

Tech Talk - Pipelines in and from Canada

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Topic: Supply/Production

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If one looks at the countries that are major importers of oil into the United States, Canada currently easily tops the list, exporting 2.085 mbd of crude (2.524 mbd of total petroleum products) for example in June. Interestingly Saudi Arabia was in second place at 1.164 mbd and Mexico had fallen to third place at 1.108 mbd. In light of the countries that used to occupy places on earlier lists and no longer do, it is worth noting that places such as Chad and the Congo are now on the list.

Crude Oil Imports (Top 15 Countries) (Thousand Barrels per Day)

Country	Jun-11	May-11	YTD 2011	Jun-10	YTD 2010
CANADA	2,085	2,006	2,110	2,174	1,969
SAUDI ARABIA	1,164	1,197	1,129	1,120	1,076
MEXICO	1,108	1,154	1,108	1,076	1,121
VENEZUELA	1,012	895	933	850	906
NIGERIA	813	808	871	1,064	994
IRAQ	559	407	435	630	508
ANGOLA	373	356	319	425	411
RUSSIA	335	339	248	416	277
COLOMBIA	272	414	334	387	320
BRAZIL	269	260	222	307	281
KUWAIT	238	200	158	217	204
ECUADOR	219	134	175	245	200
ALGERIA	110	263	229	375	323
CHAD	87	55	53	0	8
CONGO (BRAZZAVILLE)	77	59	65	34	81

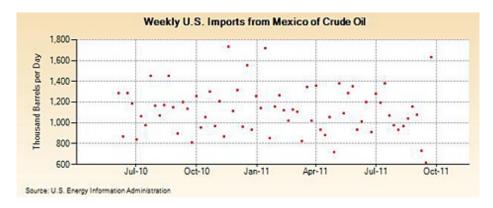
Top 15 countries sending crude oil to the United States in June (EIA)

Since that summary review, Canada has gone on to post some of the highest volumes of the recent past:



Weekly imports of crude from Canada into the United States (EIA)

This increase has occurred as the amount imported from Mexico has seen some of its lowest numbers.



Weekly imports from Mexico into the United States (*EIA*)

The numbers suggest a growing importance for that oil coming from the North. It was interesting, for example, to note that in the <u>recent report</u> reviewing available United States oil and natural gas authored by the National Petroleum Council, (which I <u>discussed earlier</u>) and which had Daniel Yergin as Vice Chair, that Canadian oil has begun to get counted with that of the United States in the more generic classification of North America, thereby acting as an anticipated aid in solving some of the "domestic" supply problems in the near future. Following that report, Dr Yergin wrote <u>an article in the WSJ</u> denouncing the idea of peak oil. <u>Euan Mearns</u> has provided his usual detailed and well-argued rebuttal to this (as does this entire series), so I will not go into that further at this point.

I <u>briefly looked</u> at Canada when I was writing the earlier summary posts on the top 30 producers in the world. Looking at the reported and projected <u>production for this year</u>, production is anticipated to steadily climb once the summer months have passed.

Reported and Estimated 2011 Canadian Crude Production



Production of Crude Oil and Equivalent in Canada in 2011 (Canadian National Energy Board)

The increase reflects a steady increase in the component from Western Canada, which started the year at 91% of the total, but is anticipated to reach 93% by the end, largely on the basis of an increase in production from the bitumen of the oil sands.

In passing it should be noted that not all the oil that will come from Canada necessarily started there, since, for example, there is currently a move to lay a pipe that would carry oil from the Bakken formation in North Dakota and Montana through Saskatchewan to the Enbridge terminal in Manitoba, and thence to refineries in the United States. Furthermore, not all future Canadian oil exports can be assumed to come to the United States. Two pipelines also being proposed are to run the 727 miles from Bruderheim, Alberta to Kitimat in British Columbia. The first of these would carry an average of 525 kbd west, while the second would transport back some 193 kbd of condensate, which would help to thin the crude going through the larger pipeline. Not surprisingly this \$6.6 billion project is getting considerable support from China.

Not that this would be a totally new investment by China in Canadian oil:

Earlier this year, for example, five companies signed up for so-called firm service, or guaranteed access, to a portion of the Trans Mountain pipeline, which carries oil from Edmonton to a port at Burnaby, B.C. Among them is PetroChina International (America) Inc., a subsidiary of Chinese energy giant China National Petroleum Corp.

The investment is not just in the pipelines to get the crude to China, there has also been a growth of <u>Chinese acquisitions</u> of shares in the companies extracting the oil. Recognizing that, in contrast with many exploratory operations, the presence of the oil in Alberta is much more certain, the risks of investment are reduced and a return, or in this case the oil itself is a much more certain outcome. As a result there are now more Asian companies entering the oil sand business.

It is not unwelcome news in Canada. Bear in mind that at present 99% of Canadian oil exports go the United States, and as the President of the Enbridge Northern Gateway <u>noted recently</u>:

I challenge any of you to name one other country in the world that only has one market

for its largest export. Right now our most valuable resource is landlocked in North America and isolated from the world market. That means it is often isolated from world price. The August spread between West Texas Intermediate and Brent Crude, the world price, was \$22 per barrel. Canadian heavy crude has more often than not sold at a discount to U.S. light crude that goes well beyond the quality differential – simply because of lack of market.

In perhaps the same way as they acted to provide a second market for the <u>natural gas of Turkmenistan</u> (other than Russia), thereby allowing the Turkmen to be able to sustain higher prices; now they can to some eyes be seen as riding to the rescue of Canadian prices.

And then there is the controversial Keystone XL pipeline set to run from Alberta down to Houston and refineries south, and which is generating some <u>high-level opposition</u>.



Planned route for the <u>Keystone pipeline</u>

There are some current indications that the State Department will approve the pipeline, permission needed since it crosses an international border. It may not hurt those chances that the chief lobbyist for TransCanada was, apparently, the deputy manager of Secretary Clinton's 2008 campaign. The latest step by the opposing forces has been to challenge the permit that TransCanada has to carry out construction on the Canadian side. Apparently the delays that are holding up the start of construction of the 700 kbd pipeline have carried the project beyond the year during which TransCanada had permission to start construction, without such construction beginning. On the other hand, TransCanada is pointing to preparations for river crossings and the laying of foundations for oil storage tanks as evidence of such construction.

It is expected that with this increased demand, production from the oil sands will double by 2020. This expansion is not without demands of its own, since the use of natural gas in the mining process (see earlier posts) will lead to an increase in demand from 1.1 bcf to 3.0 bcf to help in that

production gain. And so I will take another glance at the plans for the oil sands in the next post in this series.

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