CRUDE-BY-RAIL IN NORTH AMERICA

Lorne Stockman – Research Director

www.priceofoil.org
Crude-by-Rail: Resource Hub

Big Oil is working to extract every last drop of oil on the continent — regardless of the cost to our communities or climate. To succeed, they need ways to transport their explosive fuels, which is why they’re pushing new pipelines and increased crude-by-rail simultaneously. But recent pipeline spills and train accidents show that neither is safe. That’s why we’ve developed the materials on this page to help push back against the industry’s dangerous expansion.

Crude-by-Rail: Interactive Map

Reports and Resources:

- Report: Wrong Side of the Tracks: Why Rail is not the Answer to the Tar Sands Market Access Problem (Sept. 2014)
- Fact Sheet: CBR Proposed Rule Fact Sheet (Sept. 2014)
- Data: Map Data Download (Updated: Dec. 2014)

Articles:

- Article: Transporting Tar Sands “As Dangerous” As Shale Oil (March 2015)
- Article: Tar Sands Train to Ruin (October 2014)
- Article: The tar sands train that couldn’t (October 2014)
- Article: Tar sands reaching the US Gulf Coast by rail remains a dribble (June 2014)
- Article: Pipelines vs. Rail: A False Choice (May 2014)

Take Action:

First step: there are more than a million barrels of oil per day crossing the continent by rail, and if...
US CRUDE-BY-RAIL AND BAKKEN GO HAND IN HAND

Dec. 2009. EOG loads 1st Unit Train in Stanley, ND.
HOW MANY TRAINS?

• Currently: one million bpd = ~135 crude oil trains of 100 cars = ~9 million barrels of oil moving thru N. America at any given time

• If all capacity was used: 5 million BPD = ~675 trains with 100 cars each = ~45 million barrels of oil
## TERMINAL CAPEX IS LOW TO REALLY LOW

### Unit Train vs Manifest Models

<table>
<thead>
<tr>
<th></th>
<th>Unit Train</th>
<th>Manifest</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capital Costs</strong></td>
<td>$42M to $125M</td>
<td>$1M to $5M</td>
</tr>
<tr>
<td><strong>Speed to Market</strong></td>
<td>12 - 18 Months</td>
<td>1 to 2 Months</td>
</tr>
<tr>
<td><strong>Geographical</strong></td>
<td>Requires rail and 150+ Acres</td>
<td>More rail options less land</td>
</tr>
<tr>
<td><strong>Shipping Costs</strong></td>
<td></td>
<td>25 to 40% higher than unit train</td>
</tr>
<tr>
<td><strong>Shipping Time</strong></td>
<td>Unit trains have priority ND to USGC is 5 days</td>
<td>Manifest cars have increased transit time over Unit trains</td>
</tr>
<tr>
<td><strong>Destination Flexibility</strong></td>
<td>Destinations must be able to receive unit trains</td>
<td>Many more facilities able to receive manifest loads</td>
</tr>
<tr>
<td><strong>Operational Efficiency</strong></td>
<td>Many advantages over Manifest</td>
<td>Very labor intensive</td>
</tr>
</tbody>
</table>
Bakken Oil Express, LLC
Dickinson, North Dakota
# SHIPPER COSTS

<table>
<thead>
<tr>
<th>Pipeline Costs Stages</th>
<th>Rail Costs Stages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gathering to mainline</td>
<td>Gathering to terminal</td>
</tr>
<tr>
<td>Line Fill</td>
<td>Loading</td>
</tr>
<tr>
<td><strong>Main Tariff</strong></td>
<td>Rail Freight</td>
</tr>
<tr>
<td>Local Distribution</td>
<td>Tank Car Lease</td>
</tr>
<tr>
<td>Committed/Uncommitted</td>
<td>Unloading</td>
</tr>
<tr>
<td><strong>$6-18/bbl</strong></td>
<td>Unit/Manifest</td>
</tr>
<tr>
<td></td>
<td><strong>$8-30bbl</strong></td>
</tr>
</tbody>
</table>

*Rates are for illustration purposes only.*
ALL ABOUT THAT SPREAD
CANADIAN CRUDE-BY-RAIL GROWING BUT...
CANADIAN TAR SANDS LOADING TERMINALS
STILL DEVELOPING

Graph showing Thousand BPD for Total Canada, Tar Sands, and Conventional, with Operating and Expansions indicated.

Source: OILCHANGE INTERNATIONAL
CANADIAN CAPACITY UTILIZATION IS VERY LOW

Canadian Crude-by-Rail 2014

Loading Capacity

Rail Movements

Intra-Canadian (est.)

Exports

Thousands BPD
Figure 1: Canadian Oil Supply Forecast vs. Transportation Capacity

*Refers to the portion of U.S. Bakken production that is also transported on the Canadian pipeline network.
Oil Change International

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