Written by **Bob Adelmann** on October 20, 2014

Safety Records Show Pipelines Best Method for Transporting Oil

The combination of the Obama administration's intransigence in approving the Keystone XL pipeline and the exponential explosion in the production of crude oil, especially from the Bakken formation in North Dakota, has put increasing pressure on alternative modes of transportation to get that crude to refineries and customers. But with the increasing use of alternative modes such as barges, railcars, and over-the-road tanker trucks has come a growing concern about safety.

A series of rail accidents over the last several years has caught the attention of the Department of Transportation, and CNBC has tried its best to question the viability of oil transport safety. Since 2008, at least 10 incidents involving freight trains hauling crude across North America have spilled almost three million gallons of oil and, the most horrific accident — the Lac-Megantic derailment near Québec, Canada — killed 47 residents and destroyed half the town.

In response, the U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA) has issued mandates to beef up the more than 300,000 railcars currently carrying crude across the country.

However, according to John Edwards, a senior analyst and director at Credit Suisse:

> If you look at the safety record of crude oil pipelines versus alternatives, pipelines come out on top.
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> Release rates, as of 2012, were roughly 25 barrels per billion barrel miles … a very, very low rate of incidence taken over the hundreds of thousands of miles of pipelines and the transport millions of barrels of oil every day.

America's energy needs are so enormous that more than 18 million barrels of crude per day course through more than 500,000 miles of pipelines, either from sites such as Bakken, or ports on the East and Gulf Coast importing oil from foreign sources. Enbridge Energy Partners, the largest importer of crude into the United States, runs more than 50,000 miles of pipeline and has moved 13 billion barrels through its system over the last 10 years. Its "incident" rate (to count as an "incident" it must involve an explosion or fire, a release of five or more gallons of crude oil, an injury requiring hospitalization, a fatality, or property damage in excess of $50,000) is a minuscule .0007 percent. Put another way, 99.9993 percent of its oil arrives at its destination without incident.

But even that isn't good enough for Enbridge, according to Bradley Schamla, senior vice president of U.S. operations:

> I could talk about our safety record in terms of the [incident rate], but we don't talk a lot about that, because we're really focused on the very small percentage…. No leak is acceptable.
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> Our focus is really on eliminating all leaks with the goal of zero in our pipeline system.

As a whole, the oil pipeline delivery system is almost there. Of the 10 incidents recorded since 2008 involving three million gallons of oil (gallons, not barrels — there are 42 gallons in every barrel), the Lac-Megantic derailment was responsible for half of them.

The same month as the Lac-Megantic incident, the Manhattan Institute published its report claiming that pipelines are far safer for the transportation of oil and gas than trucks, barges, or railcars by a factor of 30 to 1. Wrote Senior Fellow Diana Furchtgott-Roth:

> In addition to enjoying a substantial cost advantage, pipelines result in fewer spillage incidents and personal injuries than road and rail. Americans are more likely to get struck by lightning than to be killed in a pipeline accident.

With more than 70 percent of crude oil and petroleum products being shipped by pipeline, it would be reasonable to assume that most incidents would involve pipelines. But exactly the opposite is true, according to Furchtgott-Roth. The majority of incidents occur on the road and by rail, though trucking accounts for just four percent of shipments and rail for just three, with tanker and barge traffic accounting for the remaining 23 percent. For instance, between 2005 and 2009, there were 20 such incidents for every billion ton miles involving over-the-road tanker trucks and more than two incidents involving railcars. But the incident rate for pipelines is just 0.58, according to the study. Put another way, rail caused nearly 30 times as many injuries requiring hospitalization as pipelines. Concluded Furchtgott-Roth:

> The evidence is clear: transporting oil and natural gas by pipeline is safe. Furthermore, pipeline transportation is safer than transportation by road, rail, or barge, as measured by incidents, injuries, and fatalities — even though more road and rail incidents go unreported.

When the Canadian think tank Fraser Institute picked up the Manhattan study and expanded and refined it last October, it came to the same conclusion: Resistance to pipeline transportation is forcing oil to its markets "by modes of transport that pose higher risks of spills and personal injuries such as rail and road transport."

This aroused the ire of Peter Goelz, the former managing director of the U.S. National Transportation Safety Board and now a senior vice president for a public relations firm out of Boston. Writing at the online Huffington Post in November, he called the Manhattan study "misguided" and the Fraser Institute report "discredited," both failed attempts to promote pipelines over railroads. But in his conclusion, Goelz admitted that the safety record of both pipelines and railroads is remarkable:

> The Fraser Institute tries to make two broad points: that pipelines are both a safer and more environmentally "friendly" way to transport crude oil than railroads. Fraser is wrong on both accounts. But in making their thinly supported political attack, they miss the real truth: both pipelines and railroads deliver better than 99.5% of their crude oil products safely.
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> They are both safe.

In an imperfect world, of course, nothing is completely safe. What's frustrating is that the Obama administration's interminable delay of approval of the final leg of the Keystone XL pipeline is forcing producers and refiners to use other, higher-risk, modes of transportation to get their product to market and into the hands and gas tanks of their customers. It's an inevitable consequence of adhering to an ideological point of view that clashes with reality.

A graduate of Cornell University and a former investment advisor, Bob is a regular contributor to The

New American *magazine and blogs frequently at www.LightFromTheRight.com, primarily on economics and politics.*

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