



## Department of Energy

Washington, DC 20585

July 2, 2010

Ms. Elizabeth Orlando  
Keystone XL Project Manager  
Office of Environmental Policy: OES/ENV  
Bureau of Oceans and International Environment  
and Scientific Affairs  
U.S. Department of State  
2201 C Street, NW, Room 2657  
Washington, DC 20520-7818

Dear Ms. Orlando:

Enclosed please find comments from the U.S. Department of Energy (DOE) on the Draft Environmental Impact Statement for the Keystone XL Oil Pipeline Project. These comments reflect input from DOE's Office of Policy and International Affairs and DOE's Western Area Power Administration (Western), which is a cooperating agency on this EIS.

The comments from DOE's Office of Policy and International Affairs are focused on the sections outlining the need for the proposed project (Section 1.2.2.), the discussion of the No Action Alternative (Sections 4.1.2-4.1.4), and the delivery of oil (Section 3.14.3.14). The comments regarding Western are focused on text describing the project's connected actions, in particular those that are directly related to Western's actions and involvement.

If you have any questions, please feel free to contact me at 202-586-4600.

Sincerely,

A handwritten signature in blue ink that reads "Carol Borgstrom".

Carol Borgstrom  
Director  
Office of NEPA Policy and Compliance

Enclosure



## Department of Energy (DOE) Comments

### Prepared by DOE's Office of Policy and International Affairs on the Draft Environmental Impact Statement for the Keystone XL Pipeline

#### 1.2.2.1. Overview of the Crude Oil Market

The Draft EIS cites two Energy Information Administration (EIA) outlook reports (2009 Annual Energy Outlook and 2009 International Energy Outlook) as points of reference to support the conclusion that “there is general consensus that the volume of crude oil consumed worldwide, as well as the volume consumed domestically, is unlikely to decrease substantially over the next 30 years” (page 1-4).

The Draft EIS refers to the EIA Annual Energy Outlook as a forecast, which would indicate that the underlying analysis assesses likely futures. Outlooks produced by EIA are not forecasts and do not imply a probabilistic assessment of the future. Instead, the Reference case cited in the Draft EIS reflects a projection of what might happen given known technology and technological and demographic trends persisting over a long-term time horizon under current laws and regulations. Uncertainties regarding policy changes may be less important for the future of oil use and oil prices than uncertainties related to economic growth rates and access to petroleum resources.

The Draft EIS statement above suggests that the EIA reports extend to 2040. However, both the Annual Energy Outlook cited and the International Energy Outlook cited extend to 2030. Please change the EIS accordingly.

#### 1.2.2.2 Supply of Heavy Crude Oil from the WCSB

- A. Please see comments above for 1.2.2.1
- B. Sections 1.2.2.1 cites the 2009 Annual Energy Outlook. The 2010 Annual Energy Outlook is now available as an updated data source and point of reference for the Final EIS.

#### 1.2.2.3 Demand for Heavy Crude Oil in PADD III

- A. The Draft EIS includes several statements (including pages 1-6 and 1-8) that delivery of Western Canadian Sedimentary Basin (WCSB) crude oil to refineries in Petroleum Administration for Defense District (PADD) III would “put downward pressure on PADD III crude oil prices.” Please include a reference to an analysis that describes the effect and the potential scale of impact achieved by delivering 500,000 barrels per day of heavy crude to replace 500,000 barrels per day of heavy crude from a different source of supply.
- B. The Draft EIS cites a Council on Foreign Relations (CFR) article (page 1-6) as the source of a statement that exports of crude oil from Venezuela to the U.S. as a portion of Venezuela's total output have decreased. Venezuelan total oil production and total U.S. oil imports from Venezuela are shown in the table below, provided by EIA. US imports from Venezuela, which were over 50 percent of Venezuela's production in 2004 and 2005, fell to about 40 percent of

that country's production in 2008 and 2009. Consider whether you want to add this information to the EIS.

	2004	2005	2006	2007	2008	2009
Venezuelan Production	2,855	2,867	2,803	2,667	2,640	2,472
U.S. Imports from Venezuela	1,554	1,529	1,419	1,361	1,189	1,078

- C. The CFR article referenced also cites a U.S. Government Accountability Office report that says Venezuela's exports of crude oil to the U.S. have been relatively stable with the exception of the strike period. Please take into account the data provided in the above comment when considering the analysis in the GAO report. The GAO report says the sudden loss of Venezuelan oil in the world market would raise world oil prices. If this impact would occur whether or not the U.S. took physical delivery of crude oil from Venezuela, please so state in the EIS.

#### 1.2.2.4 Transport of Crude Oil from the WCSB to PADD III

- A. The Draft EIS states that (a) the Enbridge Pipeline System and the Kinder Morgan Express Project have a combined capacity of approximately 2.1 million bpd to deliver crude oil from Canada to the U.S. and (b) the pipelines are operating at or around 100 percent capacity (page 1-7). However, earlier, in Section 1.2.2.2, there is a statement that, "In 2008, Canada was... shipping approximately 1.7 million bpd from western Canada to the U.S." Please clarify.
- B. The Enbridge Pipeline and the Kinder Morgan Express pipelines address delivery of 1.323 million bpd of heavy crude to the U.S. (63% of 2.1 million bpd) (page 1-7). However, in section 1.2.2.2 on the supply of heavy crude, the same source is credited with a statistic that indicates total projected heavy crude production in the WCSB was less than 0.9 million bpd in 2008. Please clarify.

#### 1.2.2.5 Future Scenarios

##### Outlook without the Proposed Project

- A. For your use in EIS revision, EIA publishes high and low oil price cases in addition to the Reference case. However, the Reference case prices from EIA, as well as the quite similar reference case prices from the International Energy Agency, are often used as the starting point for policy analyses.
- B. Please provide support for the following statements (page 1-8) , which are also repeated in other parts of the Draft EIS:

"Without the proposed Project, the limited availability of Canadian crude oil in PADD III would tend to put *upward pressure on (1) the price of crude oil shipped from Canada and other sources into PADD III, and (2) the prices of refined products shipped out of PADD III.*"

"In addition, constrained access to this large source of oil would tend to *increase price volatility* and reliance on oil from countries with declining or uncertain production horizons as

well as from countries with potential political instabilities or concerns relative to trade relations with the U.S.”

### **Outlook with the Proposed Project**

- A. With the addition of the Alberta Clipper pipeline and the Keystone pipeline, available pipeline capacity for delivery of crude oil from Alberta to the U.S. exceeds available production now and will continue to do so for some years. Therefore, it seems that delivering oil from Alberta to 15 refineries in PADD III may have a direct impact on the volume of crude oil available for delivery to other refineries currently taking WCSB crude oil. The 15 refineries in PADD III may have more options available for oil procurement and delivery than the other refineries, particularly those in other PADDs that would otherwise receive delivery of WCSB oil.

The Draft EIS discusses in Section 1.2.2.5 some plausible alternatives for sources of supply to PADD III in the no project case. The EIS should also discuss the possibility that the project, if completed and operating at full capacity as contemplated in the EIS, would result in a near-term need to find additional sources of supply to offset the decline in delivery of oil to PADD IV and possibly PADD II as well.

- B. The Draft EIS suggests that drawing on 500,000 bpd of heavy crude oil to replace the same amount of heavy crude being imported in PADD III would have the effect of “decreasing price volatility” (page 1-8). Please provide support for this conclusion in the EIS.

### **4.1.2 PADD III Crude Oil Supplies Under the No Action Alternative**

When the world experienced an oil price shock in 2008, Canada sold crude oil to the U.S. at a price linked to the global market price, not at below market rates. The Draft EIS includes a statement (page 4-3) that would lead to a different expectation:

“Oil shocks arise through unstable crude oil supplies and would be more likely to occur under the No Action Alternative, as compared to the proposed Project, since crude oil supplies would continue to be sought from unstable foreign sources in the near term.”

Oil price shocks can arise when the margins between supply and demand are tight, even if supply is stable. In the case of a manipulation of supply to create price shock conditions, the Keystone XL pipeline would not eliminate the instruments that market participants may use to exercise market power. The Keystone XL pipeline would also not eliminate U.S. demand in the international market or its exposure to price shocks propagating through that market, which affect the prices charged for supply by producers in Alberta as well. Therefore, this statement needs further examination.

#### 4.1.3 Potential WCSB Markets Under the No Action Alternative and 4.1.4 Summary

- A. Section 1.2.2.4 notes that crude oil producers in Canada have access to two significant existing pipelines to deliver WCSB oil to the U.S. In addition, the recently approved Alberta Clipper and Keystone pipelines will ensure that there is enough pipeline capacity for the delivery of crude oil from Canada into the U.S. for some years.

Recognizing that Canadian producers have four pipelines available for exporting WCSB crude oil to the U.S., it would be helpful to clarify or qualify the following two statements (page 4-4):

1. "Under the No Action Alternative, crude oil from the WCSB would not have a ready conduit for export to available refineries and markets in the U.S."
  2. "Under the No Action Alternative, the U.S. would not receive a reliable and cost efficient source of crude oil from the WCSB region and would remain dependent upon unstable foreign oil supplies from the Mideast, Africa, Mexico, and South America."
- B. Some producers (or their investors) may seek access to Asian markets regardless of whether the U.S. issues a Presidential Permit for the Keystone XL pipeline. With different investors and stakeholders supporting each project, it seems that issuance of a Presidential Permit for the Keystone XL pipeline will not foreclose an option others may be pursuing to establish a pipeline to the West Coast. That is, it appears that these two pipelines are not mutually exclusive.
1. It would be helpful to clarify the following statement (page 4-4) that suggests a direct trade-off between the pipelines: "Producers in Canada have indicated that if the U.S. market is not available to them, much of the crude would be shipped outside of North America, particularly to Japan, China, and India..."
  2. What is the scale of the primary proposed pipeline to the West Coast compared to the Keystone XL pipeline?

#### 3.14.3.14 Air Quality, Greenhouse Gases, and Climate Change

- A. The Draft EIS suggests (page 3.14-29) that "...deliveries of oil via the Project could theoretically either replace dwindling oil processed at these refineries, supplant existing supplies that are less stable or more costly, increase the total volume of oil processed, or result in a combination of these scenarios." It would be helpful to clarify this option set in a prominent part of the EIS. Presently, the Draft EIS frames some information in the context of one possible outcome and then another.
- B. The EIS states in separate parts of the EIS that TransCanada has reported a successful open season for securing binding commitments to ship oil and that no refinery has yet signed a commitment to take delivery. It would be informative to present these two points together in the EIS.

## Regarding the Western Area Power Administration Text in the Keystone XL Draft EIS

Below are DOE's comments on the text related to the Western Area Power Administration in the Draft EIS. The edits and revisions below will clarify Western's actions and involvement.

1. **70-mile or 80-mile line.** The Draft EIS refers to the proposed 230-kV transmission line as 80 miles-long on page ES-3 and 70 miles-long on page 1-3. Please revise as appropriate to be consistent.
2. **Presentation of the connected actions.**

Page ES-3, ES.2.2, Connected Actions. Change the sentence that says:

“Additionally, Western has determined that due to load forecasts associated with proposed pump stations in South Dakota, a new 230-kV transmission line would need to be added to the existing electrical grid system; as a result Western has proposed construction and operation of the 80-mile-long Lower Brule to Witten transmission line.”

to

“Additionally, Western has determined that due to load forecasts associated with proposed pump stations in South Dakota, a new 230-kV transmission line would need to be added to the existing electrical grid system; as a result Western has identified the need for the new 230-kV Lower Brule to Witten transmission line and Basin Electric Power Cooperative has proposed construction and operation of that line. Also, Western has proposed construction and operation of a 2.1-mile double circuit 230-kv transmission line from Big Bend to Lower Brule and construction of the proposed Lower Brule substation.”

Also, in Section 1.1, page 1-3 – Please revise the sentence that begins “Additionally, the Western Area Power Administration” to “Additionally, the Western Area Power Administration (Western) has determined that due to load forecasts associated with the proposed pump stations in South Dakota, a new 230-kV transmission line approximately 70 miles long (proposed Lower Brule to Witten transmission line) and a 2.1-mile double circuit 230-kV transmission line (proposed Big Bend to Lower Brule transmission line) would need to be added to the existing electrical grid system. Further, to address this requirement, Western proposes construction of a new substation (tentatively named Lower Brule Substation).”

3. **Future NEPA.** The EIS is inconsistent with regard to what additional NEPA will be required, as page ES-3 refers to “an additional and separate NEPA environmental assessment” and page 2-5 says “an additional and separate NEPA environmental review” (different than EA indicated on page ES-3). The EIS should be consistent with regard to future NEPA for the line, rather than suggesting an EA in one chapter and referring to environmental review more generally in another chapter.

On page ES-3, last sentence of ES.2.2 text, change:

“An additional and separate NEPA environmental assessment of the alternatives for the proposed transmission line will be conducted in the future”

to

“An additional and separate NEPA environmental review of the alternatives for the proposed transmission line will be conducted in the future.”

4. **Description of Western Area Power Administration.** Section 1.3.2.9., page 1-12, second paragraph. Please change the sentence that says “Western is the network balancing authority” to “Western is the network balancing authority and as such is required to perform joint system engineering studies to determine the effects that additional facilities or services might have on system reliability and stability.”
5. **Western’s involvement with proposing alternative routes and corridors for the 230-kv transmission line.** The EIS describes two proposed corridors and nine alternative route options for the 230-kV transmission line. In describing the corridors and alternative route options, the text implies that Western is directly involved. All of the EIS text and tables/figures explain that Western has proposed one of the particular alternative route options under Corridor A. One route is labeled Western in figures - see page 2-54; page 3.4-16 – Table 3.4.5-3; page 3.5-43; Figure 4.4-1; and page 4-22 and 4-23, etc.) (There is no indication that an agency other than Western is responsible for this line, e.g., no mention of RUS involvement.)

Page 4-22 says “Western and BEPC developed alternative corridors and alternative routes within those corridors for the project. Those alternatives are described below.

Initially, a 6-mile-wide corridor, Alternative Corridor A, was identified by Western for the Lower Brule to Witten transmission line between an existing substation on the transmission grid and a proposed new substation at Lower Brule. BEPC and Western then identified five preliminary alternative routes for the transmission line within Corridor A (Figure 4.4-1); the five alternatives are the Western Alternative and Alternatives BEPC-A through BEPC-D.”

To clarify that Western is no longer involved with the proposed 70-mile 230-kV transmission line, we suggest that the EIS language re: the “Western Alternative” be revised throughout the EIS. Specifically, we believe that this name could be misleading to the reader and that for clarity, this original preliminary route Western developed should be re-named something other than the “Western Corridor” in the Final EIS -- perhaps called the “Original Proposed Corridor” or “Corridor No. A-1.” Accordingly, the name of this corridor should be changed throughout the document.

6. **Unsubstantiated statements of negligible impacts for connected actions -- the 2.1-mile transmission line and the Lower Brule substation (Western’s actions) and the 230-kV transmission line.** In Section 3, for most of the resource areas the EIS says “The

construction and operation of electrical distribution lines and substations associated with the proposed pump stations, and the Lower Brule to Witten 230-kV electrical transmission line would have negligible effects on [INSERT RESOURCE]” without any explanation or justification for the statement.

7. **EIS does not indicate the presence or absence of floodplains or wetlands for the proposed 2.1-mile transmission line and Lower Brule substation (Western’s actions) (consideration of 10 CFR 1022 isn’t mentioned in the Draft EIS).** See Section 3.3.1.3, Floodplains, and Section 3.3.3, Connected Actions. DOE needs to comply with 10 CFR 1022. Thus, the EIS must mention Western's obligations under 10 CFR 1022 and, if there are floodplains or wetlands in the area, Western may need to prepare a floodplains and wetlands statement. In addition, if the Keystone XL EIS is not the site/project-specific review that Western needs for the line and substation, then the EIS could acknowledge what is known about floodplain and wetland occurrence in the project areas and say that 10 CFR 1022 will be fully addressed in the subsequent NEPA review.
8. **Editorial.** Page 4-22 change Western Area Power Authority to Western Area Power Administration.