Ten Measures That Would Make Oil Transportation by Rail Safer

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The National Energy Board recently estimated that if no new pipelines were built, oil by rail would increase tenfold in coming decades. Prime Minister Trudeau justified, in part, his recent decision to approve Kinder Morgan and Enbridge Line 3, on the grounds that pipelines were much safer than rail and would result in less oil by rail traffic.

Holding pipeline approvals hostage to the alleged threat of greater danger to human life and environmental contamination of transporting oil by rail—is disingenuous. If the dangers are so great, as implied by these assertions, then perhaps it should be banned altogether.

This of course will not happen. And with or without these new pipelines, most experts agree that transportation of oil by rail will increase over the next decade to handle increased oil sands and shale oil production. Rail offers advantages in terms of flexibility, capital investment, and under certain circumstances, cost.

Current rail loading capacity in Canada is close to one million barrels per day. It may be a secondary and complementary mode of transport but it is not insignificant.

Let me outline ten measures that would make the rail system safer for transporting oil and other dangerous goods. They would demonstrate that the lessons of Lac-Mégantic have really been learned, which may give some comfort to the community that paid such a terrible price, and which continues to suffer the traumatic aftereffects.

1. *Tank cars:* Although there have been improvements in tank car design (TC-117), the bulk of the tank cars currently transporting oil—the CPC-1232 model, which has been called by the US Transportation Safety Board only a “slight improvement” over the legacy DOT-111s—will continue on the tracks until fully replaced in 2025. These unsafe cars continue to puncture on derailment and their oil explode and burn, most recently in Mosier Oregon, narrowly averting loss of life. The Canadian government should advance the current phase-out period of these tank cars.

2. *Bakken shale:* Oil companies have strenuously resisted removing the volatile components of Bakken shale oil before loading. There has been increasing pressure on them to do so by the US Pipeline and Hazardous Materials Safety Administration
(PHMSA)). However, the incoming Trump Administration intends to undertake a massive deregulation: the future is not bright. The Canadian government should simply prohibit the transportation of non-stabilized Bakken oil on Canadian territory.

3. **Bitumen**: Bitumen is currently transported mostly in the form of *dilbit*, i.e. raw bitumen diluted with a volatile diluent to make it flow. The two derailments in Gogama Ontario in February and March 2015 involved *dilbit*—contained in CPC-1232 tank cars— which exploded and burned. However, bitumen could be transported as *neatbit*: bitumen with virtually all of its volatile components removed. This is already being done in small amounts in heated tank cars. The capacity exists to transport a lot more bitumen this way, and more cars should be built. The government should put in place phase-out timetable for the transportation of bitumen in dilbit form.

4. **Safety Management Systems**: The SMS rail regulatory regime was introduced 15 years ago ostensibly as an additional safety layer. However, in absence of traditional oversight (on-site unannounced inspections), SMS amounts to company self-regulation. It has become a substitute instead of an additional layer of protection. Especially since the government seems unwilling to devote sufficient resources to real oversight, SMS should be suspended. You can’t do both. We’ve seen the consequences.

5. **Track deterioration issues**: Longer, heavier oil trains are having a huge impact on track quality. This has been a cause of many derailments, including the disastrous 2015 derailments in Gogama, Ontario. It needs to be a major focus of improving rail safety.

6. **Worker fatigue**: Companies have been resisting for years to properly address worker fatigue. It likely contributed to the Lac-Mégantic disaster. It’s on the 2016 TSB Watch list.

7. **Modernize braking systems**: The rail industry in both Canada and the US is lobbying aggressively against US regulations requiring that as of 2021, all trains have *electronic controlled pneumatic (ECP) brakes*. These systems would in the event of a derailment prevent the pileup of cars as happened in Lac-Mégantic. Industry is also lobbying for further extension of the American 2018 deadline for implementing *positive train control*, a backup system designed to slow a train down automatically in the event of driver error. The US National Transportation Safety Board has called for this measure for decades. Under the massive deregulation promised by the Trump administration, industry will almost certainly get its way. Our federal government should mandate ECP brakes and PTC for trains operating on Canadian soil.

8. **Empowerment of communities** to have a say about the potential dangers of oil being transported through their cities and towns: For example, the proposed
Belledune, NB rail loading terminal, will increase rail traffic along its route by 86,000 barrels per day. The town of Rimouski—which is along its route—asked the federal environment minister to undertake an environmental assessment. It was turned down. Such assessments should be mandatory.

9. **Regulatory capture:** underlies many of the problems with the rail regulatory regime. The extraordinary increase in the power of corporations to shape and drive the regulatory process to benefit its own private interest at the expense of the public good, undermines a central function of government: to regulate in the public interest. The power relationship between the industry and the regulator needs to be rebalanced. This could start by providing the regulator with adequate resources, expertise and independence; increasing the transparency of industry-regulator relations; and empowering third parties—municipalities, citizens groups—to engage in the regulatory process.

10. **Judicial inquiry:** We can’t move forward until we fully understand the causes of the Lac-Mégantic disaster: What went on inside Transport Canada, its relationship with the company MMA, with the rail industry in general, and their connection to the regulatory failures that culminated in this tragedy. The August 2014 Transportation Safety Board report should not be the last word. There are many unanswered questions. Other major disasters have had inquiries? Why not this one? Combining loss of life, physical destruction and environmental contamination, Lac-Mégantic is without precedent in modern Canadian history.

Whether we like it or not, all modes of transportation will continue to be used for shipping oil —rail, pipelines, and marine. The number one priority for all modes should be to ensure protection of public health and safety, and the environment. At the same time all means possible should be devoted to reducing our dependence on oil, and transitioning to a low carbon economy.

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