



# Keystone XL Pipeline Project: Key Issues

**Paul W. Parfomak**

Specialist in Energy and Infrastructure Policy

**Neelesh Nerurkar**

Specialist in Energy Policy

**Linda Luther**

Analyst in Environmental Policy

**Adam Vann**

Legislative Attorney

March 13, 2012

Congressional Research Service

7-5700

[www.crs.gov](http://www.crs.gov)

R41668

**CRS Report for Congress**

*Prepared for Members and Committees of Congress*

## Summary

In 2008, Canadian pipeline company TransCanada filed an application with the U.S. Department of State to build the Keystone XL pipeline, which would transport crude oil from the oil sands region of Alberta, Canada, to refineries on the U.S. Gulf Coast. Keystone XL would ultimately have the capacity to transport 830,000 barrels per day, delivering crude oil to the market hub at Cushing, OK, and further to points in Texas. TransCanada plans to build a pipeline spur so that oil from the Bakken formation in Montana and North Dakota can also be carried on Keystone XL.

As a facility connecting the United States with a foreign country, the pipeline requires a Presidential Permit from the State Department. In evaluating such a permit application, after consultation with other relevant federal agencies and public input, the department must determine whether a proposal is in the “national interest.” This determination considers the project’s potential effects on the environment, economy, energy security, foreign policy, and other factors. Pursuant to the National Environmental Policy Act, the State Department considered potential environmental impacts of the proposed Keystone XL project in a final Environmental Impact Statement (EIS) issued on August 26, 2011. A wide range of public comments both for and against the pipeline were received during a subsequent 90-day review period. The State Department noted, in particular, concerns about the pipeline’s route through the Sand Hills region of Nebraska, an extensive sand dune formation with highly porous soil and shallow groundwater.

The Temporary Payroll Tax Cut Continuation Act of 2011 (P.L. 112-78) included provisions requiring the Secretary of State to issue a permit for the project within 60 days unless the President determined the project not to be in the national interest. On January 18, 2012, the State Department, with the President’s consent, denied the Keystone XL permit, citing insufficient time under the 60-day deadline to obtain all the necessary information to assess the reconfigured project. On February 27, 2012, TransCanada announced that it would proceed with development of the Keystone XL segment connecting Cushing, OK, to the Gulf Coast as a stand-alone project not requiring a Presidential Permit. The company also informed the State Department that it intended to file a new Presidential Permit application “in the near future” for the segment of the Keystone XL project from the Canadian border to Steele City, NE, with a future supplement to the application specifying an alternative route in Nebraska. The company has stated that it expects to establish the new route by October 2012. The Obama administration supports TransCanada’s plan to proceed with the southernmost segment of the Keystone XL pipeline while reserving judgment on a reconfigured northern segment until completion of a new Presidential Permit review.

The North American Energy Access Act (H.R. 3548) would transfer the permitting authority over the Keystone XL pipeline project to the Federal Energy Regulatory Commission, requiring the commission to issue a permit for the project within 30 days of enactment. The Keystone For a Secure Tomorrow Act (H.R. 3811) would immediately approve the original permit application filed by TransCanada. S. 2041 and the Energizing America through Employment Act (H.R. 4000) would similarly approve the original permit upon passage. All four bills include provisions allowing for later alteration of the pipeline route in Nebraska. S. 2100 would suspend sales of petroleum products from the Strategic Petroleum Reserve until issuance of a Presidential Permit for the Keystone XL project. Changing, or eliminating altogether, the State Department’s role in issuing cross-border infrastructure permits may raise questions about the President’s executive authority, however. H.R. 3900 would seek to ensure that crude oil transported by the Keystone XL pipeline, or resulting refined petroleum products, would be sold only into U.S. markets, but could raise issues related to international trade agreements.

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## Introduction<sup>1</sup>

In September 2008, TransCanada (a Canadian company) applied to the U.S. Department of State for a permit to cross the U.S.-Canada international border with the Keystone XL pipeline project. If constructed, the pipeline would carry crude oil produced from the oil sands region of Alberta, Canada, to U.S. Gulf Coast refineries. Because the pipeline would connect the United States with a foreign country, it requires a Presidential Permit issued by the State Department. Issuance of a Presidential Permit requires a finding that the project would serve the “national interest.”

In the course of gathering information necessary to make its national interest determination, the State Department identified various concerns raised by the public. On November 10, 2011, the State Department announced its decision to seek additional information about alternative pipeline routes before it could move forward with a national interest determination.<sup>2</sup> More specifically, concerns regarding potential environmental impacts of constructing and operating the pipeline along the proposed route through the Sand Hills region of Nebraska led the State Department to decide that an assessment of potential alternative routes that would avoid that area was necessary. Subsequently, on November 14, 2011, TransCanada announced an agreement with the Nebraska Department of Environmental Quality to identify a pipeline route that would avoid the Sand Hills. The State Department estimated at the time that the preparation of supplemental environmental analysis necessary for a new route alternative could be complete in early 2013.

Subsequent to the State Department’s announcement of a delay in the permit review, Congress acted to expedite a permit decision on the Keystone XL project. 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 to issue a permit for the project within 60 days, unless the President publicly determined the project not to be in the national interest. The act allowed for future changes to the Nebraska route if approved by the governor of Nebraska. On January 18, 2012, the State Department, with the President’s consent, denied the Keystone XL permit, citing insufficient time under the 60-day deadline to obtain all the necessary information to assess the reconfigured project.<sup>3</sup>

On February 27, 2012, TransCanada announced that it would proceed with development of the Keystone XL segment connecting Cushing, OK, to the Gulf Coast as a stand-alone project not requiring a Presidential Permit.<sup>4</sup> The company also informed the State Department that it intended to file a new Presidential Permit application “in the near future” for the segment of the Keystone XL project from the Canadian border to Steele City, NE, with a future supplement to the application specifying an alternative route in Nebraska when that route is selected.<sup>5</sup>

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<sup>1</sup> 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 et al. 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.

<sup>2</sup> U.S. Department of State, “Keystone XL Pipeline Project Review Process: Decision to Seek Additional Information,” November 10, 2011, <http://www.state.gov/r/pa/prs/ps/2011/11/176964.htm>.

<sup>3</sup> U.S. Department of State, “Briefing on the Keystone XL Pipeline,” briefing transcript, January 18, 2012, <http://www.state.gov/r/pa/prs/ps/2012/01/181492.htm>.

<sup>4</sup> TransCanada Corp., “TransCanada Set to Re-Apply for Keystone XL Permit Proceeding with Gulf Coast Project,” press release, February 27, 2012.

<sup>5</sup> *Ibid.*

TransCanada has announced that it will reapply for a Presidential Permit after a new proposed route through Nebraska is determined. The company previously stated that it expected to establish the new route by October 2012.<sup>6</sup> The Obama administration has stated its support for TransCanada's plan to proceed with the southernmost segment of the Keystone XL pipeline, while reserving judgment on the reconfigured northern segment until completion of a new Presidential Permit review.<sup>7</sup>

Members of Congress have expressed support for the proposed pipeline's potential energy security and economic benefits while others have expressed reservations about its potential environmental impacts.<sup>8</sup> Though Congress, to date, has had no direct role in permitting the pipeline's construction, it may have an oversight role stemming from federal environmental statutes that govern the pipeline's application review process. Congress also may seek to influence the State Department permitting process, or may seek to assert direct congressional authority over permit approval, through new legislation.

A number of legislative proposals, like P.L. 112-78, would have imposed deadlines on a national interest determination for the Keystone XL project. The North American-Made Energy Security Act (H.R. 1938), would have directed the President to issue a final order granting or denying the Presidential Permit for the Keystone XL pipeline by November 1, 2011. The Jobs Through Growth Act (H.R. 3400), would have required the President to issue a final order granting or denying the Presidential Permit for the Keystone XL pipeline within 30 days of enactment. The North American Energy Security Act (S. 1932), which was introduced on November 30, 2011, would have required the Secretary of State to issue a permit for the project within 60 days of enactment, unless the President publicly determined the project to be not in the national interest. The North American Energy Security Act (H.R. 3537), introduced on December 1, 2011, and the Middle Class Tax Relief and Job Creation Act of 2011 (H.R. 3630), introduced on December 9, 2011, contain similar provisions for issuing a Presidential Permit within 60 days of enactment. All of these proposed provisions have been mooted by the State Department's denial of the permit.

The North American Energy Access Act (H.R. 3548), introduced on December 2, 2011, would transfer the permitting authority over the Keystone XL pipeline 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. The Keystone For a Secure Tomorrow Act (H.R. 3811), introduced on January 24, 2012, would immediately approve the original permit application filed by TransCanada in 2008. S. 2041, introduced on January 30, 2012, and the Energizing America through Employment Act (H.R. 4000), introduced on February 9, 2012, would similarly approve the original permit upon passage. All four bills include provisions allowing for later alteration of the pipeline route in Nebraska. H.R. 3900, introduced on February 3, 2012, would seek to ensure that any crude oil transported by the Keystone XL pipeline, or

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<sup>6</sup> TransCanada Corp., "TransCanada Will Re-Apply for a Keystone XL Permit," press release, January 18, 2012.

<sup>7</sup> The White House, Office of the Press Secretary, "Statement by the Press Secretary," press release, February 27, 2012, <http://www.whitehouse.gov/the-press-office/2012/02/27/statement-press-secretary>.

<sup>8</sup> See, for example, Juliet Eilperin, "Democratic Lawmakers Pressure Obama Administration on Both Sides of Keystone Pipeline Issue," *Washington Post*, October 19, 2011; House Energy & Commerce Committee, Subcommittee on Energy and Power, Hearing on The American Energy Initiative, Discussion Draft of H.R. \_\_\_\_\_, the North American Made Energy Security Act of 2011, May 23, 2011; U.S. Senator Charles Grassley, Letter to Secretary of State Hillary Rodham Clinton, May 16, 2011; U.S. Senator Max Baucus, Letter to Secretary of State Hillary Rodham Clinton, September 10, 2010; U.S. Representative Henry A. Waxman, Letter to Secretary of State Hillary Rodham Clinton, July 2, 2010.

resulting refined petroleum products, would be sold only into U.S. markets—not exported overseas. S. 2100, introduced on February 13, 2012, would suspend sales of petroleum products from the Strategic Petroleum Reserve until issuance of a Presidential Permit for the Keystone XL project application filed in 2008.

This report describes the Keystone XL pipeline proposal and the process required for federal approval. It summarizes key arguments for and against the pipeline put forth by the pipeline’s developers, federal agencies, environmental groups, and other stakeholders. Finally, the report reviews the constitutional basis for the State Department’s authority to issue a Presidential Permit, and opponents’ possible challenges to this authority.

## **Pipeline Description**

The U.S. portion of the Keystone XL pipeline project, as originally proposed, would pass through Montana, South Dakota, Nebraska, Oklahoma, and Texas (**Figure 1**). This route would consist of approximately 1,380 miles of 36-inch-diameter pipe and have the capacity to transport 830,000 barrels per day (bpd) of crude oil to the United States, delivering up to roughly 200,000 bpd to an existing oil terminal in Oklahoma with the remainder sent further to delivery points in Texas.<sup>9</sup> On November 14, 2011, TransCanada announced an agreement with the state of Nebraska to make as yet undetermined changes to the pipeline route in Nebraska to avoid environmentally sensitive areas.<sup>10</sup> These route changes are expected to increase the pipeline mileage through the state, although the company expects to maintain the original route through the other states, including its planned delivery points, so the pipeline’s overall capacity should not be affected.

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<sup>9</sup> U.S. Department of State, *Supplemental Draft Environmental Impact Statement for the Keystone XL Oil Pipeline Project*, April 15, 2011, p. 1-4. An initial capacity of 700,000 bpd may be raised to 830,000 bpd by increasing the pumping capacity. The Keystone XL project had applied to the Pipeline and Hazardous Materials Safety Administration to operate at slightly higher pressure than permitted in standard regulations, which would have enabled a 900,000 bpd capacity, but it withdrew its applications for such a Special Permit in August, 2010. The company may reapply for this exemption in the future, however, even after the pipeline is constructed, should it be approved.

<sup>10</sup> TransCanada Corp., “Media Advisory - State of Nebraska to Play Major Role in Defining New Keystone XL Route Away From the Sandhills,” press release, November 14, 2011.

Figure 1. TransCanada Keystone Pipeline and Original Keystone XL Proposed Route



**Source:** U.S. Department of State, <http://keystonepipeline-xl.state.gov/clientsite/keystonexl.nsf/map.jpg?OpenFileResource>.

**Note:** Figure 1 shows the developer's originally proposed "preferred alternative" for the Keystone XL pipeline route according to Presidential Permit application documents, however, the route through Nebraska is expected to change. For discussion of alternative routes, see the State Department EIS discussed below.

As of February 2011, the Keystone XL project along its original route was estimated to cost more than \$7.0 billion, with the U.S. portion accounting for at least \$5.4 billion of that total.<sup>11</sup> That is higher than the cost estimate when the initial permit application was filed reportedly due to currency swings, changing regulatory requirements, and permitting delays.<sup>12</sup> A new route would presumably be longer and cost more. The Keystone XL pipeline would be an extension of TransCanada's existing Keystone pipeline, which links the Alberta oil sands to refineries in Illinois and Oklahoma (**Figure 1**). The Keystone pipeline received State Department approval on March 17, 2008, and began commercial operation in June 2010.

<sup>11</sup> 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, U.S. Dept. of State, September 19, 2008, p. 10, <http://www.keystonepipeline-xl.state.gov/clientsite/keystonexl.nsf/presidentialpermitapplication.pdf?OpenFileResource>.

<sup>12</sup> "TransCanada Expects \$1-Billion Cost Escalation for Keystone XL Pipeline," Canadian Press, February 17, 2011.

## Keystone XL Extension to Bakken Oil Production

The U.S. portion of the Bakken formation is an unconventional oil resource that underlies parts of North Dakota and Montana.<sup>13</sup> By the end of 2010, U.S. Bakken production was 350,000 bpd.<sup>14</sup> Output has climbed further in 2011. The oil is transported to refineries by rail and truck, rather than by pipeline, which would be more economic. In part, this is because infrastructure has not kept up with rapid production growth in the Bakken region in recent years. Output is expected to increase significantly in the future, increasing the need for pipeline transportation capacity.<sup>15</sup>

TransCanada has signed contracts with Bakken oil producers to carry 65,000 bpd from the region via the Keystone XL pipeline. While not the full 100,000 bpd of capacity TransCanada had offered to oil producers, this was enough to justify adding the Bakken Marketlink Project, a pipeline running from Baker, MT, to the Keystone XL pipeline, which can then carry crude to the oil hub at Cushing, OK, and on to the Gulf Coast.<sup>16</sup> The Bakken Marketlink would have a 100,000 bpd capacity and is estimated to cost \$140 million. It could start operating in 2013 if it and the Keystone XL pipeline receive regulatory approvals.<sup>17</sup>

These new Bakken contracts also improve the economics for Keystone XL, raising the amount of oil slated to flow through the pipeline.<sup>18</sup> Lower transportation costs and access to new markets may support investment in the Bakken. Furthermore, 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 will add 120,000 bpd of transport capacity to move Bakken oil to Midwest markets.<sup>19</sup> 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.”<sup>20</sup> Rail transport capacity is also expanding.<sup>21</sup>

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<sup>13</sup> Richard M. Pollastro et al., *Assessment of Undiscovered Oil Resources in the Devonian-Mississippian Bakken Formation, Williston Basin Province, Montana and North Dakota*, 2008, U.S. Geologic Survey, National Assessment of Oil and Gas Fact Sheet (2008–3021), April 2008, p. 1, [http://pubs.usgs.gov/fs/2008/3021/pdf/FS08-3021\\_508.pdf](http://pubs.usgs.gov/fs/2008/3021/pdf/FS08-3021_508.pdf). The Bakken formation also stretches into parts of Manitoba and Saskatchewan, Canada.

<sup>14</sup> Nathan Vanderklippe, “TransCanada to Move U.S. Crude Through Keystone,” *The Globe and Mail*, January 26, 2011.

<sup>15</sup> For more on Bakken oil production, see CRS Report R42032, *The Bakken Formation: An Emerging Unconventional Oil Resource*, by Michael Ratner et al.

<sup>16</sup> Jeffrey Jones, “TransCanada plans U.S. Bakken pipeline link,” *Reuters*, January 20, 2011.

<sup>17</sup> TransCanada, “TransCanada to Transport U.S. Crude Oil to Market Bakken Open Season a Success,” press release, January 11, 2011, <http://www.transcanada.com/5631.html>.

<sup>18</sup> Vanderklippe, 2011.

<sup>19</sup> Enbridge, “Bakken Pipeline Project—Project Overview,” press release, <http://www.enbridge.com/BakkenPipelineProjects/BakkenPipelineProjectUS.aspx>.

<sup>20</sup> Lauren Krugel, “TransCanada attracts support for Montana-to-Oklahoma crude pipeline,” *The Canadian Press*, January 20, 2011.

<sup>21</sup> Selam Gebrekidan, “Bakken Rail Terminal Ships First Crude Cargo-Lario,” *Reuters*, November 9, 2011.



## Presidential Permit Application Requirements and Status

Ordinarily, the U.S. government does not have permit authority for oil pipelines, even interstate pipelines. This is in contrast to interstate natural gas pipelines, which, under Section 7(c) of the Natural Gas Act, must obtain a “certificate of public convenience and necessity” from the Federal Energy Regulatory Commission.<sup>22</sup> Generally, the primary siting authority for oil pipelines would be established under applicable state law (which may vary considerably from state to state). 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. Since the Keystone and proposed Keystone XL pipelines are designed for the importation of oil from Canada, their facilities require a Presidential Permit.

Executive Order 13337 delegates to the Secretary of State the President’s authority to receive applications for Presidential Permits.<sup>23</sup> Issuance of a Presidential Permit is dependant upon a finding that the project would serve the national interest.<sup>24</sup> In the course of making that determination, the State Department is obligated to consider a host of issues related to the proposed project including its potential impacts to the environment, economy, energy security, and foreign policy, to name a few. In that capacity, the State Department is required to consult with relevant federal and state agencies and to invite public comment in arriving at its determination. Ultimately, however, the State Department has discretion in determining what factors to examine to inform its determination of whether a proposed project is in the national interest (i.e., will be granted a Presidential Permit).

Identifying and considering the potential environmental impacts of a proposed project is done within the context of the State Department’s preparation of an Environmental Impact Statement (EIS), as required pursuant to the National Environmental Policy Act (NEPA, 42 U.S.C. §4321 et seq.).<sup>25</sup> After issuing a final EIS, a public review period begins during which the State Department receives comments from the public and local, state, tribal, and federal agencies. As it is implemented by the State Department, that public comment process is part of the process of making its national interest determination, not a requirement under NEPA.

On November 11, 2011, in response to public comments on the final route of the Keystone XL pipeline, the State Department announced its decision that certain environmental issues identified in the final EIS and further stressed in public comments led it to seek additional information about an alternative pipeline route before making its final national interest determination.<sup>26</sup>

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<sup>22</sup> 15 USC §717f(c).

<sup>23</sup> 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**.

<sup>24</sup> Executive Order 13337, at Section 1(g).

<sup>25</sup> 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. In processing the permit application for the Keystone XL Pipeline project, issues associated with NEPA compliance have drawn the most attention. In large part, that is likely because it is during the NEPA process that compliance with these, as well as any other environmental requirements, would be identified, documented, and demonstrated.

<sup>26</sup> U.S. Department of State press release, “Keystone XL Pipeline Project Review Process: Decision to Seek Additional (continued...)”

Background regarding NEPA requirements applicable to the State Department's obligation to identify and assess the potential environmental impacts of the proposed Keystone XL pipeline, as well as the effect that the identification of those impacts has had the process to make a national interest determination, are discussed below.

## Background and Overview of the NEPA Process for the Pipeline Project

Broadly, NEPA requires federal agencies to consider the environmental impacts of their actions before proceeding with them and to inform the public of those potential impacts. To ensure that environmental impacts are considered, an EIS must be prepared for major federal actions "significantly" affecting the environment.<sup>27</sup> With respect to the application submitted by TransCanada, the State Department concluded that issuance of a Presidential Permit for the proposed construction, connection, operation, and maintenance of the Keystone XL Pipeline and its associated facilities at the United States border would constitute a major federal action that may have a significant impact upon the environment within the meaning of NEPA.<sup>28</sup> For this reason, the State Department prepared an EIS to address reasonably foreseeable impacts from the proposed action and alternatives.

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.<sup>29</sup> Accordingly, the State Department EIS must review and consider the potential environmental impacts of the entire pipeline (including the construction, operation, and maintenance of the pipeline and its associated facilities), not just the facilities at the border crossing.

As the NEPA compliance process for TransCanada's permit application has proceeded, it is important 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 that process of identifying a proposed project's environmental impacts, as evidenced in environmental reviews, studies, or analyses included in the EIS, compliance obligations established under additional local, state, tribal and federal law would also be identified.

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(...continued)

Information," November 10, 2011, <http://www.state.gov/r/pa/prs/ps/2011/11/176964.htm>.

<sup>27</sup> 42 U.S.C. §4332(2)(C).

<sup>28</sup> U.S. Department of State, "Notice of Intent to Prepare an Environmental Impact Statement and to Conduct Scoping Meetings and Notice of Floodplain and Wetland Involvement and to Initiate Consultation under Section 106 of the National Historic Preservation Act for the Proposed TransCanada Keystone XL Pipeline," 74 *Federal Register* 5020, January 28, 2009.

<sup>29</sup> 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. §161.

## *The Draft Environmental Impact Statement*

NEPA regulations require preparation of a draft EIS that must be circulated for public and agency comment, followed by a final EIS that incorporates those comments.<sup>30</sup> Preparing the EIS is the responsibility of a designated “lead agency,” in this case, the State Department. In developing the EIS, the State Department must rely to some extent on information provided by TransCanada. For example, TransCanada’s permit application included an Environmental Report which was intended to provide the State Department with sufficient information to understand the scope of potential environmental impacts of the project.<sup>31</sup>

The EIS must also identify any state, tribal, or federal licenses, permits, or approvals applicable to the project in the United States.<sup>32</sup> Further, in preparing the draft EIS, the lead agency must request input from “cooperating agencies,” which include any agency with jurisdiction by law or with special expertise regarding any environmental impact associated with the project.<sup>33</sup> Cooperating agencies for the Keystone XL project are 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.

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.<sup>34</sup> 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” (EPA rating of environmental impacts is discussed in more detail, below).

The State Department released its draft EIS for the proposed Keystone XL Pipeline project for public comment on April 16, 2010.<sup>35</sup> The draft EIS identified TransCanada’s “preferred alternative” (**Figure 1**) for the project as well as other alternatives considered. On July 16, 2010, EPA rated the draft EIS “Inadequate.”<sup>36</sup> EPA found that potentially significant impacts were not

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<sup>30</sup> For more analysis of NEPA requirements, see CRS Report RL33152, *The National Environmental Policy Act (NEPA): Background and Implementation*, by Linda Luther.

<sup>31</sup> Documents submitted by TransCanada are available at <http://www.keystonepipeline-xl.state.gov/clientsite/keystonexl.nsf?Open>, under the heading “Project Documents.”

<sup>32</sup> Any consultation or approval necessary to comply with any additional requirements should occur concurrently and be integrated with preparation of the EIS.

<sup>33</sup> 40 C.F.R. §1508.5. Also, Executive Order 13337 directs the Secretary of State 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.

<sup>34</sup> 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>.

<sup>35</sup> Documents prepared by the U.S. Department of State related to its NEPA requirements are available online at <http://www.keystonepipeline-xl.state.gov/clientsite/keystonexl.nsf?Open>, under the heading “State Dept. Documents.”

<sup>36</sup> 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).

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.<sup>37</sup> 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.<sup>38</sup>

### ***The Supplemental Draft Environmental Impact Statement***

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 "Environmental Objections—Insufficient Information."<sup>39</sup> 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. 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<sup>th</sup> 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.

### ***The Final Environmental Impact Statement***

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

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<sup>37</sup> 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.

<sup>38</sup> 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](http://johanns.senate.gov/public/?a=Files.Serve&File_id=8b090aa5-76fe-41ca-a674-ae9e37db8d36).

<sup>39</sup> 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).

alternatives and an environmental analyses of potential impacts associated with those alternatives.<sup>40</sup>

Generally, after a federal agency issues a final EIS, EPA would be required to rate the environmental impacts of the project based on the findings in that EIS. The project may receive a rating of either “Lack of Objections,” “Environmental Concerns,” “Environmental Objections,” or “Environmentally Unsatisfactory.” The federal agency would then be required to respond to EPA’s rating, as appropriate. EPA did not rate or provide comments on the final EIS before the decision was made to change the pipeline’s proposed route through Nebraska. Given the State Department’s subsequent denial of the Keystone XL permit, EPA may not submit formal to the State Department on the final EIS.

### **The Role of Environmental Impacts on the 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. According to the State Department, the period involves a broader evaluation of the permit application that extends beyond the project’s environmental impacts, taking into account economic, energy security, foreign policy, and other relevant issues. That is, it takes into account the range of issues the State Department deems necessary to determine if the proposed project is in the national interest. As part of this process for the Keystone XL project, the State Department held public meetings in each of the six states through which the proposed pipeline would pass and in Washington, DC.<sup>41</sup> 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.<sup>42</sup> During the review period, the State Department received input from state, local, and tribal officials as well as members of the public.

Generally, after a final EIS is issued, a final project decision would be reflected in a “Record of Decision and National Interest Determination,” issued by the State Department. A Record of Decision (ROD) is issued pursuant to NEPA. It formalizes the selection of a project alternative. For Presidential Permit applications for pipeline projects, a ROD and national interest determination are usually issued as the same document.<sup>43</sup> However, after the public review period, the State Department issued a statement regarding the public comments and its response to those comments.<sup>44</sup> During the public review period, 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

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<sup>40</sup> Environmental analysis associated with pipeline project alternatives is provided in Volumes 1 and 2 of the final EIS, available on the U.S. Department of State’s Keystone XL Pipeline Project website at <http://www.keystonepipeline-xl.state.gov/clientsite/keystonexl.nsf?Open>.

<sup>41</sup> 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>.

<sup>42</sup> 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.

<sup>43</sup> 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>.

<sup>44</sup> U.S. Department of State, November 10, 2011.

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, discussed in more detail in the “Impacts to the Nebraska Sand Hills” section, below). Further, the Nebraska legislature was convening a special session to consider the legislation that would establish regulations applicable to pipeline siting within the state. 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 determined it would be necessary to examine alternative routes that would avoid this region in Nebraska.

The State Department’s decision to gather additional information regarding the alternative pipeline routes, after the final EIS was issued, illustrates the distinctly different, yet interrelated requirements applicable to the publication of a ROD and the national interest determination. Under NEPA, the State Department 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. The State Department’s decision to issue a Presidential Permit, however, dictates a particular outcome—that a Permit will not be granted unless it is determined that the project is in the national interest. While NEPA does not prohibit federal actions with adverse environmental impacts, a project’s adverse environmental impacts (as well as other factors) may lead the State Department to determine that it is not in the national interest.

### **The NEPA Process for a New Permit Application**

In the wake of the State Department’s denial of TransCanada’s Presidential Permit application (discussed below), it is anticipated that TransCanada will submit a new application for a Presidential Permit. If that occurs, the reapplication process would require a “new” NEPA process (i.e., preparation of a draft and final EIS). However, much of the analysis included in the August 26<sup>th</sup> final EIS could potentially form the bulk of the draft EIS, with the inclusion of analysis of environmental impacts associated with new pipeline routes through Nebraska or any additional information that may be relevant to a new proposal. The State Department, however, has declined to state that a new Keystone XL permit review would be expedited on this basis, although the department has stated that it does have guidelines to use information already available in a permit review.<sup>45</sup> Nebraska officials reportedly have stated that they could decide on a new pipeline route through the state by September 2012 at the earliest.<sup>46</sup>

Since EPA did not comment on the final EIS, it is unclear if the issues raised regarding the supplemental EIS were addressed to EPA’s satisfaction. However, if TransCanada reapplies for a pipeline permit and if EPA did have comments or concerns regarding the August 26<sup>th</sup> final EIS (apart from issues related to the previous pipeline route through Nebraska), early identification of those issues would be useful in expediting the NEPA process for the reapplication.

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<sup>45</sup> U.S. Department of State, January 18, 2012.

<sup>46</sup> Chad Woodworth, “Nebraska Says Keystone XL Review to Take Months,” *The Energy Daily*, January 26, 2012.

## **Delays and Deadlines in Keystone XL Permit Review**

Shortly after issuing its final EIS, the State Department indicated that it expected to reach a final decision on whether to grant the Keystone XL permit before the end of 2011. The North American-Made Energy Security Act (H.R. 1938), which passed the House on July 7, 2011, would have directed the President to expedite the State Department's permit review process, requiring a final decision to grant or deny the permit no later than November 1, 2011 (§3(c)). H.R. 1938 was motivated by the perception among some in Congress that the State Department was taking too long to review an energy infrastructure project critical to national security and economic growth.<sup>47</sup> Opponents of the bill argued that the project's unique and potentially unacceptable safety and environmental risks, as well as its uncertain impacts on fuel prices, required more time for analysis and evaluation.<sup>48</sup> The bill was not voted upon in the Senate, however, prior to the proposed November 1 deadline.

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 to issue a permit for the project within 60 days, unless the President publicly determined the project to be not in the national interest. Other legislative proposals, which were not enacted, similarly sought to expedite the permit decision. The Jobs Through Growth Act (H.R. 3400), which was introduced on November 10, 2011, would have required the President to issue a final order granting or denying the Presidential Permit for the Keystone XL pipeline within 30 days of enactment (§396(b)). Three subsequent bills, S. 1932, H.R. 3537, and H.R. 3630, would all have mandated that the Secretary of State issue a Keystone XL permit within 60 days of enactment, unless the President publicly determined the project to be not in the national interest. The three bills would have deemed the current final EIS adequate (concluding the federal environmental review process) but would have required the permit to recognize an alternative pipeline route approved in the future by Nebraska, while not delaying construction elsewhere. Because the State Department has already reached its decision regarding the Keystone XL project permit, these deadline proposals have become moot.

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.<sup>49</sup> 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.<sup>50</sup> 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."<sup>51</sup> On February 9, 2012, the IG released its findings, reporting that the

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<sup>47</sup> U.S. House of Representatives, Energy and Commerce Committee, "Committee Approves Legislation to Increase North American Energy Production and Create Jobs," press release, June 23, 2011.

<sup>48</sup> See, for example, Representative Henry A. Waxman, "Opening Statement before the Full Committee Markup on Semi-Annual Committee Activity Report and H.R. 1938, the North American-Made Energy Security Act," June 23, 2011.

<sup>49</sup> 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.

<sup>50</sup> See, for example, Elisabeth Rosenthal and Dan Frosch, "Pipeline Review is Faced With Question of Conflict," *New York Times*, October 7, 2011.

<sup>51</sup> 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/> (continued...)

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.<sup>52</sup>

## Denial of the Keystone XL Permit

On November 10, 2011, 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.<sup>53</sup> 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.<sup>54</sup>

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.”<sup>55</sup> In a prior press interview, President Obama also appeared to suggest that, 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.<sup>56</sup>

As noted earlier, the State Department, with the President’s consent, denied 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. 122-78] ... 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.”<sup>57</sup> 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.”<sup>58</sup>

In light of the State Department’s denial of the Keystone XL permit, some in Congress seek alternative means to support development of the pipeline. The North American Energy Access

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(...continued)

Special%20Review%20Keystone%20XL%20Pipeline%20Nov%2020112.pdf.

<sup>52</sup> 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.

<sup>53</sup> 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.

<sup>54</sup> The White House, Office of the Press Secretary, “Statement by the President on the State Department’s Keystone XL Pipeline Announcement,” November 10, 2011.

<sup>55</sup> U.S. Department of State, November 10, 2011.

<sup>56</sup> KETV NewsWatch 7, “Uncut: KETV’s Rob McCartney Interviews President Obama,” Omaha, NE, November 1, 2011, <http://www.ketv.com/video/29652519/detail.html>.

<sup>57</sup> U.S. Department of State, January 18, 2012.

<sup>58</sup> Ibid.



Act (H.R. 3548), rather than imposing a deadline on the State Department, would transfer the permitting authority over the Keystone XL pipeline 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. The Keystone For a Secure Tomorrow Act (H.R. 3811), S. 2041, and the Energizing America through Employment Act (H.R. 4000) would directly shift permitting authority to Congress, immediately approving the original permit application filed by TransCanada in 2008 upon enactment. (All four bills include provisions allowing for later alteration of the pipeline route in Nebraska subject to review and approval by the state.) S. 2100, would block the administration from tapping into the Strategic Petroleum Reserve until a Presidential Permit for the Keystone XL project is approved by the State Department.

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 the **Appendix**). In response to H.R. 3548, for example, the State Department's key official on Keystone XL testified before Congress that

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.<sup>59</sup>

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 does 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 in Nebraska, and is unclear about permits required from other federal agencies, among other concerns.<sup>60</sup> For additional analysis of associated legal issues, see CRS Report R42124, *Proposed Keystone XL Pipeline: Legal Issues*, by Adam Vann et al.

Given the State Department's permit denial, 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.<sup>61</sup> So the final EIS associated with the Keystone XL Pipeline may be 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 information regarding the State Department's authority to grant a Presidential Permit, see the **Appendix**.

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<sup>59</sup> 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.

<sup>60</sup> 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.

<sup>61</sup> 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)).

## State Siting and Environmental Approvals

As noted above, the federal government does not currently exercise siting authority over oil pipelines. Siting for the Keystone XL pipeline still must comply with any applicable state laws. These laws vary from state to state. South Dakota, for example, required TransCanada to apply for a permit for the Keystone XL pipeline from the state public utility commission, which issued the permit on April 25, 2010.<sup>62</sup> Montana requires a certificate from the state's Department of Environmental Quality.<sup>63</sup> At the time of TransCanada's 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 does include an "eminent domain" provision, which grants eminent domain authority to oil pipeline companies that are unable to obtain the necessary property rights from the relevant property owners.<sup>64</sup> Due to the controversy surrounding the Keystone XL project, Nebraska called a special session of its legislature to enact legislation to assert state authority over pipeline siting.<sup>65</sup> A number of additional approvals and permits required by the states along the proposed route are summarized in TransCanada's Presidential Permit application.<sup>66</sup>

## 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 diversity of the U.S. petroleum supply and economic benefits to the United States, including job creation. Environmental groups object to the project on the grounds that Canadian oil sands development has negative environmental impacts—particularly that development of oil sands releases more greenhouse gases than development of alternatives, like conventional oil or renewable fuels (discussed in greater detail below). Also, they argue that it promotes continued U.S. dependency on fossil fuels and affected communities along the route. Some members of the public are opposed to the selection of the proposed pipeline route. Opposition generally stems from concerns regarding potential impacts associated with the pipeline's construction and operation in communities along the proposed route—particularly potential impacts to land use (e.g., cattle grazing) and groundwater contamination in the event of a release. As mentioned above, concern that ultimately delayed the State Department's decision to make a national interest determination stemmed from concern regarding a segment of the route that crossed the Sand Hills region of Nebraska.

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<sup>62</sup> 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>.

<sup>63</sup> Montana Major Facility Siting Act, Title 75, Chapter 20.

<sup>64</sup> Nebraska Rev. Stat. §57-1101.

<sup>65</sup> Kevin O'Hanlon, "Governor Signs Two Bills Into Law," *Lincoln Journal Star*, November 23, 2011.

<sup>66</sup> TransCanada Keystone, L.P., *Keystone XL Project: Preliminary Environmental Report*, September 2008, Table 7, <http://www.keystonepipeline-xl.state.gov/clientsite/keystonexl.nsf/preliminaryenvironmentalreport.pdf?OpenFileResource>.

## **Impacts to the Nebraska Sand Hills**

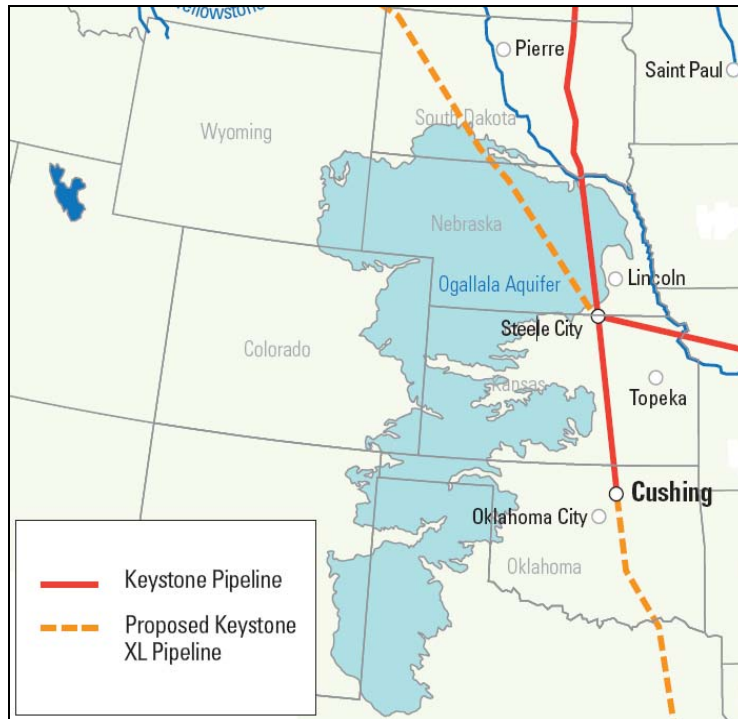
In the process of examining factors necessary to determine whether the Presidential Permit for the Keystone XL pipeline is in the national interest, the State Department decided that it needs to assess potential alternative pipeline routes that would avoid the Sand Hills region of Nebraska. Unique characteristics 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. Subsequently, TransCanada announced that it would work with the Nebraska Department of Environmental Quality to identify a potential pipeline route that would avoid the Nebraska Sand Hills.<sup>67</sup>

To understand the concerns associated with potential environmental impacts of the construction and operation of a pipeline that crosses 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.<sup>68</sup> 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.

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<sup>67</sup> TransCanada Corp., November 14, 2011.

<sup>68</sup> 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>.

**Figure 2. Keystone XL Pipeline Route Across the Ogallala Aquifer**

**Source:** Natural Resources Defense Council, *Say No to Tar Sands Pipeline*, November, 2010, p. 3.

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 aquifer systems in the world.<sup>69</sup> In the final EIS, the preferred pipeline route through Nebraska would be located entirely above the Ogallala Aquifer (**Figure 2**).

The highly porous soil of the Sand Hills make it a significant recharge zone in the northern region of the Ogallala Aquifer system. 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 U.S. for irrigation and agriculture.

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. Along the preferred route of the proposed pipeline, 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

<sup>69</sup> 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.

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.<sup>70</sup>

## 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 foreign crude oil supplies from Mexico and Venezuela, the two largest oil importers into the U.S. Gulf Coast.<sup>71</sup> Consistent with this argument, H.R. 3900 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.<sup>72</sup> 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 political unrest 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 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.<sup>73</sup> 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.<sup>74</sup>

## Canadian Oil Imports in the Overall U.S. Supply Context<sup>75</sup>

Gross U.S. imports of crude oil and petroleum products averaged 11.8 million barrels per day (Mbpd) in 2010.<sup>76</sup> Exports averaged 2.3 Mbpd, leaving net imports at 9.4 Mbpd.<sup>77</sup> U.S. net

<sup>70</sup> 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.

<sup>71</sup> TransCanada Keystone Pipeline, L.P., September 19, 2008, pp. 6-8.

<sup>72</sup> On February 7, 2012, the House Energy and Committee rejected an amendment to H.R. 3548 offered by Representative Edward Markey containing similar export restrictions.

<sup>73</sup> 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.

<sup>74</sup> For more about this, see CRS Report R41683, *Middle East and North Africa Unrest: Implications for Oil and Natural Gas Markets*, by Michael Ratner and Neelesh Nerurkar.

<sup>75</sup> 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>.

<sup>76</sup> All data in this section are from the U.S. Energy Information Administration's (EIA's) *Petroleum Navigator* ([http://www.eia.gov/dnav/pet/pet\\_move\\_impcus\\_a2\\_nus\\_ep00\\_im0\\_mbb1\\_m.htm](http://www.eia.gov/dnav/pet/pet_move_impcus_a2_nus_ep00_im0_mbb1_m.htm)) and *International Energy Statistics* (<http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm>).

imports declined each year between 2005 and 2010 as a result of lower total oil demand and higher domestic supply. Domestic demand has decreased by about 1.7 Mbpd versus 2005 levels due largely to the economic recession. Meanwhile, U.S. production of oil and oil alternatives (including crude oil, natural gas liquids, and biofuels) increased by 1.4 Mbpd between 2005 and 2010. As a result, net imports fell by roughly 3.1 Mbpd since 2005.<sup>78</sup> Some of this decline could be mitigated in the near term as oil demand recovers from the recession or if domestic supply were to fall. However, there is increasing consensus among forecasters that U.S. net oil imports have passed their high water mark already and may remain relatively flat in the long run.<sup>79</sup>

Among the largest sources of U.S. gross oil imports are Canada (2.5 Mbpd), the Persian Gulf (1.7 Mbpd), and Mexico (1.3 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 (**Figure 3**). All major Persian Gulf exporters are members of the Organization of the Petroleum Exporting Countries (OPEC), which cut production in 2009 to support oil prices. 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.<sup>80</sup>

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(...continued)

<sup>77</sup> For context, the United States consumes roughly 19 Mbpd, 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 Mb/d to Mexico.

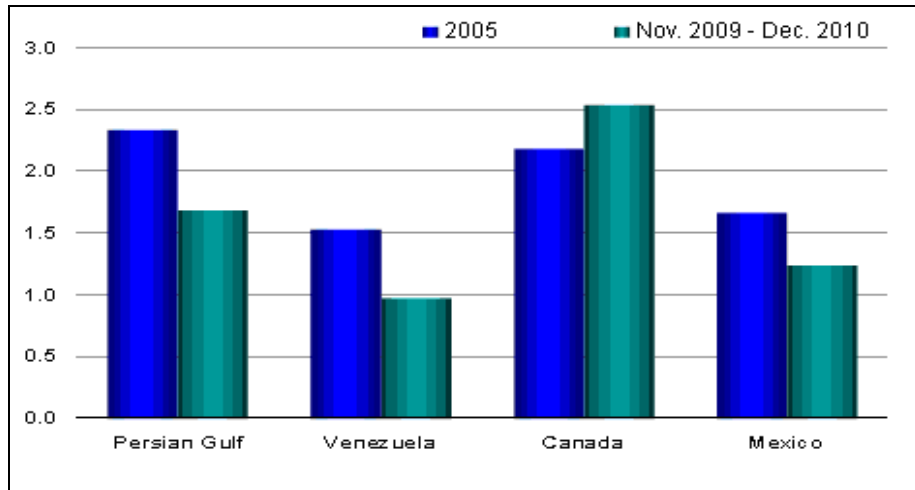
<sup>78</sup> These data are based on full year 2010 estimates provided by the EIA's *Short Term Energy Outlook* (STEO), <http://www.eia.doe.gov/emeu/steo/pub/contents.html>. The STEO provides a balance of U.S. supply and demand.

<sup>79</sup> For more analysis, see CRS Report R41765, *U.S. Oil Imports: Context and Considerations*, by Neelesh Nerurkar.

<sup>80</sup> U.S. Energy Information Administration, "Country Analysis Brief: Venezuela," February 2010, <http://www.eia.doe.gov/emeu/cabs/Venezuela/Oil.html>.

**Figure 3. U.S. Changes in U.S. Oil Imports, Selected Sources**

Gross imports from four sources, Mbpd



**Source:** U.S. Energy Information Administration, "Petroleum Navigator: U.S. Imports by Country of Origin," December 12, 2010, [http://www.eia.gov/dnav/pet/pet\\_move\\_impcus\\_a2\\_nus\\_ep00\\_im0\\_mbbld\\_m.htm](http://www.eia.gov/dnav/pet/pet_move_impcus_a2_nus_ep00_im0_mbbld_m.htm).

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, and nearly all Canadian energy exports go to U.S. consumers.<sup>81</sup> Canadian oil production has increased about 0.2 Mbpd since 2005, and exports to the United States increased by 0.4 Mbpd (**Figure 4**).<sup>82</sup> Canadian oil production is expected to grow by as much as 1.6 Mbpd between 2009 and 2025, mostly through increased output from the oil sands.<sup>83</sup>

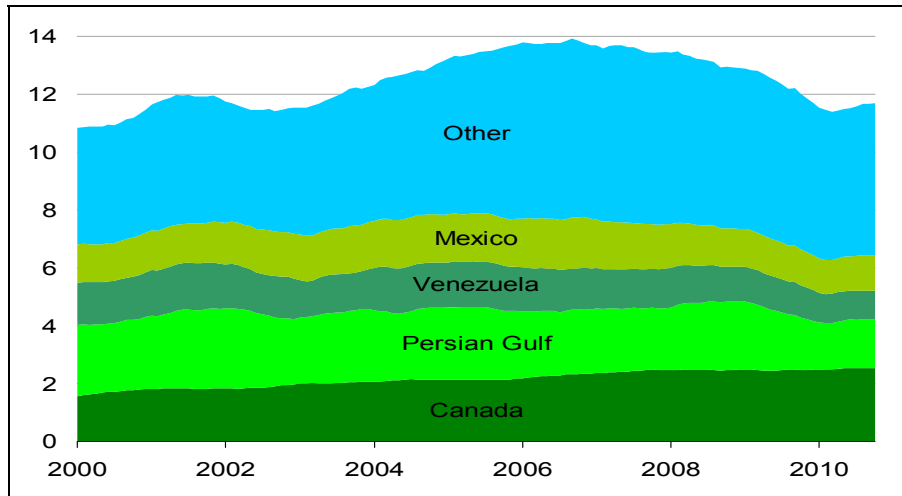
<sup>81</sup> For further analysis of U.S.-Canada energy trade, see CRS Report R41875, *The U.S.-Canada Energy Relationship: Joined at the Well*, by Paul W. Parfomak and Michael Ratner.

<sup>82</sup> 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.

<sup>83</sup> Canadian Association of Petroleum Producers (CAPP), *Crude Oil: Forecast, Markets, and Pipelines*, June 2010, p. 2, <http://www.capp.ca/getdoc.aspx?DocId=173003>.

**Figure 4. Gross U.S. Oil Imports**

Monthly imports in Mbpd on a 12-month moving average, Jan. 2000 to Oct. 2010



**Source:** U.S. Energy Information Administration, "Petroleum Navigator: U.S. Imports by Country of Origin," December 12, 2010. [http://www.eia.gov/dnav/pet/pet\\_move\\_impcus\\_a2\\_nus\\_ep00\\_im0\\_mbbldpd\\_m.htm](http://www.eia.gov/dnav/pet/pet_move_impcus_a2_nus_ep00_im0_mbbldpd_m.htm).

### Oil Sands, Keystone XL, and the U.S. Crude 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 that can be transported by pipeline. The bulk of oil sands supply growth is expected to be in the form of the latter.<sup>84</sup>

Most oil sands imports into the United States currently go to the Midwest, where some refineries are investing in complex refining capacity to process growing volumes of heavy Canadian crude.<sup>85</sup> The U.S. Gulf Coast region already has a large amount of complex refining capacity and is considered potentially well suited for processing Canadian heavy crude oil.<sup>86</sup> 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 they may still need to adjust processes and make new capital investments in equipment to accommodate particular crudes' characteristics,<sup>87</sup> especially if the new Canadian crudes will be used in large amounts.<sup>88</sup> There are 15 refineries within Keystone XL's proposed

<sup>84</sup> CAPP, 2010, p. 7.

<sup>85</sup> CAPP, 2010, p. 13. According to CAPP, refineries adding capacity to process heavy oil in the Midwest include those in Roxana, IL; Whiting, IN, and Detroit, MI.

<sup>86</sup> CAPP, 2010, p. 14.

<sup>87</sup> 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.pdf&fs=1497549](http://www.bakerhughes.com/assets/media/whitepapers/4c2a3c8ffa7e1c3c7400001d/file/28271-canadian_crudeoil_update_whitepaper_06-10.pdf.pdf&fs=1497549).

<sup>88</sup> For a description of which units refineries may need to add (or have added) to be able to process more Canadian oil (continued...)



delivery area in Texas that currently process heavy crude oil which is similar in composition to the oil that Keystone XL pipeline would carry.<sup>89</sup>

Oil production from the oil sands is increasing as is production from the Bakken and other areas of the U.S. Midwest.<sup>90</sup> Transport options to ship crude from the Midwest to the Gulf Coast are limited. (Traditionally, 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 prices. Midwestern refiners benefit from the lower cost of crude. This, however, does not translate to substantially lower gasoline or other products prices for consumers in the Midwest. The Midwest still brings in refined products from other regions which keeps refined products prices in line with national and international levels.<sup>91</sup>

Oil sands producers are interested in Keystone XL because it would expand their market reach into the Gulf Coast region. This would increase the number of refineries they could sell their crude to because Gulf Coast refineries have more upgrading capacity which is better suited to run heavy crude. Reaching a larger market and one with more upgrading capacity could increase the price these producers receive for their crude. Gulf Coast refiners are interested in the Keystone XL pipeline because it increases the supply of heavy sour crude in the Gulf 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.<sup>92</sup> 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.<sup>93</sup> 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 this increased supply of crude to the Gulf Coast may result in larger refined product exports rather than contributing to lower domestic fuel cost. Although the United States is a net importer of oil and oil products, it does export some refined products.<sup>94</sup> U.S. refined product

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sands supply, see Praveen Gunaseelan and Christopher Buehler, “Changing US Crude Imports Are Driving Refinery Upgrades,” *Oil and Gas Journal*, August 10, 2009.

<sup>89</sup> U.S. Department of State, April 15, 2011. p. 1-4.

<sup>90</sup> 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\\_crpdn\\_adc\\_mbbldpd\\_a.htm](http://www.eia.gov/dnav/pet/pet_crpdn_adc_mbbldpd_a.htm).

<sup>91</sup> Adjusted for transport costs and other regional differences.

<sup>92</sup> 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](http://www.beg.utexas.edu/energyecon/documents/overview_of_alberta_oil_sands.pdf).

<sup>93</sup> 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, Robert Pirog, and Molly F. Sherlock.

<sup>94</sup> For an explanation of why the United States exports refined products when it is a large (crude) oil importer, see CRS Report R40120, *U.S. Oil Exports*, by Robert Bamberger.

exports rose when domestic demand declined in the wake of the recession and as foreign demand for certain fuels, like diesel, has remained relatively robust. If Keystone XL secures growing oil sands output to flow into 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 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.

### ***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,<sup>95</sup> is now selling its share of Seaway to Enbridge. Enbridge and Seaway shareholder Enterprise Products Partners L.P. immediately announced that they would reverse 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. Pending regulatory approval, the line could operate in reversed service with an initial capacity of 150,000 barrels per day by second quarter 2012.<sup>96</sup>

Prior to the Seaway sale, Enbridge has reported it has significant commitments for two new pipeline projects, Flanagan South and Wrangler, that would carry oil from Illinois to Oklahoma and then from Oklahoma to Texas.<sup>97</sup> According to Enbridge, the project would duplicate existing routes and does not cross an international border, in which case it does not require a Presidential Permit. Enbridge already has cross border pipeline capacity connecting Alberta to Illinois. However, according to reports, Wrangler has been canceled in light of the Seaway purchase and reversal.<sup>98</sup> Like Keystone XL, these projects would also have facilitated increased flow of Canadian crude to the U.S. Gulf Coast.

### ***Canadian Oil to Alternative Markets***

In 2010, 98% of Canada's oil exports went to the United States, mostly through north-south pipelines. 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

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<sup>95</sup> 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](http://www.conocophillips.com/EN/newsroom/news_releases/2011news/Pages/07-14-2011.aspx).

<sup>96</sup> Enbridge, "Enbridge and Enterprise Agree to Reverse Seaway Crude Oil Pipeline From Cushing to U.S. Gulf Coast," press release, November 16, 2011, <http://www.enbridge.com/MediaCentre/News.aspx?yearTab=en2011&id=1530773>.

<sup>97</sup> Bradley Olson, "Enbridge Pursuing Alternative to Transcanada's Keystone XL," *Bloomberg*, November 9, 2011.

<sup>98</sup> Ben Lefebvre, "Enterprise Products Cancels Wrangler Pipeline," November 16, 2011.

shipped from Vancouver. Currently, about 90% of the crude shipped out by sea goes to California, with the remainder shipped to the U.S. Gulf Coast and Asia.<sup>99</sup>

There are proposals to increase the capacity for oil from Alberta to reach the Canadian west coast. Kinder Morgan is considering expanding the Trans Mountain Pipeline to 700,000 bpd, more than doubling its existing capacity, and expanding west coast shipping facilities. 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.<sup>100</sup> 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. Both proposals have received criticism from environmentalists. Because it would require construction of a completely new pipeline, Northern Gateway in particular has been criticized by some environmental and First Nations groups.<sup>101</sup>

If export capacity to the west coast is expanded it could increase the amount of Canadian crude oil going to non-U.S. markets. 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.<sup>102</sup> A study commissioned by the U.S. Department of Energy suggested that

if pipeline projects to the BC [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.<sup>103</sup>

## 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 recent 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.”<sup>104</sup> A 2009 report from the Canadian Energy

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<sup>99</sup> Lucretia Cardenas, “Kinder Morgan Says Eyes Fall Open Season For Trans Mountain Pipeline Expansion,” *Platts*, March 24, 2011.

<sup>100</sup> 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.

<sup>101</sup> Derrick Penner, “Opposition to Enbridge Northern Gateway pipeline grows,” *Vancouver Sun*, December 2, 2010.

<sup>102</sup> Edward Welsch, “TransCanada: Oil Sands Exports Will Go to Asia if Blocked in U.S.,” Dow Jones Newswires, June 30, 2010.

<sup>103</sup> 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.

<sup>104</sup> 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...)

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 US 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.<sup>105</sup>

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.<sup>106</sup> 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.

## Canadian Oil Sands Environmental Impacts

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.<sup>107</sup> Because bitumen in oil sands cannot be pumped from a conventional well, it must be mined, usually using strip mining or open pit techniques, or the oil can be extracted with underground heating methods.<sup>108</sup> Large amounts of water and natural gas are also required (for heating) during the extraction process.<sup>109</sup> 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.<sup>110</sup> 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 production can be diverted to other

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

<sup>105</sup> Canadian Energy Research Institute, *The Impacts of Canadian Oil Sands Development on the United States' Economy, Final Report*, Calgary, Alberta, October 2009, p. vii.

<sup>106</sup> See, for example, 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, [http://www.dirtyoilsands.org/files/Keystone\\_XL\\_Jobs\\_11-09-10.pdf](http://www.dirtyoilsands.org/files/Keystone_XL_Jobs_11-09-10.pdf).

<sup>107</sup> 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.

<sup>108</sup> U.S. Bureau of Land Management, "About Tar Sands," web page, January 11, 2011, <http://ostseis.anl.gov/guide/tarsands/index.cfm>.

<sup>109</sup> Cecilia Jamasmie, "The Challenges and Potential of Canada's Oil Sands," *Mining*, September-October 2010, pp. 7-8.

<sup>110</sup> 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.

markets (e.g., Asia), preventing the Keystone XL project may not necessarily limit oil sands development.<sup>111</sup>

## Fossil Fuels Dependence and Greenhouse Gas Emissions

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.<sup>112</sup> 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.”<sup>113</sup> 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 recommends 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.<sup>114</sup> 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.<sup>115</sup>

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<sup>111</sup> 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.

<sup>112</sup> 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.

<sup>113</sup> See footnote 37.

<sup>114</sup> See EPA letter referenced in footnote 36, p. 7.

<sup>115</sup> EnSys Energy & Systems 2010, p. 116.

## Appendix. Presidential Permitting Authority<sup>116</sup>

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.<sup>117</sup> 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.<sup>118</sup> 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.”<sup>119</sup> 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.<sup>120</sup> 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.<sup>121</sup> 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.<sup>122</sup>

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).<sup>123</sup> The court stated that the authority to regulate the cross-border pipeline lies with either Congress or the President.<sup>124</sup> 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.”<sup>125</sup> The

<sup>116</sup> For a more expansive treatment of this topic, see CRS Report R42124, *Proposed Keystone XL Pipeline: Legal Issues*, by Adam Vann et al.

<sup>117</sup> *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.

<sup>118</sup> *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.

<sup>119</sup> *Ibid.*

<sup>120</sup> 659 F. Supp. 2d 1071, 1078 (D. S.D. 2009).

<sup>121</sup> *Ibid.* at 1078.

<sup>122</sup> *Ibid.* at 1078, 1078 n.5.

<sup>123</sup> See *ibid.* at 1080-81.

<sup>124</sup> *Ibid.* at 1081.

<sup>125</sup> *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.<sup>126</sup>

In *Sierra Club v. Clinton*,<sup>127</sup> the plaintiff Sierra Club challenged the Secretary of State'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).<sup>128</sup> 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."<sup>129</sup> 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.<sup>130</sup> 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."<sup>131</sup> 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.

## Author Contact Information

Paul W. Parfomak  
Specialist in Energy and Infrastructure Policy  
pparfomak@crs.loc.gov, 7-0030

Neelesh Nerurkar  
Specialist in Energy Policy  
nnerurkar@crs.loc.gov, 7-2873

Linda Luther  
Analyst in Environmental Policy  
lluther@crs.loc.gov, 7-6852

Adam Vann  
Legislative Attorney  
avann@crs.loc.gov, 7-6978

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<sup>126</sup> Ibid. at 1082.

<sup>127</sup> 689 F.Supp.2d 1147 (D. Minn. 2010).

<sup>128</sup> Ibid. at 1162.

<sup>129</sup> Ibid.

<sup>130</sup> 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.

<sup>131</sup> 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).

## **Acknowledgments**

The authors would like to acknowledge the contributions of Kristina Alexander and Vanessa Burrows to the content of this report.