exercised permitting authority over the construction and operation of “pipelines, conveyor belts, and similar facilities for the exportation or importation of petroleum, petroleum products” and other products at least since the promulgation of Executive Order 11423 in 1968.¹¹⁶ Executive Order 13337 amended this authority and the procedures associated with the review, but did not substantially alter the exercise of authority or the delegation to the Secretary in E.O. 11423.¹¹⁷ However, the source of the executive branch’s permitting authority is not entirely clear from the text of these Executive Orders. Generally, powers exercised by the executive branch are authorized by legislation or are inherent presidential powers based in the Constitution. E.O. 11423 makes no mention of any authority, and E.O. 13337 refers only to the “Constitution and the Laws of the United States of America, including Section 301 of title 3, United States Code.”¹¹⁸ Section 301 simply provides that the President is empowered to delegate authority to the head of any department or agency of the executive branch.

The legitimacy of this permitting authority has been addressed by federal courts. In *Sisseton v. United States Department of State*, the plaintiff Tribes filed suit and asked the court to suspend or revoke the Presidential Permit issued under E.O. 13337 for the TransCanada Keystone Pipeline.¹¹⁹ The U.S. District Court for the District of South Dakota found that the plaintiffs lacked standing because they would be unable to prove their injury could be redressed by a favorable decision.¹²⁰ The court determined that even if the plaintiff’s injury could be redressed, “the President would be free to disregard the court’s judgment,” as the case concerned the President’s “inherent Constitutional authority to conduct foreign policy,” as opposed to statutory authority granted to the President by Congress.¹²¹

The court further found that even if the Tribes had standing, the issuance of the Presidential Permit was a presidential action, not an agency action subject to judicial review under the Administrative Procedure Act (APA).¹²² The court stated that the authority to regulate the cross-border pipeline lies with either Congress or the President.¹²³ The court found that “Congress has failed to create a federal regulatory scheme for the construction of oil pipelines, and has delegated this authority to the states. Therefore, the President has the sole authority to allow oil pipeline border crossings under his inherent constitutional authority to conduct foreign affairs.”¹²⁴ The

¹¹⁵ For a more expansive treatment of this topic, see CRS Report R42124, *Proposed Keystone XL Pipeline: Legal Issues*, by Adam Vann, Kristina Alexander, and Kenneth R. Thomas, and CRS Report R43261, *Presidential Permits for Border Crossing Energy Facilities*, by Adam Vann and Paul W. Parfomak.

¹¹⁶ *Providing for the performance of certain functions heretofore performed by the President with respect to certain facilities constructed and maintained on the borders of the United States*, 33 *Federal Register* 11741, August 16, 1968.

¹¹⁷ *Issuance of Permits With Respect to Certain Energy-Related Facilities and Land Transportation Crossings on the International Boundaries of the United States*, 69 *Federal Register* 25299, May 5, 2004.

¹¹⁸ *Ibid.*

¹¹⁹ 659 F. Supp. 2d 1071, 1078 (D. S.D. 2009).

¹²⁰ *Ibid.* at 1078.

¹²¹ *Ibid.* at 1078, 1078 n.5.

¹²² See *ibid.* at 1080-81.

¹²³ *Ibid.* at 1081.

¹²⁴ *Ibid.*

President could delegate his permitting authority to the U.S. Department of State, but delegation did not transform the permit's issuance into an agency action reviewable under the APA.¹²⁵

In *Sierra Club v. Clinton*,¹²⁶ the plaintiff Sierra Club challenged the Secretary's decision to issue a Presidential Permit authorizing the Alberta Clipper pipeline. Among the plaintiff's claims was an allegation that issuance of the permit was unconstitutional because the President had no authority to issue the permits referenced in E.O. 13337 (in this case, for the importation of crude oil from Canada via pipeline).¹²⁷ The defendant responded that the authority to issue Presidential Permits for these border-crossing facilities "does not derive from a delegation of congressional authority ... but rather from the President's constitutional authority over foreign affairs and his authority as Commander in Chief."¹²⁸ The U.S. District Court for the District of Minnesota agreed, noting that the defendant's assertion regarding the source of the President's authority has been "well recognized" in a series of Attorney General opinions, as well as a 2009 judicial opinion.¹²⁹ The court also noted that these permits had been issued many times before and that "Congress has not attempted to exercise any exclusive authority over the permitting process. Congress's inaction suggests that Congress has accepted the authority of the President to issue cross-border permits."¹³⁰ Based on the historical recognition of the President's authority to issue these permits and Congress's implied approval through inaction, the court found the Presidential Permit requirement for border facilities constitutional.

¹²⁵ *Ibid.* at 1082.

¹²⁶ 689 F.Supp.2d 1147 (D. Minn. 2010).

¹²⁷ *Ibid.* at 1162.

¹²⁸ *Ibid.*

¹²⁹ *Ibid.* at 1163 (citing 38 U.S. Atty Gen. 162 (1935); 30 U.S. Op. Atty. Gen. 217 (1913); 24 U.S. Op. Atty. Gen. 100; and *Natural Resources Defense Council (NRDC) v. U.S. Department of State*, 658 F.Supp.2d 105, 109 (D.D.C. 2009)). The court in *NRDC* held that the State Department's issuance of a presidential permit under Executive Order 13337 was not subject to judicial review under the Administrative Procedure Act for abuse of discretion because "the issuance of presidential permits is ultimately a presidential action." 658 F. Supp. 2d at 109, 111-12. The court said that to allow judicial review of such decisions would raise separation of powers concerns. *Ibid.* at 111.

¹³⁰ *Ibid.*; see also *Youngstown Sheet and Tube Co. v. Sawyer*, 343 U.S. 579 (1952) (establishing a three-part test for analyzing the validity of presidential actions in relation to constitutional and congressional authority).

Appendix B. Details of the Initial NEPA Review

The NEPA process for TransCanada's 2008 Presidential Permit application for the Keystone XL pipeline project included several significant milestones (summarized in **Table 1**). These events, and resulting documents, will likely have varying degrees of influence over TransCanada's 2012 permit application.

Draft EIS issued

The State Department released its draft EIS for the proposed Keystone XL Pipeline project for public comment on April 16, 2010.¹³¹ The draft EIS identified TransCanada's "preferred alternative" for the project as well as other alternatives considered. On July 16, 2010, EPA rated the draft EIS "Inadequate."¹³² EPA found that potentially significant impacts were not evaluated and that the additional information and analysis needed was of such importance that the draft EIS would need to be formally revised and again made available for public review. Additional criticism of the State Department's implementation of the NEPA process followed an October 21, 2010, statement by Secretary Clinton that, while analysis of the project was not complete and a final decision had not been made, the State Department was "inclined to" approve the project.¹³³ Critics of the project, including some Members of Congress, stated that the Secretary's statement appeared to prejudge its permit approval for the pipeline proposal as a foregone conclusion.¹³⁴

Supplemental Draft EIS Issued

The State Department issued a supplemental draft EIS on April 15, 2011. In addition to addressing issues associated with EPA's inadequacy rating, the supplemental draft EIS addressed comments received from other agencies and the public. On June 6, 2011, EPA sent a letter to the State Department that rated the supplemental draft EIS as having "Insufficient Information" and having "Environmental Objections" to the proposed action.¹³⁵ EPA acknowledged that the State Department had "worked diligently" to develop additional information in response to EPA's comments and the large number of other comments on the draft EIS. However, EPA believed that additional analysis needed to be included in the final EIS to fully respond to its earlier comments.

¹³¹ Documents submitted for the initial 2008 Presidential Permit application have now been archived by the State Department. Documents related to that original application are available at <http://keystonepipeline-xl.state.gov/archive/index.htm>.

¹³² U.S. Environmental Protection Agency's July 16, 2010, letter to the U.S. Department of State commenting on the draft EIS for the Keystone XL project is available at [http://yosemite.epa.gov/oeca/webeis.nsf/%28PDFView%29/20100126/\\$file/20100126.PDF](http://yosemite.epa.gov/oeca/webeis.nsf/%28PDFView%29/20100126/$file/20100126.PDF).

¹³³ See Secretary of State Hillary Clinton, "Remarks on Innovation and American Leadership to the Commonwealth Club," San Francisco, CA, October 15, 2010, available at <http://www.state.gov/secretary/rm/2010/10/149542.htm>. The statement by Secretary Clinton was actually made in response to a question about the Alberta Clipper pipeline project which received a Presidential Permit from the State Department in 2009; a State Department spokesman later clarified that the Secretary was referring to the Keystone XL pipeline permit approval.

¹³⁴ For example, see the October 21, 2010, letter from Senator Mike Johanns to Secretary Clinton expressing his concern that her statement gave the appearance that approval of the pipeline was a foregone conclusion, http://johanns.senate.gov/public/?a=Files.Serve&File_id=8b090aa5-76fe-41ca-a674-ae9e37db8d36.

¹³⁵ U.S. Environmental Protection Agency's June 6, 2011, letter to the U.S. Department of State commenting on the supplemental draft EIS for the Keystone XL project is available at [http://yosemite.epa.gov/oeca/webeis.nsf/%28PDFView%29/20110125/\\$file/20110125.PDF?OpenElement](http://yosemite.epa.gov/oeca/webeis.nsf/%28PDFView%29/20110125/$file/20110125.PDF?OpenElement).

Among other items, EPA recommended that the State Department should do the following: improve the analysis of the potential oil spill risks, including additional analysis of other reasonable alternatives to the proposed pipeline route; provide additional analysis of potential oil spill impacts, health impacts, and environmental justice concerns to communities along the pipeline route and adjacent refineries; and improve its characterization of lifecycle greenhouse gas emissions associated with Canadian oil sands crude.

In its June 6 letter to the State Department, EPA refers to agreements with the State Department that certain deficiencies identified in the supplemental draft EIS would be addressed in the final EIS. Further, in its conclusion, EPA stated that it would carefully review the final EIS to determine if it fully reflects those agreements and if measures to mitigate adverse environmental impacts are fully evaluated.

Final EIS Issued

On August 26, 2011, the State Department issued the final EIS for the proposed Keystone XL Pipeline. Among other elements of the final EIS, it identified various major pipeline route alternatives and an environmental analyses of potential impacts associated with those alternatives.¹³⁶

In October 2011, 14 Members of Congress wrote to the State Department's Office of Inspector General requesting an investigation of the department's handling of the EIS and national interest determination for the Keystone XL project.¹³⁷ The request was prompted, in part, by press reports suggesting bias or potential conflicts of interest in the State Department's hiring of an outside contractor to perform the EIS and in its communications with the pipeline's developer, TransCanada.¹³⁸ On November 4, the Inspector General's Office (IG) announced that, in response to this request, it was initiating a special review "to determine to what extent the Department and all other parties involved complied with Federal laws and regulations relating to the Keystone XL pipeline permit process."¹³⁹ On February 9, 2012, the IG released its findings, reporting that the State Department "did not violate its role as an unbiased oversight agency," among other specific findings generally supportive of the department's Keystone XL permit review process.¹⁴⁰

Public Review and National Interest Determination

Following the release of the Keystone XL project's final EIS, a review period began to determine if the proposed project was in the national interest. As part of the process for the Keystone XL project, the State Department held public meetings in each of the six states through which the

¹³⁶ Environmental analysis associated with pipeline project alternatives is provided in Volumes 1 and 2 of the final EIS.

¹³⁷ U.S. Senator Bernard Sanders, et al., Letter to The Honorable Harold W. Geisel, Office of Inspector General, U.S. Department of State, October 26, 2011.

¹³⁸ See, for example, Elisabeth Rosenthal and Dan Frosch, "Pipeline Review Is Faced with Question of Conflict," *New York Times*, October 7, 2011.

¹³⁹ Harold W. Geisel, United States Department of State, Office of Inspector General, "Information Memo for Deputy Secretary Burns," November 4, 2011, <http://sanders.senate.gov/imo/media/doc/Special%20Review%20Keystone%20XL%20Pipeline%20Nov%2020112.pdf>.

¹⁴⁰ Harold W. Geisel, United States Department of State, Office of Inspector General, *Special Review of the Keystone XL Pipeline Permit Process*, AUD/SI-12-28, February 2012.

proposed pipeline would pass and in Washington, DC.¹⁴¹ The meetings were intended to give members of the public additional opportunity to voice their opinions on issues they thought should be taken into account in determining whether granting or denying the Presidential Permit would be in the national interest.¹⁴² During the review period, the State Department received input from state, local, and tribal officials as well as members of the public.

After the public review period, the State Department issued a statement regarding the public comments and its response to those comments.¹⁴³ The State Department stated that it received comments on a wide range of issues, including the Keystone XL project's potential impact on jobs, pipeline safety, health concerns, the societal impact of the project, and oil extraction in Canada. Concern regarding the proposed pipeline route through the Sand Hills area of Nebraska was identified as one of the most common issues raised. Comments regarding that pipeline route were consistent with the environmental impacts identified in the final EIS with regard to the unique combination of characteristics of the Sand Hills region.

In the final EIS, the preferred pipeline route through Nebraska would have been located entirely above the Ogallala Aquifer. Potential impacts to the Ogallala Aquifer and the Sand Hills identified in the final EIS include potential groundwater contamination after a release (e.g., a spill or leak from a hole or damaged portion of the pipeline) of crude oil during the construction or operation of the proposed pipeline. Both the soil porosity and the close proximity of groundwater to the surface increase the potential that a release of oil from the pipeline could contaminate groundwater in the region.

During the public review period, the governor of Nebraska called a special session of the legislature to determine if siting legislation could be crafted and passed for pipeline routing in Nebraska. Facing the prospect of new state pipeline siting regulations applicable to the Sand Hills, together with the concern about the Keystone XL pipeline's specific "preferred" route, the State Department announced that it would require additional information about alternative pipeline routes avoiding the environmentally sensitive Sand Hills area in Nebraska before moving forward with its national interest determination.¹⁴⁴ Although the State Department did not decide that environmental issues led to a determination that the proposed project was not in the national interest, environmental issues identified in the final EIS, and further stressed in public comments, led to its decision to delay that determination until it gathered this information.

Although no new decision deadline was established, State Department officials suggested that it would be "reasonable to expect that this process including a public comment period on a supplement to the final EIS consistent with NEPA could be completed as early as the first quarter of 2013."¹⁴⁵ In a prior press interview, President Obama also appeared to suggest that,

¹⁴¹ U.S. Department of State press release, "Keystone XL Final Environmental Impact Statement Released; Public Meetings Set," August 26, 2011, <http://www.state.gov/r/pa/prs/ps/2011/08/171082.htm>.

¹⁴² These additional public meetings are not part of the NEPA process. Considering the strong public interest in the pipeline proposal (both opposed and in favor), the public hearings were part of the State Department's national interest determination.

¹⁴³ U.S. Department of State, November 10, 2011.

¹⁴⁴ U.S. Department of State, "Keystone XL Pipeline Project Review Process: Decision to Seek Additional Information," Media Note, PRN 2011/1909, Office of the Spokesperson, November 10, 2011.

¹⁴⁵ U.S. Department of State, November 10, 2011.

notwithstanding the delegation of Presidential Permit authority to the State Department, he would be personally involved in the final decision on the Keystone XL Pipeline permit application.¹⁴⁶

Directive to the President to Approve or Deny the Permit

In the wake of the State Department determination that supplemental analysis was needed, Congress directed the President to make a determination on the Presidential permit application for the Keystone XL pipeline. Specifically, the Temporary Payroll Tax Cut Continuation Act of 2011 (P.L. 112-78), enacted on December 23, 2011, included provisions requiring the Secretary to issue a permit for the project within 60 days, unless the President publicly determined the project to be not in the national interest.

Subsequently, the State Department, with the President's consent, announced that it would deny the Keystone XL permit on January 18, 2012. In its announcement the department stated that its decision "was predicated on the fact that [P.L. 112-78] ... passed in December does not provide sufficient time to obtain the information that we think is necessary to assess whether the project, in its current state, is in the national interest."¹⁴⁷ However, the department also stated that its decision did not preclude TransCanada from reapplying for a Presidential Permit in the future, although such a reapplication "will trigger ... a completely new review process."¹⁴⁸

As a result of that denial, instead of developing a supplemental EIS incorporating analysis applicable to a new pipeline route through Nebraska, a new Presidential permit application process will be required. As a result, a "new" NEPA process will be required. Although much of the analysis and documentation will likely be the same, issuance of a draft and final EIS, and corresponding public and agency comment periods, will be required.

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¹⁴⁶ KETV NewsWatch 7, "Uncut: KETV's Rob McCartney Interviews President Obama," Omaha, NE, November 1, 2011, <http://www.ketv.com/video/29652519/detail.html>.

¹⁴⁷ U.S. Department of State, January 18, 2012.

¹⁴⁸ Ibid.