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Keystone XL Pipeline: Overview and Recent Developments

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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, Keystone XL requires a Presidential Permit from the State Department based on a determination that the pipeline would "serve the national interest." To make its national interest determination (NID), the department considers potential effects on energy security; environmental and cultural resources; the economy; foreign policy, and other factors. Effects on environmental and cultural resources are determined by preparing an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). The NID process also provides for public comment and requires the State Department to consult with specific federal agencies.

TransCanada originally applied for a Presidential Permit for the Keystone XL Pipeline in 2008. Since then various issues have affected the completion of both the NEPA and NID processes for the project. In particular, during the NID process for the 2008 application, concerns over environmental impacts in the Sand Hills of Nebraska led the state to enact new requirements that would change the pipeline route. Facing a 60-day decision deadline imposed by Congress, the State Department denied the 2008 permit application on the grounds that it lacked information about the new Nebraska route. In May 2012, TransCanada submitted a new application with a modified route through Nebraska, thus beginning a new NEPA and NID process.

With the release of the final EIS for the new pipeline route in January 2014, the State Department began the current NID process. Public comment on the project, allowed under the Executive Order, ended on March 2014. Federal agency comment on the project was interrupted by state court action in Nebraska, but this litigation was resolved. The department subsequently told federal agencies to provide their input by February 2, 2015. The State Department has not committed to a deadline for issuing its final NID or making a Presidential Permit decision.

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 from the development of Canadian oil sands, continued U.S. dependency on fossil fuels, and the risk of a potential release of heavy crude. There is also debate about how much Keystone XL crude oil, or petroleum products refined from it, would be exported overseas. Relations between the U.S. and Canadian governments have also been an issue. With the fate of Keystone XL uncertain, Canadian oil producers have pursued other shipment options, including other pipelines and rail.

In light of what some consider excessive delays in the State Department's permit review, Congress has sought other means to support development of the pipeline. In the 114th Congress, the most significant legislative proposal has been the Keystone XL Pipeline Approval Act (S. 1), which would have directly approved Keystone XL and put an end to any further review under federal environmental statutes. On January 29, 2015, the Senate passed S. 1 by a vote of 62 to 36. On February 11, the House passed S. 1 by a vote of 270 to 152. The bill was sent to President Obama on February 24th and vetoed the same day. The Senate attempted to override the President's veto on March 4; however; the override measure failed by a vote of 62 to 37. No further action on S. 1 was taken in the House.

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Introduction[1]

In May 2012, 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 U.S.-Canada border. The Keystone XL Pipeline would transport Canadian oil sands crude[2] 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 the Presidential Permit would be conditioned on a State Department determination that the pipeline project would serve the national interest.

Members of Congress remain divided on the merits of the project, as some have expressed support for the potential energy security and economic benefits, while others have reservations about its potential environmental impacts. There is also concern over how much crude oil, or petroleum products refined from Keystone XL crude, would be exported overseas. Though Congress, to date, has had no direct role in permitting the pipeline's construction, it has oversight stemming from federal environmental statutes that govern the review. Further, Congress may seek to influence the State Department's process or to assert direct congressional authority over approval through new legislation.

This report describes the Keystone XL Pipeline Project and the process that the State Department must complete to decide whether it will approve or deny TransCanada's permit application. The report also discusses key energy security, economic, and environmental issues relevant to the State Department's national interest determination. Some of these issues include perspectives among various stakeholders both in favor of and opposed to the construction of the pipeline. 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.

Description of the Keystone XL Pipeline

In recent decades, the natural bitumen in oil sands, particularly deposits in Alberta, Canada, has been extracted to generate substantial quantities of crude oil. The Alberta deposits are estimated to be one of the largest accumulations of oil in the world, contributing to Canada's third-place ranking for estimated proven oil reserves (behind Venezuela and Saudi Arabia).[3] In 2005, TransCanada announced a plan to address expected increases in Alberta oil production by constructing the Keystone Pipeline system. When complete, the system would transport crude oil from Alberta to U.S. markets in the Midwest and Gulf Coast. The pipeline system was proposed as two distinct phases—the Keystone Pipeline (now constructed and in service) and the Keystone XL Pipeline.

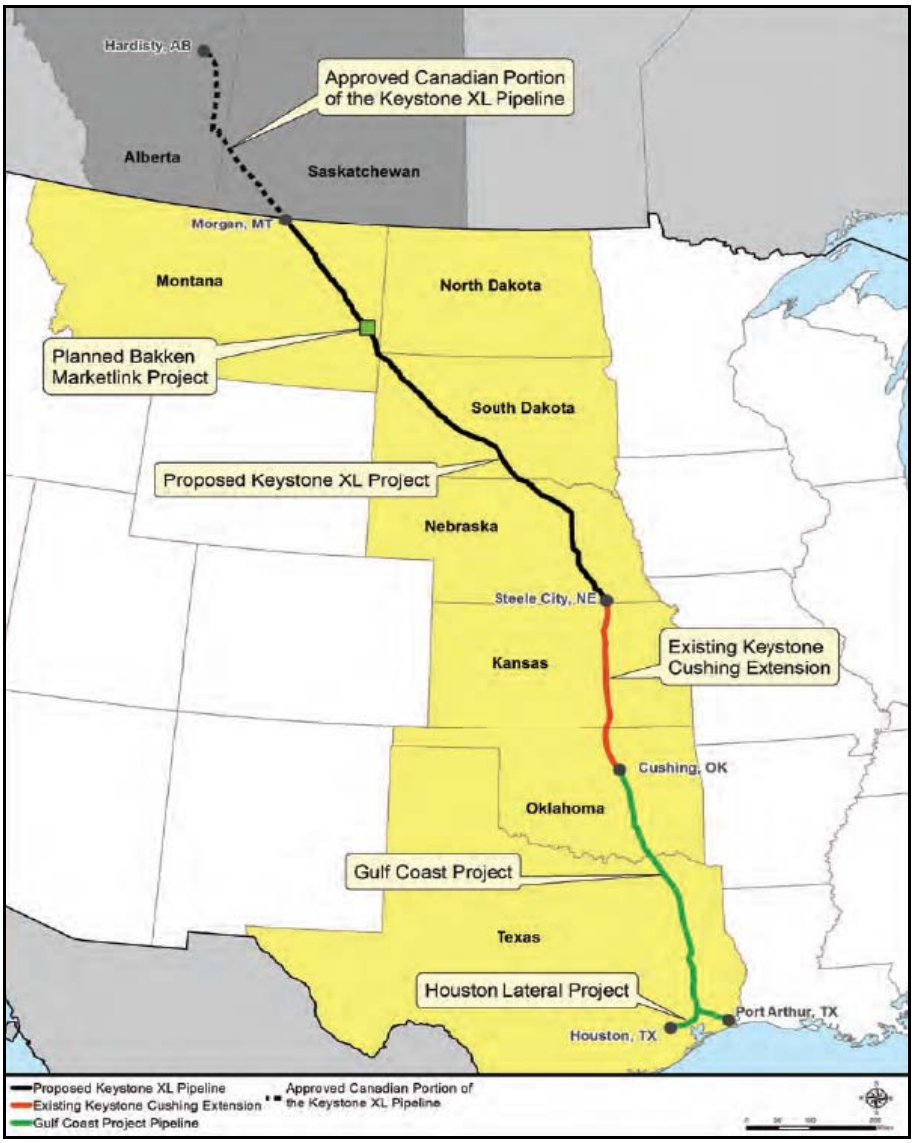
[1] This report provides a high-level overview of the Keystone XL project, permit review process, and general policy issues. More detailed analysis about specific issues is available in other CRS reports as indicated throughout this report.

[2] The terms "oil sands" and "tar sands" are often used interchangeably. Opponents of the resource's development often use the term "tar sands," which arguably carries a negative connotation; proponents typically refer to the material as "oil sands." The use of "oil sands" in this report is not intended to reflect a point of view, but to adopt the term most commonly used by the primary federal agencies involved in recent oil sands policy issues.

[3] Energy Information Administration, "International Energy Statistics," web page, November 2, 2014, http://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=5&pid=57&aid=6&cid=all,&syid=2010&eyid=2014&unit=BB.

The Keystone XL Pipeline Project would consist of 875 miles of 36-inch pipeline and associated facilities linking Hardisty, Alberta, to Steele City, NE. The pipeline would also include the Bakken Marketlink in Baker, MT—a pipeline lateral that could transport crude oil from the Bakken oil fields into Steele City (further discussed below). From Steele City, crude oil could be transported to the Gulf Coast via previously constructed TransCanada pipelines—the Cushing Extension and the Gulf Coast pipeline, both already operating (**Figure 1**).[4] Both the Keystone XL and Gulf Coast pipelines would ultimately have a capacity of 830,000 bpd.

Figure 1. Proposed Keystone XL Pipeline



Source: U.S. Department of State, *Final Supplemental Environmental Impact Statement for the Keystone XL Project*, January 2014, p. 1.2-3, http://keystonepipeline-xl.state.gov/documents/organization/221145.pdf.

[4] The Gulf Coast Project was originally proposed as the southern segment of the Keystone XL Pipeline system in TransCanada's 2008 permit application. It was subsequently separated from the original proposal because it did not require a Presidential Permit. The Gulf Coast Pipeline was completed in 2013 and began service in 2014.

In 2012, TransCanada estimated the capital cost of the U.S. portion of the Keystone XL Project would be $5.3 billion.[5] However, this figure has reportedly risen to $8 billion during the permit review.[6] Currency swings, changing regulatory requirements, the cost of materials, and legal expenses could be factors contributing to the increase in project cost.

Marketlink for Bakken Oil Production[7]

The Bakken Formation is a large shale oil and natural gas resource underlying parts of North Dakota, Montana, and the Canadian provinces of Saskatchewan and Manitoba. Although the region has been producing oil since 1951, it is only since 2006 that prices and technology (e.g., hydraulic fracturing and directional drilling) have made it economic for industry to increase production. In March 2012, Bakken production exceeded 500,000 bpd the first time and continues to increase steadily.[8] Average daily output in August 2014 exceeded 1,100,000 bpd.[9] To date, infrastructure to transport oil produced from the Bakken Formation has not kept up with the increased production. Bakken crude oil is transported to refineries by rail and truck, in addition to more economical transport by pipeline.[10]

As stated earlier, the proposed Keystone XL Project would include a lateral pipeline, the Bakken Marketlink, to provide crude oil transportation service ultimately to Texas via the Gulf Coast Pipeline.[11] Up to 12% of the Keystone XL Pipeline's capacity has been set aside to transport Bakken crude. The Bakken transportation contracts improve the economics for the Keystone XL Pipeline, raising the amount of oil slated to flow through the pipeline. 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.[12] Rail transport capacity has also been expanding.[13]

[5] 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.

[6] Timothy Cama, "Keystone Pipeline Cost Surges," *The Hill*, November 4, 2014.

[7] For further discussion, see CRS Report R42032, *The Bakken Formation: Leading Unconventional Oil Development*, by Michael Ratner et al.

[8] North Dakota Department of Mineral Resources, "North Dakota Monthly Oil Production Statistics," Bismarck, ND, November 2014, https://www.dmr.nd.gov/oilgas/stats/historicaloilprodstats.pdf.

[9] Ibid.

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

[11] 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.

[12] See, for example, Enbridge, "Bakken Pipeline Projects (U.S. and Canada)," web page, October 29, 2014, http://www.enbridge.com/BakkenPipelineProjects.aspx.

[13] 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.

Presidential Permit Applications

Federal agencies ordinarily have no authority to site oil pipelines, even interstate pipelines.[14] This authority generally would be established under state law. However, the construction of a pipeline that connects the United States with a foreign country requires executive permission conveyed through a Presidential Permit. Executive Order 11423, as amended by Executive Order 13337, delegates to the Secretary of State the President's authority to receive applications for Presidential Permits.[15] Issuance of a Presidential Permit requires a State Department determination that the project would serve the "national interest." The term is not defined in the executive orders or elsewhere. The State Department has asserted that, consistent with the President's broad discretion in the conduct of foreign affairs, it has discretion in deciding the factors it will examine in making a national interest determination.[16]

Consideration of Environmental Impacts Under NEPA

As part of its Presidential Permit application review, the State Department must identify and consider environmental impacts within the context of the National Environmental Policy Act (NEPA).[17] NEPA requires federal agencies to consider the environmental impacts of a proposed action, such as issuing a permit, before proceeding with them and to inform the public of those potential impacts. 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.[18] With respect to the Presidential Permit application submitted by TransCanada for Keystone XL, the State Department has concluded that approval of a permit requires the preparation of an EIS.[19]

Preparing an EIS requires the State Department 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.[20] Cooperating agencies for the Keystone XL

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

[15] 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 **Appendix** to this report.

[16] U.S. Department of State, "Final Environmental Impact Statement for the Proposed Keystone XL Project," August 2011, pp. 1-4.

[17] 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.

[18] 42 U.S.C. §4332(2)(C).

[19] 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. Because the department planned to incorporate findings from its EIS for TransCanada's prior Keystone XL permit application, the department considers refers to the new EIS as "supplemental."

[20] 40 C.F.R. §1508.5. Also, Executive Order 13337 directs the Secretary to refer an application for a Presidential Permit (continued...)

Project include the Environmental Protection Agency (EPA); the Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA); the Department of the Interior's Bureau of Land Management, Fish and Wildlife Service, and National Park Service; the Army Corps of Engineers; the 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 January 31, 2014, the State Department released the final EIS for the proposed Keystone XL project.[21] In a fact sheet released with the EIS, the State Department noted that the final EIS was not a decisional document about whether to approve or deny the project. Instead, it is a technical assessment of the potential environmental impacts related to the proposed pipeline intended to inform the NID.[22] The EIS also responds to 1.9 million public and agency comments received on the project. The State Department asserted that the final EIS reflects the most current information on the proposed project as well as its discussions with both state and federal agencies.

After a final EIS is issued, a federal agency may issue a final record of decision (ROD) regarding a proposed action. For actions requiring a Presidential Permit, however, issuance of the final EIS represents the final stages of the State Department's National Interest Determination (NID), completed in accordance with Executive Orders 11423 and 13337. Analysis in an EIS is intended to inform the NID process. The State Department generally issues its final decision in a combined "Record of Decision and National Interest Determination." That is, it is a document issued in accordance with requirements established under both NEPA and the Executive Orders.[23]

The National Interest Determination

As noted above, Executive Order 11423, as amended by Executive Order 13337, directs the State Department to issue a Presidential Permit for a project that "serves the national interest." The orders do not define "national interest" or direct the State Department to evaluate specific factors before issuing a Presidential Permit. In its interpretation of the Executive Order, 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 when making its NID.[24] Executive Order 13337 does, however, require the State Department to refer the application and pertinent project information to, and request the views of the Attorney General, Administrator of the Environmental Protection Agency, and Secretaries of Defense, the Interior, Commerce, Transportation, Energy, and Homeland Security (or the heads of those departments or agencies with relevant authority or responsibility over relevant elements of the proposed project).

(...continued)

to other specifically identified federal departments and agencies on whether granting the application would be in the national interest.

[21] See U.S. Department of State, *Final Supplemental Environmental Impact (SEIS)* at http://keystonepipeline-xl.state.gov/finalseis/index.htm.

[22] U.S. Department of State, Office of the Spokesperson, "Keystone XL Pipeline Fact Sheet," January 31, 2014, http://www.state.gov/r/pa/prs/ps/2014/01/221114.htm.

[23] 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.

[24] See the U.S. Department of State's *Final Supplemental Environmental Impact Statement Keystone XL Project*, discussion of "Department of State Purpose and Need," p 1.3-2.

With the release of the final EIS for the Keystone XL pipeline project, the State Department stated that it would consider many factors, including the proposal's potential effect on energy security; environmental and cultural resources; the economy; and foreign policy.[25] The State Department also noted that, with the release of the final EIS, it would seek input from the eight federal agencies identified in Executive Order 13337.[26] In accordance with that Executive Order, those agencies had 90 days to provide their views to the State Department.

Executive Order 13337 also specifies that the State Department may, but is not required to, consult with state, tribal, and local government officials and foreign governments during the NID process. (Those stakeholders are given an opportunity to comment on the project during the NEPA process.) However, given the level of interest expressed by various stakeholders in support of and opposition to the proposed Keystone XL Pipeline project, the State Department announced a 30-day public comment period that ended on March 7, 2014.

In April 2014, the Department of State notified the eight federal agencies that it would provide an unspecified amount of additional time beyond the 90-day deadline for their input due to ongoing litigation in the Nebraska Supreme Court challenging the state's approval of the altered pipeline route, discussed later in this report.[27] That litigation was resolved in January 2015 in favor of the existing state approval. With the Nebraska case decided, the State Department asked the cooperating federal agencies to submit their input regarding the Keystone XL Pipeline by February 2, 2015.[28] The department has not publicly released details of these submissions.

If all public and agency input that the State Department must consider has been received, the Department must consider that input, as well as any relevant project information (e.g., analyses provided in the final EIS) to determine whether the project would serve the national interest. The State Department has not committed to a time frame to issue a final Record of Decision and National Interest Determination. In January 2014, when asked about the potential timeline in which Secretary Kerry may make a final decision, a State Department representative stated that the only timeline given in Executive Order 13337 pertains to the 90-day limit within which outside agencies must provide comments on the proposal to the State Department. The Executive Order specifies no timeline for reaching its determination.[29] Since then, the State Department has not committed to a time frame to issue its decision.

[25] See the "Keystone XL Pipeline Fact Sheet," referenced in footnote 22.

[26] U.S. Department of State, June 2014.

[27] The State Department stated that additional time was needed, in part, because, if the pipeline route through Nebraska were to change, the final EIS would have to be amended to ensure analysis of any new environmental impacts of that route. Although the department stated that its review of the permit application would continue, many analysts viewed this notification as effectively suspending the permit review. See Steven Mufson, "Obama Administration Postpones Decision on Keystone XL Pipeline," *Washington Post*, April 18, 2014.

[28] See the State Department's February 3, 2015, Daily Press Briefing (available at http://www.state.gov/r/pa/prs/dpb/2015/02/237108.htm#DEPARTMENT) in which State Department spokesperson Jen Psaki refers to a January 16 notice to the eight federal agencies to submit their Keystone evaluations to the State Department by February 2.

[29] Kerri-Ann Jones, Assistant Secretary, U.S. Department of State, Bureau of Oceans and International Environmental and Scientific Affairs, "Remarks on the Release of the Final Supplemental Environmental Impact Statement for the Proposed Keystone Pipeline," January 31, 2014, available at http://www.state.gov/e/oes/rls/remarks/2014/221129.htm.

State Siting and Additional Construction Requirements

As noted above, the federal government does not currently exercise siting authority over oil pipelines within the United States. Instead, pipeline siting for the Keystone XL Project must comply with any applicable state law—which varies 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.[30]

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 a provision to grant eminent domain authority to oil pipeline companies unable to obtain the necessary property rights from landowners.[31] However, due to the controversy surrounding the Keystone XL Project, Nebraska held a special session of its legislature in 2012 to enact legislation authorizing the governor to approve oil pipeline siting. The governor approved Keystone XL's route through the state in 2013.

In addition to state *siting* requirements, there are numerous local, state, tribal, and federal requirements applicable to oil pipeline *construction, operation, and maintenance*. For example, the 2014 final EIS for Keystone XL lists major permits, licenses, approvals, and consultation requirements for the proposed project that would be required by federal, state, and local agencies prior to its implementation. These include water and wetlands-related permits from the Army Corps of Engineers; Environmental Protection Agency review and issue of National Pollutant Discharge Elimination System permits; Bureau of Land Management temporary use permits on federal lands; Fish and Wildlife Service consideration of impacts to endangered species; and multiple state/county agency consultations or permits for projects that cross navigable waters or state highways, or involve work potentially affecting state streams, cultural resources, or natural resources.[32]

Legislative Efforts to Change Permitting Authority[33]

In light of what they perceive as excessive delays in the State Department's review of permit application for Keystone XL, some in Congress have sought alternative means to support the pipeline's development. 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.[34] Other proposals, such as H.R. 3811 and S. 3445, would

[30] 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.

[31] Nebraska Rev. Stat. §57-1101.

[32] U.S. Department of State, January 2014, Final EIS, Section 1.9, "Permits, Approvals, and Regulatory Requirements."

[33] 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.

[34] 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.

have directly shifted permitting authority to Congress, effectively approving upon enactment the permit applications filed by TransCanada.

Similar legislation was proposed in the 113th Congress, including legislative proposals from the prior Congress that were reintroduced. The Energy Production and Project Delivery Act of 2013 (S. 17) and the American Energy Solutions for Lower Costs and More American Jobs Act (H.R. 2) would have eliminated the Presidential Permit requirement for Keystone XL. The Keystone for a Secure Tomorrow Act (H.R. 334) and a Senate bill to approve the Keystone XL Project (S. 582) sought to directly approve the Keystone XL Pipeline under the constitutional authority of Congress to regulate foreign commerce. The Northern Route Approval Act (H.R. 3) would have eliminated the Presidential Permit requirement for Keystone XL, requiring 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 have provided for the approval and construction of the Keystone XL Pipeline (S.Amdt. 494). The North American Energy Infrastructure Act (H.R. 3301) would have transferred permit authority for oil pipelines from the State Department to the Department of Commerce; would have required agencies to approve applications within 120 days of submission unless they determined the project to be not in the U.S. national *security* interest (as opposed to "national interest" more generally); and would have eliminated the need for new or revised Presidential Permits for pipeline modifications (e.g., reversal of flow direction), among other provisions. The Keystone XL Pipeline Approval Act (S. 2554), another Senate bill (S. 2280), and a House bill to approve the Keystone XL Pipeline (H.R. 5682) would have granted final federal approval to the pipeline.

Legislative Proposals in the 114th Congress

After the November 2014 congressional elections, President Obama reaffirmed his intention to let the current State Department permit review process "play out."[35] However, with greater majorities in both the House and Senate, Republican leaders stated their intention to again seek congressional authorization of the Keystone XL Pipeline as a legislative priority in the 114th Congress.[36] Accordingly, several bills were introduced or reintroduced to support the approval of the pipeline. The Keystone XL Pipeline Act (S. 1 and H.R. 3), the Keystone XL Pipeline Approval Act (S. 147), and the Keystone for a Secure Tomorrow Act (H.R. 28) would all directly approve Keystone XL and put an end to any further environmental review under NEPA or other federal environmental statutes. The Strategic Petroleum Supplies Act (S. 82) would suspend sales of petroleum products from the Strategic Petroleum Reserve until permits for the Keystone XL Pipeline were issued. Only one legislative proposal, S. 188, sought to condition approval of the pipeline, prohibiting the export from the United States of any Canadian crude oil transported by Keystone XL, or any refined petroleum fuel products derived from that crude oil, subject to waivers by the President.

On January 29, 2015, the Senate passed the renamed Keystone XL Pipeline Approval Act (S. 1), as amended, by a vote of 62 to 36. The bill was passed in the House on February 11 by a vote of 270 to 152. S. 1 was sent to President Obama on February 24th and vetoed by the President the same day. President Obama stated that he vetoed S. 1 because it attempted "to circumvent

[35] Darren Goode, "Barack Obama: Let Keystone Process 'Play Out,'" *Politico*, November 5, 2014.

[36] Representative John Boehner and Senator Mitch McConnell, "Now We Can Get Congress Going," *Wall Street Journal*, November 6, 2014.

longstanding and proven processes for determining whether or not building and operating a cross-border pipeline serves the national interest."[37] The Senate attempted to override the President's veto on March 4, however the override measure failed by a vote of 62 to 37. No further action on S. 1 was taken in the House.

Notwithstanding the failure of S. 1 to be enacted, congressional leaders have not ruled out further legislative proposals to authorize the Keystone XL Pipeline. Congressional efforts to change or eliminate altogether the State Department's role in issuing cross-border infrastructure permits may raise questions about the President's executive authority (further discussed in the **Appendix**). Such proposals may also raise some administrative and legal challenges for FERC or other federal agencies.

Key Factors Relevant to the National Interest

There are numerous policy considerations potentially relevant to the national interest determination for Keystone XL. The following are brief introductions to key issues in ongoing congressional debate: energy security, environmental impacts, economic impacts, the Canada-U.S. relationship, and Keystone XL in the context of U.S. energy policy, broadly.

Energy Security

The United States and Canada maintain extensive trade in crude oil and petroleum products.[38] Canada is the single largest foreign supplier of crude oil and petroleum products to the United States—and the United States is the dominant consumer of Canada's exports. Of the 9.2 million barrels per day (Mbpd) the United States imported in 2014, Canada supplied 3.4 Mbpd (37%), more than the combined imports from the next two largest suppliers—Mexico and Saudi Arabia.[39] Keystone XL would bring Canada's total petroleum export capacity to the United States via pipeline to over 4.1 Mbpd, enough capacity to carry more than 45% of U.S. crude petroleum imports in 2014. Given that Canada actually supplied the United States with 3.4 Mbpd in 2014, large increases in Canadian supply via pipeline could ultimately be possible, although much of the increased crude supply, while refined domestically, could be destined for foreign markets in the form of refined petroleum products such as diesel fuel.

Increased energy trade between the United States and Canada is viewed by some pipeline proponents as a major contributor to U.S. energy security. Most notably, TransCanada's Presidential Permit application argues that the pipeline will allow U.S. refiners to substitute supply from Canada—a stable, friendly neighbor—for other foreign crude supply and to obtain direct pipeline access to growing Canadian crude output.[40] Such energy security arguments have taken on additional weight for some proponents in light of the recent geopolitical tensions in Venezuela, as well as in other oil-producing countries in the Middle East and North Africa.

[37] The White House, Office of the Press Secretary, "Veto Statement Regarding S. 1," press release, February 24, 2015.

[38] 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.

[39] U.S. Energy Information Administration, Import/Export data, http://www.eia.doe.gov/petroleum/data.cfm#imports.

[40] TransCanada Keystone Pipeline, L.P., September 19, 2008, pp. 6-8.

With expanded pipeline capacity extending to the U.S. Gulf Coast, Alberta crude may compete with other heavy crudes such as those from Mexico, Venezuela, and elsewhere.[41] It is difficult to predict precisely how this competition would play out, but it could take place through shifting discounts or premiums on crude oils from various sources.[42] Thus, it could be possible for Canadian oil supplies to effectively "push out" waterborne shipments from other countries, although this would depend on a wide range of market conditions. If Keystone XL is not permitted, the absence of the pipeline may encourage Alberta producers to increase shipments by rail and to find an alternate pipeline export route through either the Canadian East or West Coast. Thus, Canadian supplies may displace heavy oil supplies in overseas markets and potentially lead to relatively more overseas imports coming into the U.S. Gulf Coast.

During a press conference on November 14, 2014, President Obama appeared to express skepticism about the potential benefits of the Keystone XL pipeline with respect to domestic crude supplies, stating: "Understand what this project is. It is providing the ability of Canada to pump their oil, send it through our land, down to the Gulf, where it will be sold everywhere else."[43] However the Keystone XL Pipeline's developer, and a number of industry analysts disagree with the President's assertion.[44] They argue that, when accounting for crude oil prices, marine transportation costs, and refinery configurations, "American refineries would be the primary buyers of crude oil transported through the Keystone XL pipeline, by a vast margin."[45]

In addition to the disagreement about the amount of crude oil carried on Keystone XL that would be exported to foreign refineries, there is ongoing debate about the volumes of petroleum products refined from Keystone XL crude that would be shipped overseas. For example, one prominent industry analysis has concluded that "about 70 percent" of products refined from Keystone XL crude oil would be consumed in the United States.[46] Pipeline opponents have disputed such conclusions, arguing that recent market data from Gulf Coast refineries suggest much higher exports of refined products from crude carried on Keystone XL.[47] The volume of Keystone XL crude oil—or derived refined products—that may ultimately be exported is dependent upon many constantly changing economic and operational factors. Thus, predicting domestic versus export volumes over the life of the pipeline is highly uncertain. However, whether Keystone XL is viewed as primarily serving domestic or export markets may continue to be a factor in debate about whether the pipeline is in the national interest.

[41] 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.

[42] 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.

[43] The White House, Office of the Press Secretary, "Remarks by President Obama and Daw Aung San Suu Kyi of Burma in Joint Press Conference," press release, November 14, 2014, https://www.whitehouse.gov/the-press-office/2014/11/14/remarks-president-obama-and-daw-aung-san-suu-kyi-burma-joint-press-confe.

[44] TransCanada Corp., "Keystone XL Pipeline, Myths and Facts," web page, March 22, 2015, http://keystone-xl.com/facts/myths-facts/.

[45] Lauren Carroll, "Obama Says Keystone XL Is for Exporting Oil Outside the U.S., Experts Disagree," *Tampa Bay Times*, November 20, 2014. See also Glenn Kessler, "Obama's Claim that Keystone XL Oil 'Bypasses the U.S.' Earns Four Pinocchios," *Washington Post*, March 2, 2015.

[46] IHS, "IHS: Vast Majority of Crude Oil Transported via Keystone XL Pipeline Would Be Consumed in the United States," press release, February 23, 2015, http://press.ihs.com/press-release/energy-power/ihs-vast-majority-crude-oil-transported-keystone-xl-pipeline-would-be-con.

[47] See, for example, Oil Change International, "Department of Energy Data Shows Keystone XL Is an Export Pipeline," web page, March 12, 2015, http://priceofoil.org/2015/03/12/department-energy-data-shows-keystone-xl-export-pipeline/.

Uncertainties About Energy Security

Refineries in the Gulf Coast region have been increasingly optimized to process heavy crude oils, with a particular focus on crudes from Alberta given the growing supplies there. Increasing the share of supply from Canada could be viewed as concentrating, rather than diversifying, the U.S. crude oil supply portfolio, and thus exposing the refining sector to greater supply risk associated with any problems with Canadian supply. It is worth noting that even if Keystone XL is built, prices for the oil it carries as well as for domestically produced oil will continue to be affected by international events. Furthermore, as refineries continue to upgrade for the processing of heavy crude, additional heavy crude supplies from Canada may serve to augment, rather than displace, historic crude supplies from countries like Venezuela. Thus U.S. refinery exposure to market volatility or supply disruptions from key non-Canadian suppliers may remain whether or not Keystone XL is constructed. The energy security implications of increased Canadian crude supplies in a global market are, therefore, somewhat unpredictable.

Economic Impacts of the Pipeline

The economic impacts of the Keystone XL pipeline have been the subject of considerable debate. In light of the ongoing recovery from the recent U.S. economic recession, a particular focus has been the prospect of new jobs directly associated with the pipeline's construction and operation, as well as jobs that may be created indirectly or otherwise induced due to the pipeline's construction or due to an increase in crude oil supplies.[48] Other economic considerations include property tax revenues to local jurisdictions, although they are more straightforward. Regarding economic impact, the State Department's Final EIS for the Keystone XL Project application concludes:

> During construction, proposed Project spending would support approximately 42,100 jobs (direct, indirect, and induced), and approximately $2 billion in earnings throughout the United States.... Construction of the proposed Project would contribute approximately $3.4 billion (or 0.02 percent) to the U.S. gross domestic product (GDP). The proposed Project would generate approximately 50 jobs during operations. Property tax revenue during operations would be substantial for many counties, with an increase of 10 percent or more in 17 of the 27 counties with proposed Project facilities.[49]

Because job projections, in particular, involve numerous assumptions and estimates, the State Department's job estimates for Keystone XL have been a source of disagreement. One challenge to State's analysis is that different definitions (e.g., for temporary jobs) and interpretations can lead to different numerical estimates and "fundamental confusion" about the Final EIS numbers.[50] Consequently, it may be difficult to determine what overall economic and employment impacts may ultimately be attributable to the Keystone XL pipeline or to the various alternative transport scenarios if the pipeline is not constructed. It is beyond the scope of this report to try to evaluate

[48] "Direct" jobs are at firms awarded contracts for goods and services, including construction, directly by Keystone. "Indirect" jobs stem from goods and services purchased by the Keystone XL construction contractors (e.g., concrete, fuel, surveying). "Induced" jobs stem from the spending of earnings received by employees working for either the construction contractor or for any supplier of goods and services required in the construction process (e.g., spending by welders, jobs for pipe mill workers).

[49] Final EIS, p. ES-19.

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

specific job calculations and methodology. Nonetheless, stakeholders and analysts have asserted lower and higher job estimates in support of their positions regarding the pipeline.

Skepticism About Job Creation

In a July 2013 interview, President Obama stated considerably lower job estimates for the Keystone XL Pipeline than those presented by the State Department's Final EIS:

> My hope would be that any reporter who is looking at the facts would take the time to confirm that the most realistic estimates are this might create maybe 2,000 jobs during the construction of the pipeline—which might take a year or two—and then after that we're talking about somewhere between 50 and 100 jobs in an economy of 150 million working people[51]

President Obama's remarks appeared to focus on a subset of direct jobs, although the specific source for the Presidents' estimates is unclear. A White House spokesperson subsequently acknowledged that "there are a range of estimates out there about the economic impact of the pipeline."[52] Nonetheless, the President's remarks were interpreted by some as minimizing the job potential creation of the project.[53] (A low job estimate would be consistent with President Obama's other statements that greenhouse gas emissions would be a key factor on which he would base his decision regarding the pipeline permit.) Other groups and studies have similarly downplayed or otherwise disputed the pipeline's potential job benefits, some assuming that potential job creation would simply take place within the alternative transport scenarios cited in the State Department's market analysis (e.g., the freight rail and tanker sectors), and others even arguing that the pipeline could destroy jobs.[54] The general thrust of these arguments has been that purported job benefits, particularly the limited number of "permanent" jobs, do not justify other costs and risks associated with the Keystone XL Pipeline's development.

Support for the Keystone XL Jobs Argument

Many Keystone XL pipeline proponents support the project based on its economic benefits, and specifically jobs, often citing much higher job estimates than those in the Final EIS. A 2010 study by the Energy Policy Research Foundation, for example, concluded 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."[55] A 2009 report from the Canadian Energy Research Institute (CERI) commissioned by the American Petroleum Institute similarly concluded that

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[51] "Interview with President Obama," Transcript, *New York Times,* July 27, 2013.

[52] Josh Earnest, Deputy Press Secretary, The White House, press briefing, July 29, 2013, http://www.whitehouse.gov/the-press-office/2013/07/29/press-briefing-principal-deputy-press-secretary-josh-earnest-7292013.

[53] Nick Snow, "Keystone XL Supporters Dispute Obama's Job Estimates Citation," *Oil & Gas Journal*, July 30, 2013.

[54] For example, Anthony Swift, Natural Resources Defense Council, "President Obama Is Right on Keystone XL Tar Sands Pipeline Job Numbers," blog, July 30, 2013; http://switchboard.nrdc.org/blogs/aswift/washington_post_must_take_its.html. Cornell University Global Labor Institute, *Pipe Dreams? Jobs Gained, Jobs Lost by the Construction of Keystone XL*, September 28, 2011; National Wildlife Federation, "TransCanada Exaggerating Jobs Claims for Keystone XL," November 9, 2010.

[55] 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, (continued...)

> 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 U.S. 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.[56]

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. Nonetheless, studies such as these, as well as the State Department's analysis, have been used by pipeline proponents to emphasize the purported employment benefits of Keystone XL. Proponents generally argue that thousands of jobs created by Keystone XL, even if they are temporary jobs, will indeed be significant at a time of relatively high national unemployment.[57]

Global and Regional Environmental Impacts

Debate about the environmental impacts of the Keystone XL pipeline have focused largely on its potential to induce greater oil sands crude production and associated emissions of greenhouse gases. However, concerns about oil spills from the pipeline, and the impact of pipeline construction in environmentally sensitive areas along the route, have also been important considerations.

Climate Change and Greenhouse Gas Emissions[58]

On June 25, 2013, President Obama announced a national "Climate Action Plan" to reduce emissions of carbon dioxide (CO_2) and other greenhouse gases (GHG), as well as to encourage adaptation to expected climate change. During his speech, the President made reference to the proposed Keystone XL Pipeline and stated that the "net effects of the pipeline's impact on our climate" would factor into the State Department's national interest determination, examining whether the project would "significantly exacerbate the problem of carbon pollution."[59]

Among the various impacts identified in the project's environmental impact statement are those involving GHG emissions. As required under NEPA, the Final EIS identifies anticipated direct and indirect impacts of the project as proposed by TransCanada as well as various project alternatives, including analysis of the "no action alternative" (i.e., an assessment of the impacts associated with denying TransCanada's permit application). The Final EIS finds:[60]

(...continued)

November 29, 2010, p. 2, http://www.eprinc.org/pdf/oilsandsvalue.pdf.

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

[57] See, for example, U.S. Representative John Boehner, Speaker of the House, "Boehner: President Obama Out of Excuses on Keystone Jobs," press release, January 31, 2014; Laborers' International Union of North America, "Manufacturers and Unions Agree on Keystone XL," press release, July 29, 2013.

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

[59] White House, "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.

[60] Final EIS, pp. ES-15, ES-16, 4.14-39. For more analysis of these findings, see CRS Report R43415, *Keystone XL:* (continued...)

- the GHG emissions released during the construction period for the project would be approximately 0.24 million metric tons of carbon dioxide equivalents ($MMTCO_2e$)[61] due to land use changes, electricity use, and fuels for construction vehicles (equivalent to 0.004% of U.S. annual GHG emissions)[62];
- the GHG emissions released during normal operations would be approximately 1.44 $MMTCO_2e$/year due to electricity use for pumping stations, fuels for maintenance and inspection vehicles, and fugitive emissions (equivalent to 0.2% of U.S. annual GHG emissions);
- the total, or gross, life-cycle GHG emissions (i.e., the aggregate GHG emissions released by all activities from the extraction of the resource to the refining, transportation, and end-use combustion of refined fuels) attributable to the oil sands crude transported through the proposed pipeline would be approximately 147 to 168 $MMTCO_2e$ per year (equivalent to 2.2% to 2.6% of U.S. annual GHG emissions);
- the incremental, or net, life-cycle GHG emissions (i.e., GHG emissions over-and-above those from the crude oils expected to be displaced in U.S. refineries) is estimated to be 1.3 to 27.4 $MMTCO_2e$ per year (equivalent to 0.02% to 0.4% of U.S. annual GHG emissions); but
- according to the State Department's market analysis, "approval or denial of any one crude oil transport project, including the proposed project, is unlikely to significantly impact the rate of extraction in the oil sands or the continued demand for heavy crude oil at refineries in the United States based on expected oil prices, oil-sands supply costs, transport costs, and supply-demand scenarios."[63]

The crude oil market analysis in the Final EIS is presented separately from the GHG emissions assessment. By determining that the most likely scenario is one in which oil sands production would be unaffected by expected market conditions, the Final EIS implies that the "incremental" life-cycle GHG emissions attributable to the oil sands crudes transported through the proposed pipeline are negligible. With this determination, the only difference in estimates between competing scenarios would be attributable to the operational GHG emissions of the alternative modes of transportation (e.g., GHG emissions from rail cars, trucks, or tankers). The Final EIS reports that the annual operational emissions attributed to the "no action" alternatives range from 4.0 to 4.4 $MMTCO_2e$ per year (an increase of 29%-42% over the 3.1 $MMTCO_2e$ per year in operational emissions for the proposed project inclusive of the existing southern leg).

(...continued)

Greenhouse Gas Emissions Assessments in the Final Environmental Impact Statement, by Richard K. Lattanzio.

[61] "Carbon dioxide equivalent" is a metric used to compare emissions of various greenhouse gases based upon their global warming potential as indexed against one unit of carbon dioxide.

[62] EPA reports that total domestic GHG emissions for all sectors in 2012 to be 6,502 $MMTCO_2e$. EPA, *Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2012,* http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html.

[63] Final EIS, p. ES-16. The State Department bases its analysis primarily on three market projections: (1) the crude oil input mix at Gulf Coast refineries remains constant, (2) rail and other non-pipeline transport options would fully accommodate all projected growth in oil sands production, and (3) at no point would the global price of oil fall—or the marginal cost of production increase—far enough that investment in new oil sands projects would be deemed uneconomical (i.e., below the breakeven cost of production).

Debate About the Final EIS

Some stakeholders have questioned many of the conclusions in the Final EIS and argue that the project may have greater climate change impacts than projected by the State Department. They contend that there is nothing presumed or inevitable about the rate of expansion for the Canadian oil sands.[64] Current oil sands projects face a challenging financial environment, and up-front production costs and price differentials are comparatively higher for oil sands crudes, making new investment sensitive to changes in supply costs and global prices.[65] Opponents stress that oil market projections and transportation options are rife with uncertainty, and that the proposed Keystone XL Pipeline could have a much more significant impact on oil sands expansion if a number of key variables differ from the State Department's assumptions. Proponents of the proposed pipeline support a market analysis as outlined in the Final EIS. They argue that as long as there is strong global demand for petroleum products, resources such as the Canadian oil sands will be produced and shipped to markets using whatever route necessary. Furthermore, they estimate that GHG emissions intensities for the Canadian oil sands are currently within the range of many other heavy crude oils, and that in the future Canadian oil sands emissions intensities will only decrease (due to efficiency improvement and technological advances), while those of other crudes around the world will likely increase (due to a heavier resource base).

Oil Spill Concerns and Potential Trade-Offs

Each mode of oil transportation involves some risk, and each has historically resulted in oil spills. Although pipelines and oil tankers transport the vast majority of oil within the United States, other modes of transportation have increased in recent years. In particular, the volume of crude oil carried by rail increased from approximately 4 million barrels in 2010 to approximately 87 million barrels in 2013, a 20-fold increase.[66] Some portion of the recent increase is related to the increase in Canadian oil sands crude production and pending status of the Keystone XL pipeline.[67]

In its Final EIS for Keystone XL, the State Department used Pipeline and Hazardous Material Safety Administration as well as Coast Guard data to compare oil spill frequency and volume by mode of transportation. Between 2002 and 2009, the State Department found:

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[64] See, for example, Natural Resources Defense Council et al., "Request for Supplemental Environmental Impact Statement for the TransCanada Keystone XL Pipeline Based on Significant New Information," submitted to the U.S. Department of State, June 24, 2013; Oil Change International, "Cooking the Books: How the State Department Analysis Ignores the True Climate Impact of the Keystone XL Pipeline," April 2013; and Rep. Henry Waxman et al., "Letter to the Hon. Kerry-Ann Jones," submitted to the U.S. Department of State, July 10, 2013.

[65] The Final EIS reports new oil sands production supply costs at $65-$70 per barrel for in situ crude; $80-$85 per barrel for mining (without upgrader); and $90-$100 per barrel for mining (with upgrading). At the time of the release of the Final EIS, West Texas Intermediate (WTI) spot prices were approximately $100/barrel, and thus well above new production supply costs. However, as of March 16, 2015, WTI spot prices were down to $44/barrel, well within the range of potentially impacting new project investment and development. Whether this short-term price volatility may impact long-term investment decisions for Canadian crude production and infrastructure is an open question.

[66] This increase of rail transportation is based on data from the Energy Information Administration, which tracks U.S. refinery receipts of crude oil by mode of transportation. This data source only captures the mode of transportation used for the last leg of such shipments. For further details, see CRS Report R43390, *U.S. Rail Transportation of Crude Oil: Background and Issues for Congress*, by John Frittelli et al.

[67] The Keystone XL pipeline is also expected to transport light crude oil from the Bakken formation in North Dakota. Currently, much of this production is also transported by rail.

- pipeline transport has the highest number of barrels released per ton-mile compared to rail and marine transport; and
- rail transport has the highest number of reported releases per ton-mile compared to pipeline and marine transport.[68]

Although the capacity of an individual rail car is relatively small, around 700 barrels (29,400 gallons), a major derailment could involve releases from multiple tank cars, resulting in a substantial spill. For example, in 2013, train derailments in Aliceville, AL, and Casselton, ND, each spilled over 10,000 barrels (420,000 gallons) of crude oil.[69] By comparison, the 1989 grounding of the *Exxon Valdez* oil tanker in Prince William Sound, Alaska released 260,000 barrels (10.9 million gallons) of crude oil. The largest U.S. pipeline oil spill (that CRS can document) discharged approximately 40,000 barrels (1.7 million gallons) in 1991 near Grand Rapids, MN. Nonetheless, spill volume is arguably a relatively unimportant factor in terms of impacts and cleanup costs. Location matters more: a major spill away from shore will likely cost considerably less to abate than a minor spill in a populated location or sensitive ecosystem. Depending on timing and location, even a small spill can cause significant harm to individual organisms and entire populations.[70]

Although some might equate rejection of the Keystone XL permit with avoiding oil spills, a more accurate tradeoff would be the risk of spills from this particular pipeline compared to spills from other modes of oil transportation which may be used as alternatives. Keystone XL Pipeline proponents and opponents, including those in the rail industry, have cited their own interpretations of spill data to argue that one transportation mode is significantly riskier than others.[71] However, any such conclusion is open to debate.

Spill Concerns Specific to Oil Sands Crude

During the first Keystone XL permit and EIS process, a primary topic of debate among stakeholders was whether particular properties of oil sands crude would impose a greater risk of a pipeline oil spill than other crude oil pipelines. To examine these issues, Congress enacted P.L. 112-90, which ultimately resulted in a 2013 report from the National Research Council (NRC). The central findings of the report included the following:

> The committee does not find any causes of pipeline failure unique to the transportation of diluted bitumen [oil sands crude]. Furthermore, the committee does not find evidence of chemical or physical properties of diluted bitumen that are outside the range of other crude oils or any other aspect of its transportation by transmission pipeline that would make diluted bitumen more likely than other crude oils to cause releases.[72]

[68] 2014 Final EIS, p. 5.3-9 and Figures 5.3.3-1 and 5.3.3-2.

[69] Spill volume data from PHMSA hazardous materials safety database, at http://www.phmsa.dot.gov/resources/data-stats.

[70] For further discussion, see CRS Report R43390, *U.S. Rail Transportation of Crude Oil: Background and Issues for Congress*, by John Frittelli et al.

[71] See, for example, James Conca, "Pick Your Poison for Crude—Pipeline, Rail, Truck Or Boat," *Forbes*, April 26, 2014; William Marsden, "Lac-Megantic Inferno Could Boost Keystone XL," *Calgary Herald*, July 9, 2013.

[72] National Research Council, *Effects of Diluted Bitumen on Crude Oil Transmission Pipelines*, 2013.

However, the NRC report did not examine how spills of oil sands crude may differ from spills of conventional crude oil. CRS is not aware of an authoritative study that has assessed this topic, but the recent oil sand crude spills may offer some insights. The 2010 pipeline spill (850,000 gallons) that reached Michigan's Kalamazoo River has demonstrated particular cleanup challenges. According to EPA, the oil will not appreciably degrade and it has mixed with sediment on the river bottom.[73] The pipeline owner, Enbridge, estimated cleanup costs would be approximately $1.2 billion,[74] substantially higher than the average cost of cleaning up a similar amount of conventional oil.[75]

Issues with the Pipeline Route Across Nebraska

During the national interest determination period for the 2008 Presidential Permit application, it became clear that changes to Nebraska law would require the selection of a pipeline route that would avoid the Sand Hills region of Nebraska. The region is unique due to its high concentration of wetlands, extensive areas of very shallow groundwater, and its sensitive ecosystem. 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.

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 is 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.[76]

When the 2008 permit application was denied, TransCanada announced it would work with the Nebraska DEQ to identify a potential pipeline route that would avoid the Sand Hills. On January 13, 2013, the governor of Nebraska approved a proposed reroute of the Keystone XL pipeline through Nebraska, as noted above.[77] However, as stated earlier, a Nebraska District Court ruled that the 2012 state law authorizing the governor to approve TransCanada's pipeline route violated the Nebraska Constitution. Prior to the passage of the 2012 law, that authority rested exclusively with the state's Public Service Commission (PSC). As a result of the court's decision, the governor's approval of the pipeline siting in 2013 was temporarily declared null and void pending appeal. However, on January 9, 2015, the Nebraska Supreme Court vacated the lower court's

[73] Enbridge Inc., *Third Quarter Interim Report to Shareholders for the Nine Months Ended September 30, 2014*, http://enbridge.com/~/media/www/Site%20Documents/Investor%20Relations/2014/2014_ENB_Q3_Report.pdf?la=en.

[74] See Enbridge Inc., Management's Discussion and Analysis, December 2014, at http://enbridge.com/~/media/www/Site%20Documents/Investor%20Relations/2015/2014_YE_ENB_MDA.pdf.

[75] Based on cost estimates prepared in 2004. See Dagmar Etkin, Modeling Oil Spill Response and Damages Costs, Proceedings of the 5th Biennial Freshwater Spills Symposium, 2004, at http://www.environmental-research.com.

[76] 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.

[77] See U.S. Department of State, March 2013, Draft EIS: "Volume III. Appendix A. Governor Approval of the Keystone XL Project in Nebraska."

ruling, effectively clearing the way for the Keystone XL Pipeline to be constructed through the state on the route already authorized by the governor.[78]

Canada-U.S. Relationship

Oil production and exports are a major source of economic development and revenue for Canada. Continued expansion of Canada's oil production is, therefore, a high national priority for Prime Minister Stephen Harper's government (see below), although not all Canadians share this view. As Canada's largest crude oil customer, the United States has anchored Canada's energy trade. Historically, the energy relationship between the United States and Canada, while intertwined, has been straightforward—taking the form of a steadily growing southward flow of crude oil to U.S. refineries. Energy products have been traded freely back and forth between the two countries under the North American Free Trade Agreement (NAFTA) and energy transportation infrastructure generally has been constructed as needed with little fanfare. But the U.S. permitting process for the Keystone XL Pipeline has greatly complicated that energy relationship, creating new tensions between the U.S. and Canadian governments as well as within Canada.

Other Pipelines in Canada

Partly as a result of delays in the Keystone XL permit process, the Canadian federal government has been advocating the construction of the Northern Gateway pipeline through British Columbia to export oil to Asia, as well as the Energy East pipeline for export or domestic consumption in eastern Canada. Like the Keystone XL, these routes have drawn opposition from environmentalists; however, First Nations tribes, over whose land much of the Northern Gateway pipeline would be constructed, also generally oppose the pipelines.

On October 29, 2014, Trans-Canada submitted its application for the Energy East Pipeline. This proposal would repurpose portions of an existing, yet unused, natural gas pipeline along with some new construction into a cross-country oil artery that could potentially ship 1.1 million bpd eastward. It would supply eastern Canadian refineries with crude that is currently imported from the United States or elsewhere, and could allow for seaborne exports from its terminus at the port of Saint John, New Brunswick.[79]

On June 14, 2014, the Canadian Federal Government approved the Northern Gateway Pipeline, conditioned on obtaining provincial permits and consultation with the First Nations tribes, through whose land the pipeline would traverse. The governments of British Columbia (B.C.) and Alberta have quarreled over the pipeline. B.C. Premier Christy Clark had laid out five conditions for B.C.'s assent to construction of the pipeline: successful completion of an environmental review; "world-leading" marine spill response and land oil-spill prevention; addressing aboriginal legal requirements; treaty rights and opportunities; and a "fair share" of economic benefits. Many in British Columbia believe that the province would be subject to most of the risks associated with the pipeline, but the monetary benefit would flow primarily to Alberta. In November 2013,

[78] Supreme Court of Nebraska, Randy Thompson et al., Appellees and Cross-appellants, v. Dave Heineman, in his Official Capacity as Governor of the State of Nebraska, et al., Appellants and Cross-appellees, No. S-14-158, January 9, 2015, https://supremecourt.nebraska.gov/sites/supremecourt.ne.gov/files/sc/opinions/s14-158.pdf.

[79] "TransCanada Corp.'s submits massive 30,000-page application for Energy East pipeline," *Financial Post,* October 30, 2014.

after months of negotiations between the two provinces, the premiers of both provinces announced a framework agreement on inter-provincial energy movement.[80] However, this agreement does not represent approval of Northern Gateway by the B.C. provincial government. Whether or not the Keystone XL is approved, it appears Canadian federal government officials will also continue to argue for the approval of the cross-Canada pipelines.

Keystone XL and U.S. Energy Policy

Beyond the debates about the proposed Keystone XL Pipeline's impacts on oil sands production and greenhouse gases, some stakeholders have expressed a broader concern about whether the approval or denial of the project could set a precedent for U.S. energy policy.[81] They argue that while many of the decisions that may affect the development of the oil sands will ultimately be made by the market and the national and provincial governments of Canada, the choice of whether or not to approve the permit for the project is an opportunity for the U.S. government to signal its future direction.[82]

Some stakeholders have pushed for a national energy policy that moves the United States away from a reliance on fossil fuels. They see the decision to build the proposed pipeline as a 50-year-long commitment to a carbon-based economy and its resulting GHG emissions.[83] Some observers contend that with meaningful action on climate policy slowed or stalled in Congress, the courts, and, to some extent, the regulatory agencies (i.e., local, state, and federal environmental and land-use agencies), the sole remaining outlet to leverage a low-carbon energy policy is case-by-case action on such items as infrastructure permits.[84] Some of these stakeholders have actively opposed the permit for the project believing that it may set a precedent. If the pipeline is allowed to go forward, they say, it may be the case that no future infrastructure project would be held accountable for its incremental contribution to cumulative GHG emissions.

Others recognize that the project could affect U.S. energy policy by setting a precedent and sending a signal, but they reach a different conclusion. Many regard the project as one element of a revitalized energy production sector in North America and urge that U.S. policy should support investment in such infrastructure for economic and national security reasons.[85] In this view, since Canadian oil sands will be developed regardless of the transportation mode used, the public policy interest lies in supporting North American energy suppliers rather than those overseas.

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[80] "Clark, Redford Have Framework for Pipeline Deal," *Globe and Mail*, November 5, 2013, http://www.theglobeandmail.com/news/national/clark-redford-reach-deal-on-pipelines/article15260483/.

[81] Whether the project would set a precedent or send a signal about U.S. energy policy was not addressed in the FEIS.

[82] See, for example: Juliet Eilperin and Lenny Bernstein, "Environmental Groups Say Obama Needs to Address Climate Change More Aggressively," *Washington Post*, January 16, 2014.

[83] EPA notes in its comments to the *DEIS,* given the 50-year lifetime of new infrastructure projects such as the proposed pipeline, "the additional CO_2e from oil sands crude transported by the pipeline could be as much as 935 million metric tons"[83] (the Final EIS reports a range of 135-1,430 $MMTCO_2e$). Final EIS, p. 4.14-41.

[84] Efforts to have the State Department reevaluate the analysis in the EIS and/or deny the permit for Keystone XL include those of Rep. Henry Waxman, et al., "Letter to the Hon. Kerry-Ann Jones," submitted to the U.S. Department of State, July 10, 2013, http://350.org/campaigns/stop-keystone-xl/; Natural Resources Defense Council, http://www.nrdc.org/energy/dirtyfuels_tar.asp; and Sierra Club, http://www.sierraclub.org/dirtyfuels/tar-sands/; among others.

[85] See, for example, Rep. Fred Upton, "Opinion: The Architecture of Abundance: Building Energy Infrastructure," *Reuters,* July 25, 2013.

Appendix. Presidential Permitting Authority[86]

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.[87] 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 of State in E.O. 11423.[88] 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."[89] 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.[90] 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.[91] 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.[92]

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).[93] The court stated that the authority to regulate the cross-border pipeline lies with either Congress or the President.[94] 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."[95] The President could

[86] 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.

[87] "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.

[88] "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.

[89] Ibid.

[90] 659 F. Supp. 2d 1071, 1078 (D. S.D. 2009).

[91] Ibid. at 1078.

[92] Ibid. at 1078, 1078 n.5.

[93] See ibid. at 1080-81.

[94] Ibid. at 1081.

[95] Ibid.

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.[96]

In *Sierra Club v. Clinton*,[97] 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).[98] 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."[99] 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.[100] 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."[101] 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.

[96] Ibid. at 1082.

[97] 689 F.Supp.2d 1147 (D. Minn. 2010).

[98] Ibid. at 1162.

[99] Ibid.

[100] 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.

[101] 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).

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