

## Appendix D – Emailed Submissions

This appendix contains comments received from individuals via email up to May 15<sup>th</sup>, 2014. Participants' names or other personal identifying information (where provided by the participant) have been removed to ensure anonymity.



## **Scientists Concerned and Informed on the Environment Speak Out**

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An open letter to:

**Mayor Monaghan, Councillors Empinado, Feldhoff, Germuth, Goffinet, Murphy, and Scott:**

We write to express our concerns about the Northern Gateway, and export of diluted bitumen (dilbit) from Kitimat through the Douglas Channel. We are pleased that you have committed to a plebescite to determine voters preferences, but we are concerned that massive spending by the proponents will bias the outcome.

We believe the risks associated with this project far outweigh any short-term benefit for Kitimat, and that both the science and the economic benefits have been largely misrepresented by the industry and by the Federal Government. In 2012, the Canadian taxpayer benefit was about \$9 per "barrel of oil equivalent", less than one-fifth of Norway's per-barrel return rates in the same year.

Information obtained by CBC under access to information law found that the rate of overall pipeline incidents in Canada doubled between 2000 and 2011, with the highest incidence in BC. Such incidents are much more dangerous when the product in the pipe is "dilbit". It was diluted bitumen from the Bakken Oil Shale deposits which blew up in Lac Megantic – and had been misrepresented by the shippers as conventional crude oil.

The industry implies that all "crude oil" is essentially the same. This is untrue. There are three different products: conventional crude, synthetic crude, and dilbit. Synthetic crude oil – produced by "heavy oil upgraders" – approximates the characteristics of conventional light crude. However, such "upgraders" – actual refineries that extensively process the bitumen – are expensive, and the majority-foreign owners of the tar-sands are not building additional upgraders in Alberta, preferring to reap a larger value-add by shipping the raw product overseas, rather than refining it in Canada.

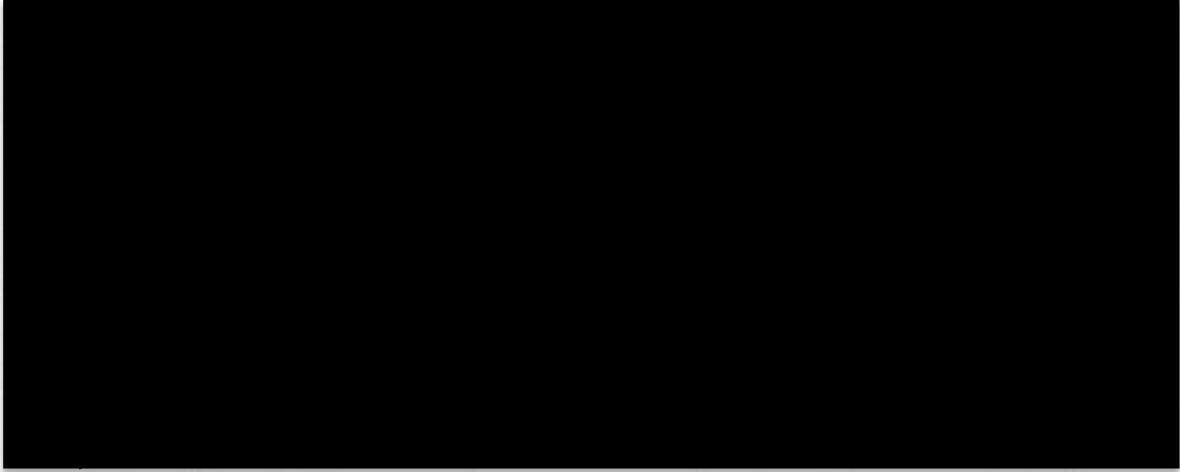
So dilbit, not synthetic crude, is to be shipped via Kitimat, and attempts to spin this as "just crude oil" are an outright misrepresentation by government and industry that does not pass the "truth in advertising" test. The industry attempts to hide the composition of "dilbit" as a "trade secret". Dilbit is known to regularly contain highly flammable and potentially carcinogenic compounds – basically whatever is cheapest diluent at the time – such as benzene, toluene, hexane, and the like.

The Embridge spill in the Kalamazoo in 2010 is an example of the problem of dilbit in and around waterways. A similar spill in the Kitimat watershed would destroy the livelihoods of a good portion of the citizenry and seriously impact property values, as happened in Kalamazoo. It would have serious externalized health impacts and costs, and the long term effects on wildlife and fish is immeasurable. In the challenging waters of Douglas inlet, the inevitable tanker incident will be catastrophic for Kitimat's economy. In an area not that far removed from the Exxon Valdez disaster, one would hope many politicians and citizens would understand this.

Finally, there is the question of responsible tar sands development. It has been estimated that to avoid runaway climate change, only 20% of known fossil fuel reserves can be exploited. If Canada were both charging market rates and upgrading in Alberta or BC, then only a small portion of the reserves would generate the same economic benefit within Canada. James Hansen, world renowned climate scientist put it this way: "If Canada proceeds {with planned extraction and pipelines}, and we do nothing, it will be game over for the climate."

**Scientists Concerned and Informed on the Environment Speak Out**

**Signed:**



**Scientists Concerned and Informed on the Environment Speak Out is a global multidisciplinary group of science-trained and experienced individuals who track threats to our environment, and the misconceptions and misrepresentations that often accompany those threats.**

Are you folks planning to endorse and encourage members to come out to Mayday?

See [maydayottawa.ca](http://maydayottawa.ca)

See you there. Energy east is on the agenda on the march  
Sent from my BlackBerry 10 smartphone.



Re: Energy East Project

I am 24 years old and was born and raised in Kenora. I am informed of the facts through Kenora community discussions with leaders who have knowledge about the pipelines and the oil industries. It causes me a lot of frustration when I am thinking about raising a family here. I am a recent property owner in the Kenora area. Knowing the facts it is evident that this project has no base to go forward only the risks to our environment, our livelihood and the future of our most valuable commodity....our children!

The reason I have stayed in Kenora is the natural beauty, and healthy way of life. I am questioning what the future holds if I decide to remain in this area, and I feel that our properties will be worthless when; not IF a spill or the like occurs here.

Please accept my vehement opposition to this ridiculous proposal. As a Canadian looking to the future I see myself investing in green renewable energy, and I see myself purchasing in the near future solar panelling, electric vehicles etc. My decision to stay in Kenora will be based on how our province decides to deal with large corporations such as this that will stop at nothing to get the oil to market. What

I would like to see is a carbon tax put on all oil going through our province for existing and current railroad transportation as well as in the future.

Sincerely



Thank you for the opportunity to express my personal concerns about the proposed Energy East pipeline. I appreciate the openness of the OEB's public consultation process, and I did attend the April 7<sup>th</sup> session in Stittsville. I felt the attendees recognized that while they are very real concerns with the pipeline itself, there was a need to look at broader issues of energy policy and climate change.

This pipeline conversion is not going to help Ontarians, and probably will not benefit Canadians either. It appears the dilbit is being transported to the east coast for export by tanker ship, another dangerous prospect. It doesn't sound like it will even be refined in Canada. Exporting the dilbit will profit the oil companies involved, who have major foreign interests, but the profits will not trickle down to ordinary Canadians. But the pipeline does pose considerable major risks.

There is really no question as to if a spill will occur, but when it will occur, and how major it will be. If the vulnerable aquifer in Eastern Ontario is contaminated, shallow wells will be unusable for decades. There is no mechanism in place to fairly compensate those affected. Surface water, including the Rideau and Mississippi Rivers in Eastern Ontario, would be compromised, affecting tourism and water supplies and natural systems. The Rideau Canal has achieved UNESCO World Heritage status, and we cannot afford to jeopardize its quality.

I am concerned about the training and safety of local first responders should a spill occur, and similarly, to how first responders would handle a rail accident. More and more tanker cars are carrying oil products, and the diluent needed to make the dilbit flow.

Landowners and municipalities don't seem to have a choice as to whether the pipeline crosses their land or jurisdiction, and are not being fairly compensated. And should a spill occur it will become the municipality's problem.

I am also very concerned about the ability of the existing, aging pipeline, to handle this thick, acidic, abrasive substance it was not built to carry. Should the pipeline be approved, TransCanada needs to held to the highest safety standards. If relevant standards are not in place (and I understand the standards may not be in place for this particular commodity), they should be forced to wait until the regulating bodies are ready.

But my major concern is that the overall process does not seem to be set up to do a fair evaluation of the project. Recent changes to provincial and federal environmental legislation have been a step backwards, and have just made it easier for the pipeline to be approved. The veto power the federal government may have over the National Energy Board (NEB) disregards the point of an objective evaluation process. And the NEB requirement that someone be a registered intervenor to comment is unfair, as the pipeline affects all Canadians. Limiting the questions or areas of concern in an evaluation will never lead to the right answer.

A national body such as the NEB should be in a position to help us make a decision that is the best for our country. We need to ask if putting major infrastructure investment into oil is the right direction for Canada, and if we should spend more resources developing renewable energy and increasing energy efficiency instead. Further, limiting the scope of the discussion ignores the impact this pipeline and the oil sands extraction in general will have on greenhouse gas emissions, when Canada has made a commitment to the world to reduce our contribution to global climate change. This will damage our international reputation. And the magnitude of the climate change impact will basically negate all the progress that individuals, governments, businesses and organizations have already made to combat climate change. These big picture issues have to be considered, and the National Energy Board should be directed to at least start asking those questions.

Canada needs to step back from mega oil projects and work towards a national energy policy. Approving this project just encourages oil companies to continue on as they have before, and allows the reckless expansion of the tar sands. The extent of the environmental degradation caused by that extraction is already out of control, and the people living nearby are suffering health consequences. We need to proceed more responsibly and slowly, and approving this pipeline prematurely gets in the way of doing that.



To whom it may concern,

The pipeline poses a myriad of risks to the ecology of the areas it passes through as well as drinking water supplies. Its contribution to global warming is unprecedented and unacceptable if we want to continue living on the planet.

The pipeline is old and was not designed to carry such a corrosive material as dilbit. It isn't a matter of "if there will be leaks". THERE WILL BE LEAKS. Existing pipelines have demonstrated this.

The industry has demonstrated that they are not capable of handling them when they occur. One need only mention KALAMAZOO as a perfect example of what will happen. 3.3million liters leaked into the river. People had to be evacuated and almost a million dollars has only partially cleaned up the mess. DILBIT SINKS and leaves the river contaminated.

According to an industry whistle blower Transcanada has not complied with its own safety standards.

Trains are quite unsafe as well. Pipelines are run by the same corporate mindset that gave us MEGANTIC. A total disregard for the environment and the people living anywhere except the boardroom.

Even if there were a pipeline train traffic would increase carrying highly flammable light hydrocarbons.

Our government and corporate elite from the fuel industry totally ignore evidence that we are making the planet uninhabitable for those to come. Climate change is a reality and this project will go a long way to speeding up the process. The pipeline to anywhere would result in an increase of over 30 million tonnes of greenhouse gases. That is just from the extraction. The burning of these fossil fuels is both dangerous and morally wrong. There is another way.

I would very much like to receive confirmation of receipt of these comments and how you respond.

Thank you

FOR THE EARTH AND ALL ITS CREATURES



We are concerned with the proposal to convert the natural gas pipeline for the east shipment of bitumen. A 50 year old pipeline with imminent signs of wear and tear is not a suitable venue for the highly pressurized shipment of dilbit. Bitumen diluted with water will create further abrasion and added wear and tear to the inside lining. Then the risks of ruptures and fissures are even more grave. Any 50 year water pipe is labelled as being old on the industrial/manufacturing market, and on the verge of fractures and erosion points. These natural gas pipelines are not 100% stainless steel lined and have already been exposed to extreme conditions for their age. To convert them into water laced dilbit/bitumen will only augment their stress points with the undulation of dilbit and created added internal pressure points. Our environment is too precious and fragile that this additional risk should not be undertaken as planned. Any catastrophe along the pipeline would infest the land with the unctuous muck and seep into our water table. Investments in the proper modern technology should be a better option to consider. However, the human risk is too high a price for people living in close proximity to the nearby pipeline pathway.

With complete objection to your proposal, we hope you will reconsider suitable safe methods that put people first before the money machine. Societies' values must be re-aligned to reflect a concern for the quality of life for humans, the preservation of the wilderness and the recognition of the merits of our environment for future generations.

With the present political uncertainty in the world, Canada could become a true trailblazer for the clean future of our country in conserving our fossil fuels for our own sustainability as a country as opposed to becoming too globally dependent on other nations for food, goods and fuels. Our strength as a nation will be determined not by the resources we have sold, but by the resilience of our leaders to have the foresight to enrich the lives of its people in order to empower them to envision a peaceful path for the future of our country. Depleting our resources for the monetary gains is not a guarantee that our country will maintain peaceful recognition on the world stage.

Anxiously awaiting further communication/updates in the unfoldment of your proposal.



Secretary,

Below, I have copied you on a message that I sent to the Frontier Centre for Public Policy, Head Office in Manitoba regarding a paper written by a Mary Jane Bennett entitled, "Lessons From Lac-Megantic". It reviews the implications of a contingency fund for railroad disasters such as the recent Lac Megantic disaster and explosion. I did receive a reply back from the Centre by [REDACTED]. [REDACTED] suggested that I look at the Oil Spill Liability Trust Fund, the Federal Deposit Insurance Corporation (banking) and the Price-Anderson Act (nuclear reactors). [REDACTED] stated that, "In like vein, a pipeline spill compensation fund could be established under the same logic as our report". I assume by *our report*, [REDACTED] is referring to Ms. Bennett's report on the Lac-Megantic disaster. The report is available from the Centre on line.

I feel strongly, that the promoters of the West/East pipeline are overlooking the risk assumed by the provinces and landowners across the country including Ontario and NB through which the pipeline must pass to reach the east coast at Saint John, NB. I would hope that your province and your board will look closely at the concept and application of a multimillion if not multibillion standing fund to cover the huge losses that and liabilities inherent in a disastrous spill along the pipeline route across the route and at pumping stations and terminals. Sooner or later, a spill or spills will occur somewhere across Canada. If asked if a well in the Gulf of Mexico could creat a catastphic release of oil, it would almost go without saying that BP would have stated that it could not happen. Yet the losses are in the billions and the settlelments continue. At Lac-Megantic, the public purse will likely end up covering losses in the billions. The companies building and operating the pipeline should hold reserves up front sufficient to internalize extreme damages to property and life if a massive spill should occur.

----- Original Message -----

**From:** [REDACTED]  
**To:** [REDACTED]  
**Sent:** Monday, November 25, 2013 10:51 AM  
**Subject:** Fwd: [General Contact] Pipeline Contingency Fund

Good morning,



Thank you for your interest in railroad safety and pipeline spill compensation.

I have requested, [REDACTED], to respond and [REDACTED] will shortly.

Thank you again for taking the time to reach out to the Frontier Centre.

[REDACTED]  
Frontier Centre for Public Policy  
#203 - 2727 Portage Avenue  
Winnipeg, MB R3J 0R2  
204-957-1567 (telephone)  
204-957-1570 (fax)  
[info@fcpp.org](mailto:info@fcpp.org) (email)  
[www.fcpp.org](http://www.fcpp.org) (website)

----- Forwarded message -----

From: [REDACTED]

Date: Sat, Nov 23, 2013 at 5:35 PM

Subject: [General Contact] Pipeline Contingency Fund

To: [info@fcpp.org](mailto:info@fcpp.org) [REDACTED] sent a message using the contact form at <http://www.fcpp.org/contact>.

Recently, I heard the story on RR safety between Mary Jane Bennett and Terry Seguin of the CBC in Fredericton. Ms Bennett suggested that the concept of a contingency fund to reimburse people for spill damage in communities should be examined. I would like to know if your Centre has done any work on

the concept of pipeline spill damage contingency funding and if you have published any information on the subject. Or, for that matter, are you aware of any studies that have been undertaken on pipeline spill compensation.

Thanks you,



## OEB SUBMISSION

### **Impacts with TCP's proposed Energy East Pipeline and what should be focussed upon:**

One impact that I haven't heard raised is "What does the closing of this gas line do to gas supplies, and thus gas costs, in this province?"

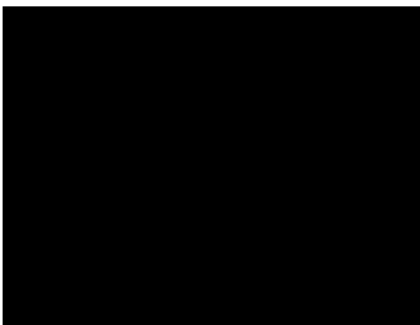
The negatives of potential leaks/breaks in the lines in the North Bay area have been very well described. The larger issues of climate change, research, etc., although they should be addressed before approvals, reality says they will be ignored... sadly. Therefore more safety features (emergency valves, frequent testing of valves and pipe integrity) MUST be sought by the OEB/Ontario government on behalf of the citizens of North Bay in order to minimize accident risk.

Assuming the Pipeline Project will get approval, the following should be done or included within the regulations governing the pipeline:

1. Third party auditors and inspectors (who should be under the Energy Ministry or the Environment Commissioner) should be appointed to examine TCP reports and inspect, without notice, pump stations, emergency valve procedures, and be able to speak with TCP employees about possible issues. A number of personal communications have indicated that former employees of gas companies often report minor leaks which are ignored by superiors, a behaviour that must be addressed.
2. Money to support NBMCA environmental and risk assessment of an oil spill in the Trout Lake watershed area is vital since Trout Lake is the sole drinking water source for the area. OEB could/should request TCP as well as Ontario government provide resource input for this project to be completed before this project can be completed.
3. Emergency shut-off valves need to be placed at EVERY pipeline/water intersection

4. Testing of the emergency shut-offs valves semi-annually with actual valve closings.
5. Integrity of pipe checking with PIG's needs to be done on, at least, one quarter of the line annually. Other technologies that are available should be examining the line on a continuous basis.
6. At a minimum, annual reports re pipe condition, number of leaks, volumes of leakage and how the cleanup and remediation of spills were done by TCP must be an OEB requirement, with these reports going to the Ontario government inspectors/auditor for review and action, and then be made public.
7. TCP reports that when pipe leaks are identified, the flow can be shut down within 10 minutes. The regulations should make this initiation action a requirement. Smaller leaks of  $\leq 1.5\%$ , apparently, may take up to four hours to identify. Automatic shutdown of the system at the point of confirming a leak should be a requirement.

Respectfully submitted by



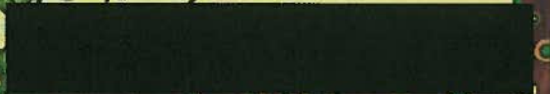
May 5/14

Dear Alex,

I sent this document to Premier Wynne on Budget Day. Well, as feared, we're into election mode & so I'm sending this copy to you at the O.C.B. - Please note the no. of trans Canada's explosions in Northern Ontario alone.

Thank you for

your good work in transcribing our meeting on N. Bay.



# **The Predictable Path to Disaster**

## **TransCanada's Energy East Pipeline**

(Please see endnotes for sources)

On the "Frequently Asked Questions" section on the Natural Resources Canada website regarding federally Regulated Pipelines it states:

"there has not been a single rupture on a federally-regulated pipeline built in the past 30 years"  
(1)

Buried in National Energy Board (NEB) documents is a list of 39 ruptures on federally-regulated pipelines.

Information on the NEB website states:

"In Canada, the NEB regulates nearly 71,000 kilometres of pipelines that move approximately one billion barrels of oil per year. In fact, between 2000 and 2011, 99.9996% of the crude oil and petroleum product transported on federally regulated pipelines was done so safely." (2)

Using these NEB numbers means that 645,960 litres of oil spilled; that they know of. The NEB does not require companies like TransCanada to report spills less than one thousand five hundred litres. (3)

The TransCanada Energy East Pipeline will convert an existing Natural Gas pipeline to Dilbit or Tar Sands Bitumen dissolved in extremely dangerous chemicals so it will flow.

TransCanada can spill up to 1,500 litres of Dilbit and they don't have to tell you, they don't have to tell first responders, they don't have to inform the public and they don't have to tell the NEB because under Federal regulations they don't have to, it is non-reportable.

This means thousands upon thousands of litres could leak all along the TransCanada Energy East pipeline route and as long as TransCanada estimates the volume spilled at less than the reportable volume, Trout Lake, Lake Nipissing and hundreds of lakes, rivers and tributaries in Ontario which we consider precious along the route can be irreversibly contaminated.

TransCanada's best in practice remote monitoring for leak detection is typically able to detect leaks down to approximately 25 to 30 percent of the pipeline flow rate. (4) In the case of Energy East, TransCanada's SCADA (supervisory control and data acquisition) system would not detect a leak below 43 million, 697 thousand, 500 litres at best.

TransCanada's software-based volume balance systems that monitor receipt and delivery volumes are typically able to detect leaks down to approximately 5 percent of the pipeline flow rate. (5) In the case of Energy East, TransCanada could not detect a leak smaller than 8 million, 739 thousand, 500 litres per day using this advanced system.

The absolute very best TransCanada volume leak detection threshold is 1.5% to 2% of daily flow if they use computer based volume trending. (6) Therefore in the case of Energy East no leak can be detected by TransCanada less than 2 million, 621 thousand, 850 litres leaking every day.

Back in 1996 the NEB admitted that " There are typically 30 to 40 failures each year on pipelines regulated by the NEB,..." (7)

Natural Resources Canada goes onto state:

"Pipeline companies have primary responsibility for ensuring pipeline safety and environmental protection" (8) Not the Federal Ministry of the Environment, not Natural Resources Canada, not the NEB; Industry. Natural Resources Canada and the NEB have passed pipeline safety over to pipeline companies.

Alright, lets examine how that responsibility has been handled...

### **TransCanada Pipeline Failures**

1969 July 8 is of special note. TransCanada had a pipeline failure 9.8 kilometers away from the September 26, 2009 Marten River pipeline explosion. The exploded pipe was manufactured by A.O. Smith and was full of defects to the degree that TransCanada decided to replace all the A.O. Smith pipe. Unfortunately this defective pipe was randomly placed throughout the natural gas pipeline system and TransCanada despite knowing that this was defective pipe which had proven itself as an explosion hazard, left some of the A.O. Smith pipe in the ground. TransCanada decided not to replace all known defective pipe unless the population in the area grew and then would decide if the defective pipe should be replaced. (9) The NEB was well aware of the defective pipe yet allowed TransCanada to continue with this unpredictable explosion risk for 30 years until the same A.O. Smith pipe exploded in 2009 near Marten River. (10)

1979 May 30, TransCanada pipeline explodes near Englehart Ontario. (11)

1985 March to 1986 March - In just one year TransCanada pipelines ruptured three times in Northern Ontario. (12)

1985 March 10, Ignace Ontario TransCanada pipeline exploded. (13)

Less than 5 months later...

1985 August 20, TransCanada pipeline ruptured near Lowther Ontario. (14)

1986 TransCanada 36" pipeline ruptured, Callander Ontario. (15)

1989 July, TransCanada pipeline rupture near Brandon Manitoba. (16)

1990 June 6, TransCanada Pipeline rupture near Marionville, Ontario. (17)

1991 January 17, TransCanada pipeline ruptured near Cochrane, Ontario. (18)

Later that year...

1991 December 8, TransCanada pipeline rupture near Cardinal, Ontario. (19 & 20)

Seven months later...

1992 July 15, TransCanada Pipeline exploded near Tunis and Potter, Ontario. (21 & 22)

1994 July 23, Latchford, Ontario, TransCanada's 36 inch pipeline exploded. (23)  
An OPP officer noted that rocks and debris from the explosion 1,148 feet away had landed on the highway. (24)

3 months later...

1994 October 6, Williamstown, Ontario TransCanada pipeline ruptured. (25)

4 months later...

1995 February, TransCanada pipeline explosion near Vermilion Bay in Northern Ontario. (26)

Less than 6 months later...

1995 July 29, rupture on TransCanada's pipeline near Rapid City, Manitoba, resulting in a major explosion. (27 & 28)

8 months later...

1996, April 15, TransCanada pipeline ruptured followed by an explosion and fire. La Salle River crossing, 10 km southwest of Winnipeg, near the town of St. Norbert, Manitoba. (29)

8 months later...

1996 December 11, TransCanada's pipeline exploded at Stewart Lake near Vermilion Bay, Ontario. (30)

less than a year later...

1997 December 2, TransCanada's pipeline exploded near Cabri, Saskatchewan. (31)

2002 April 14, , Brookdale Manitoba, 36" TransCanada pipeline exploded. (32)

2002 October 8, TransCanada's PMRL pipeline ruptured and TransCanada took over 7 years to submit the final pipeline failure report to the NEB on 4 December 2009. (33)

2003 December 1, TransCanada pipeline ruptured 120 kilometers south of Grande Prairie Alberta. (34)

14 hours later just 15 kilometers away another TransCanada pipeline exploded. (35)

2009 July 20, TransCanada's Nova Gas, Peace River Mainline Alberta exploded. (36)  
From 1973 up to this explosion this TransCanada pipeline experienced 16 leaks and 6 ruptures. (37)

less than two months later...

2009 Sept. 12, , near Swastika, Ontario a 36 inch TransCanada pipeline exploded. (38)  
TransCanada didn't know about it until the Englehart fire department called it into TransCanada's Emergency Notification Line. (39)

then days later...

2009 Sept. 24, TransCanada's Line 100-1 ruptured near Marten River, Ontario. (40) The Transportation Safety Board of Canada states it was a rupture. (41) But the NEB states it does not meet the definition of a rupture. (42) Even though the 30 inch pipeline "exploded". (43) Leaving a large crater with pipeline fragments scattered up to 100 meters away.



17 months later...

2011 February 19, Beardmore Ontario, TransCanada's 36 inch pipeline exploded. (44 & 45)

just 3 months later...

2011 May 29, The first Keystone tar sands pipeline, constructed less than a year ago, has sprung its twelfth leak even though meeting minimum design requirements for conventional pipelines. (46)

less than 2 months later...

2011 July 20, near Gillette, Wyo., The TransCanada Bison pipeline exploded 6 months after it went into service. (47)

2013 Oct. 17, TransCanada Nova pipeline ruptured north of Wabasca Alberta. (48)

One month later...

2013, Nov. 25, another natural gas pipeline rupture on TransCanada's Nova system near Boyle, Alberta. (49) It was the second rupture on the Nova system in a six week period. (50) NEB documents show that...

"the inspection officer has reasonable grounds to believe that a hazard to the safety or security of the public, or employees of a company or a detriment to property or the environment is being or will be caused by the construction, operation, maintenance or abandonment of the pipeline." (51)

and goes onto state:

"The cause and contributing factors of the Flat Lake Lateral Loop rupture have not yet been determined;" and " The ruptured section of the Flat Lake Lateral Loop will soon be put back in service". (52)

This clearly demonstrates the dismissive and cavalier attitude of the NEB and the cowboy attitude to safety by TransCanada Limited. There is tremendous risk allowing a pipeline to go back into service when the cause of the failure is unknown.

2014 Jan 25, Otterburne Manitoba, TransCanada's pipeline exploded. (53) Karl Johannson, TransCanada executive vice-president of natural gas, told reporters and community members that the half-century-old pipeline had been well-maintained and that TransCanada held the highest standard for its pipelines, to ensure service and maintain public safety. (54)

less than a month later...

2014 Feb. 18, TransCanada's Nova pipeline ruptured near Rocky Mountain House. (55)

The 30+ TransCanada pipeline failures listed above defy the NEB's claim that "Safety and environmental protection are of paramount importance to the National Energy Board (NEB)," when they add that reduction in pipeline failures depends on industry (56) and as Natural Resources Canada states "Pipeline companies have primary responsibility for ensuring pipeline safety and environmental protection" (57)

The 30+ TransCanada pipeline failures listed above are all failures which defy Natural Resources Canada's claim that "there has not been a single rupture on a federally-regulated pipeline built in the past 30 years". (58)

The 30+ TransCanada pipeline failures listed above also defy TransCanada's written information provided to the public attending the Ontario Energy Board (OEB) hearings on the TransCanada Energy East Pipeline proposal, stating "TransCanada has been building safe, reliable pipelines for over 60 years"

The above list of TransCanada pipeline failures may not be complete.

**Other notable pipeline failures:**

January 2005: Carrollton, Ky. Sunoco Mid-Valley pipeline ruptured sending 260,000 gallons of oil into the Kentucky River. (59)

October 2008: Burlington, Ky. Sunoco Mid-Valley pipeline spilled 115,000 gallons. Eighty homes evacuated. Oil ended up in neighbourhood sanitary sewers. (60)

2010 July, Kalamazoo Michigan - Enbridge Line 6B burst spilling 3.3 million litres or 20,862 barrels of Tar Sands Crude. (61) By comparison, the TransCanada Energy East Pipeline will carry over 52 times that volume every day.

2011 April 29, Plains Midstream Canada Rainbow pipeline system leaked 4,449,200 litres of crude in the boreal forest east of the Peace River, Alberta. The same line ruptured in 2006. (62)

2013, September 10, diesel spill. SARNIA, ON. Sun-Canadian Pipe Line. (63) Sun-Canadian is on record as saying they have an excellent record with respect to safety and pipeline reliability. (64)

2013 September 29, North Dakota - 20,600-barrel oil spill discovered by farmer harvesting wheat. (65)

2011 July 1: Exxon Mobile pipeline burst spilling more than 1,509 barrels into the Yellowstone River near Billings Montana. The leak has caused a forty km plume, fouling the riverbank and forced municipalities and irrigation districts downstream to close intakes. The break in south-central Montana led to temporary evacuations of hundreds of residents along a thirty two km stretch. The Silvertip Pipeline is a 12-inch nominal diameter pipeline which carries Canadian Crude. (66)

Between 2012 & 2013, "751 oil spills were reported in North Dakota, spilling a total of about 4,528 barrels of oil, the Associated Press reported last month. Those figures don't include the 20,600-barrel oil spill discovered near Tioga in September previously mentioned. (67)

2013 March 29 - Mayflower, Arkansas, Exxon Mobile Pegasus pipeline spilled 7,000 barrels of Canadian Wabasca heavy crude from the Athabasca oil sands. (68)

2013 November 18, "More than 55,000 barrels of saltwater (8,739,500 Litres) produced by the oil and gas industry spilled on North Dakota land over the previous 22 months." (69)

2014, March 18, Sunoco Mid-Valley pipeline leaks 20,000 gallons into Oak Glen Nature Preserve in Colerain Township Ohio. Sunoco had no idea that a spill was occurring until a driver passing by noticed oil spread across a marsh in the Nature Preserve. It is the 40th incident since 2006 along this pipeline alone, which stretches 1,100 miles from Texas to Michigan, according to the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration. Sunoco has been fined numerous times over leaks on the pipeline causing millions of dollars in damage and after this leak Sunoco put a simple clamp on the pipe to plug the hole. (70)

2014 March 21, BISMARCK, N.D. 34,000 gallons of crude spilled a broken oil pipeline in north-western North Dakota. (71)

### **Clean up costs for oil spills:**

The estimated cleanup cost for conventional oil runs at about \$2000 per barrel of oil. Tar sands diluted bitumen cleanup is estimated to cost an average \$29,000 per barrel. (72)

In 2011 the United States Internal Revenue Service exempted tar sands oil from tax paid into the spill cleanup fund as the substance did not fit the characterization of crude oil.

In a statement from Exxon Mobile referring to the Mayflower Arkansas bitumen spill Exxon Mobile said, "bitumen is not considered crude oil, and therefore tar sands pipeline operators like Exxon aren't required to pay into the oil spill cleanup fund." (73)

The cost for Exxon Mobile to contribute to the clean up fund would be 0.08 cents per Barrel. (74)

### **A troubling perspective:**

To help place the TransCanada Energy East Pipeline into perspective everyone remembers the Exxon Valdes oil spill in Alaskan waters twenty five years ago on March 24, 1989. The ship ran aground and spilled 10.8 million gallons of crude oil. (75)

That year Exxon made 3.8 Billion in profit and the following year made 5 Billion. And this occurred while Exxon disputed cleanup costs nearly every step of the way.

Exxon fought paying damages and appealed court decisions multiple times, and they have still not paid in full. Years of fighting and court appeals on Exxon's part finally concluded with a U.S. Supreme Court decision in 2008 that found that Exxon only had to pay \$507 million of the original 1994 court decree for \$5 billion in punitive damages.

Five years ago as of 2009, Exxon had paid only \$383 million of the \$507 million to those who sued, stalling on the rest and fighting the \$500 million in interest owed to fishermen and other small businesses from more than 12 years of litigation.

Statistics as of 5 years ago demonstrate that some of the original plaintiffs are no longer alive to receive, or continue fighting for their damages. An estimated 8,000 of the original Exxon Valdez plaintiffs have died since the spill, while waiting for their compensation as Exxon fought them in court. (76)

### **Some numbers to ponder:**

Animals killed by the Exxon Valdes oil.

250,000 to 500,000 seabirds

1,000 otters

300 harbour seals

250 bald eagles

22 orcas

billions of salmon and herring eggs

and of course 30,000 human plaintiffs.

On the issue of lingering oil twenty five years later, one of the most stunning revelations by the government funded Exxon Valdez Oil Spill Trustee Council who have been monitoring Prince William Sound is that Exxon Valdez oil persists in the environment and in places is nearly as toxic as it was the first few weeks after the spill. (77)

In perspective, the TransCanada Energy East pipeline will pump four times as much oil spilled from the Exxon Valdes every day through North Bay...for the next 40 years.

## **So what are the chances of a Energy East pipeline leak?**

Despite Natural Resources Canada's statement that there has not been a single rupture on a federally-regulated pipeline built in the past thirty years, The Transportation Safety Board of Canada lists over one thousand Federally regulated pipeline occurrences over a nine year period between 2003 and 2012. (78)

NEB statistics show that over a brief 5 year period:

- 1 million, 217 thousand litres of oil spilled from their regulated pipelines between 2009 and 2013 and this does not include any spill less than 1,500 litres which TransCanada and other companies are not required to report. (79)
- There were 301 reportable gas leaks over the same time period. (80)
- There were 527 reportable "incidences" over the same time period which include death or serious injury, adverse environmental effects, explosions, spills and leaks and operating a pipeline well beyond it's safety limits. (81)

Therefore the chances of the Energy East Pipeline NOT leaking are so remote as to dwindle to the vanishing point.

The definition of Environmental protection is the practice of protecting the natural environment on individual, organizational or governmental levels, for the benefit of both the natural environment and humans.

### **The NEB States:**

"Safety and environmental protection are of paramount importance to the National Energy Board (NEB)". (82) "Notwithstanding the safety record of NEB-regulated pipelines, the Board has noticed an increased trend in the number and severity of incidents being reported by NEB-regulated companies in recent years. The Board is of the view that a reduction in numbers and severity of pipeline incidents depends on actions taken by industry." (83)

The operative word here is "depends" on industry. Not the NEB, not the Ministry of Natural Resources, not the Ministry of the Environment not the Transportation Safety Board of Canada. None of these. The NEB is leaving it up to industry.

On February 2014 the NEB released the TransCanada "Audit Report for Integrity Management Programs". For this audit the NEB interviewed and met with sixty three TransCanada directors, managers, legal council members, engineers, technicians and operators responsible for TransCanada Pipelines and the responsibilities included:

Liquid Pipeline Integrity,  
Maintenance Programs,  
Business Development and Project Support,  
Facilities Integrity,  
Damage Prevention,  
Engineering and Asset Reliability,  
Mechanical and Civil Engineering,  
Automation Engineering,  
Materials Engineering,  
Regulatory Compliance,  
Program Governance and Compliance,  
Pipeline Corrosion,  
Quality Management,  
and Public Awareness. (84)

A quote from the audit findings:

"The Board finds TransCanada to be non-compliant in four sub-elements of the audit, those being:

Hazard Identification,  
Risk Assessment and Control;  
Operational Control-Upset or Abnormal Operating Conditions;  
Inspection,  
Measurement and Monitoring;  
and Management Review." (85)

It appears that TransCanada has not been held accountable since the July 20th, 2009 NEB Incident Brief on the Rupture of the Peace River Mainline operated by TransCanada Pipelines Ltd.

Those findings were:

"The Board makes seven findings as to the cause and contributing factors"

1. External corrosion was the immediate cause.
2. Microbiologically Influenced Corrosion was a contributing factor.
3. Failed Polyvinyl Chloride coating that resulted in localized shielding of cathodic protection was a basic cause.
4. Inaccurate sizing of the defect by the magnetic flux leakage in-line inspection tool was a basic cause.
5. Inadequate field investigation criteria was a basic cause.
6. Ineffective operational control was a management system cause.
7. Inadequate inspection was a management system cause. (86)

But remember, the NEB states "Pipeline companies have primary responsibility for ensuring pipeline safety and environmental protection." (87) And a reduction in numbers and severity of pipeline incidents depends on industry.

After the twelfth leak on the newly constructed Keystone pipeline Terry Cunha, a spokesperson for TransCanada, said "We've demonstrated we have built a very safe pipeline system because we haven't had a leak on our pipeline," "Unfortunately what we're having is oil releases..."<sup>(88)</sup>

This cavalier attitude toward safety is consistent with the Canadian Conservative Government's actions and statements.

This attitude is consistent with current and past legislative modifications which drastically reduce our environmental protections to our water.

This attitude is consistent with Conservative MP for Nipissing—Timiskaming (Ontario) Jay Aspin voting to remove environmental protections for our drinking water source previously inherent in the Navigable Waters Protection Act. (89)

And the NEB audit findings of TransCanada's non-compliance are consistent with Canadian Prime Minister Stephen Harper's statement:

"In this party, we will not accept that environmental protection must stop economic development." (90)

Back in October of 2012 the then Federal Conservative Transport Minister Denis Lebel said in relation to the changes to the Navigable Waters Protection Act, " that waterways not on the new list will be protected by other federal laws and by provinces and municipalities. (91)

At the recent OEB hearings on the Energy East project TransCanada provided written documents to the public which state " TransCanada has been building safe, reliable pipelines for over 60 years.

Therefore it is absolutely necessary for the Province of Ontario and the Municipality of North Bay to stop TransCanada's Energy East project before TransCanada's pipeline safety and reliability record repeats itself.

**In conclusion:**

On February 24, 2014 a National Energy Board audit found TransCanada was breaking federal rules in areas such as hazard identification, risk assessment, monitoring and management review. (92)

"The thousands of pages of records, released over the past month by the Senate energy and environment committee, show cases where engineers were told in internal emails to stop searching for potential pipeline defects." (93)

The risk to North Bay's watershed, to Ontario as a whole is insurmountable in the highest degree.

TransCanada's Energy East project must be stopped.

Sincerely,



North Bay, Ontario

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Endnotes:

<sup>1</sup> Natural Resources Canada, Frequently Asked Questions (FAQs) Concerning Federally-Regulated Petroleum Pipelines in Canada; 3.6 How are pipeline leaks prevented or minimized? :<http://www.nrcan.gc.ca/energy/infrastructure/5893#h-3-1>

<sup>2</sup> Ibid

<sup>3</sup> National Energy Board, Safety and Environmental Performance Dashboard, Pipeline Incidents: Incident means an occurrence that results in a spill in excess of 1.5 m<sup>3</sup>  
1.5 cubic meters = 1,500 litres: <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/dshbrd/dshbrd-eng.html>

<sup>4</sup> Keystone XL Project APPENDIX Q, Pipeline Risk Assessment and Environmental Consequence Analysis: <http://keystonepipeline-xl.state.gov/documents/organization/205569.pdf>

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> National Energy Board, Public Inquiry Concerning Stress Corrosion Cracking on Canadian Oil and Gas Pipelines. MH-2-95, REPORT OF THE INQUIRY November 1996  
: <http://publications.gc.ca/collections/Collection/NE23-58-1996E.pdf>

<sup>8</sup> Natural Resources Canada, Frequently Asked Questions (FAQs) Concerning Federally-Regulated Petroleum Pipelines in Canada; 3.6 How are pipeline leaks prevented or minimized? :<http://www.nrcan.gc.ca/energy/infrastructure/5893#h-3-1>

<sup>9</sup> Transportation Safety Board of Canada: <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0083/p09h0083.asp>

<sup>10</sup> Ibid

<sup>11</sup>[http://en.wikipedia.org/wiki/TransCanada\\_pipeline](http://en.wikipedia.org/wiki/TransCanada_pipeline)

<sup>12</sup> NEB SSC backgrounder report referenced.  
[http://www.pipelinesafetytrust.com/docs/neb\\_doc1.pdf](http://www.pipelinesafetytrust.com/docs/neb_doc1.pdf)

<sup>13</sup> Report on a second study of pipeline accidents using the Health and Safety Executive's risk assessment programs MISHAP and PIPERS, Prepared by Casella Scientific Consultants for the Health and Safety Executive 2002: <http://www.hse.gov.uk/research/rrpdf/rr036.pdf>

<sup>14</sup> National Energy Board Public Inquiry Concerning Stress Corrosion Cracking on Canadian Oil and Gas Pipelines. MH-2-95, REPORT OF THE INQUIRY November 1996  
: <http://publications.gc.ca/collections/Collection/NE23-58-1996E.pdf>

<sup>15</sup> Ibid

<sup>16</sup> Transportation Safety Board of Canada : <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0074/p09h0074.pdf>

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<sup>17</sup> Alberta Energy Regulator, <https://aer.andornot.com/Record/AERCALG23020>

<sup>18</sup> Commodity Pipeline Occurrence Report: TransCanada Pipelines Limited Natural Gas Pipeline Ruptures:  
[http://books.google.ca/books/about/Commodity\\_Pipeline\\_Occurrence\\_Report.html?id=n3veQgAACAAJ&redir\\_esc=y](http://books.google.ca/books/about/Commodity_Pipeline_Occurrence_Report.html?id=n3veQgAACAAJ&redir_esc=y)

<sup>19</sup> National Energy Board Public Inquiry Concerning Stress Corrosion Cracking on Canadian Oil and Gas Pipelines. MH-2-95, REPORT OF THE INQUIRY November 1996  
: <http://publications.gc.ca/collections/Collection/NE23-58-1996E.pdf>

<sup>20</sup> Report on a second study of pipeline accidents using the Health and Safety Executive's risk assessment programs MISHAP and PIPERS, Prepared by Casella Scientific Consultants for the Health and Safety Executive 2002: <http://www.hse.gov.uk/research/rrpdf/rr036.pdf>

<sup>21</sup> National Energy Board Public Inquiry Concerning Stress Corrosion Cracking on Canadian Oil and Gas Pipelines. MH-2-95, REPORT OF THE INQUIRY November 1996  
: <http://publications.gc.ca/collections/Collection/NE23-58-1996E.pdf>

<sup>22</sup> Commodity Pipeline Occurrence Report: TransCanada Pipelines Limited Natural Gas Pipeline Ruptures :  
[http://books.google.ca/books/about/Commodity\\_Pipeline\\_Occurrence\\_Report.html?id=n3veQgAACAAJ&redir\\_esc=y](http://books.google.ca/books/about/Commodity_Pipeline_Occurrence_Report.html?id=n3veQgAACAAJ&redir_esc=y)

<sup>23</sup> The Transportation Safety Board of Canada :  
<http://c66.203.200.38.tidc.telus.com/eng/rapports-reports/pipeline/1994/p94h0036/p94h0036.asp>

<sup>24</sup> Transportation Safety Board of Canada, Pipeline Investigation Report P94H0036  
<http://www.tsb.gc.ca/eng/rapports-reports/pipeline/1994/p94h0036/p94h0036.asp>

<sup>25</sup> <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/pplnrptrs-eng.html>  
Follow link at bottom of page for NEB Pipeline rupture Excel file

<sup>26</sup> National Energy Board Public Inquiry Concerning Stress Corrosion Cracking on Canadian Oil and Gas Pipelines. MH-2-95, REPORT OF THE INQUIRY November 1996  
: <http://publications.gc.ca/collections/Collection/NE23-58-1996E.pdf>

<sup>27</sup> Ibid

<sup>28</sup> Transportation Safety Board of Canada  
[http://c66.203.200.38.tidc.telus.com/eng/publications/reflexions/pipeline/2002/numero-issue\\_3/pipeline-numero-issue-3-sec1.asp](http://c66.203.200.38.tidc.telus.com/eng/publications/reflexions/pipeline/2002/numero-issue_3/pipeline-numero-issue-3-sec1.asp)

<sup>29</sup> Ibid

<sup>30</sup> Ibid

<sup>31</sup> Ibid

<sup>32</sup> Transportation Safety Board of Canada : <http://c66.203.200.38.tidc.telus.com/eng/rapports-reports/pipeline/2002/index.asp>



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<sup>33</sup> TransCanada Final Failure Report on the 8 October 2002 rupture of the PRML, submitted to the Board on 4 December 2009. see endnote # 19:

[http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/nvgsrptrpcrvr2009\\_07\\_20/nvgsrptrpcrvr2009\\_07\\_20-eng.html#ftn19back](http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/nvgsrptrpcrvr2009_07_20/nvgsrptrpcrvr2009_07_20-eng.html#ftn19back)

<sup>34</sup> Forensic Appraisal Group Limited : [http://www.forensic-appraisal.com/valuation\\_issues](http://www.forensic-appraisal.com/valuation_issues)

<sup>35</sup> Ibid

<sup>36</sup> Pipeline Incident Report Investigation Pursuant to Section 12 of the National Energy Board Act into the 20 July 2009 Rupture of the NOVA Gas Transmission Limited Peace River Mainline at KP 379, South of High Level, Alberta, Canada

<sup>37</sup> NEB safety investigation; 2.4 Historical Incidents and Performance

[http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/nvgsrptrpcrvr2009\\_07\\_20/nvgsrptrpcrvr2009\\_07\\_20-eng.html#ftn22](http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/nvgsrptrpcrvr2009_07_20/nvgsrptrpcrvr2009_07_20-eng.html#ftn22)

<sup>38</sup> Transportation Safety Board of Canada: <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0083/p09h0083.asp>

<sup>39</sup> Transportation Safety Board of Canada report: <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0074/p09h0074.asp>

<sup>40</sup> Transportation Safety Board of Canada: <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0083/p09h0083.asp>

<sup>41</sup> Ibid

<sup>42</sup> <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/pplnrptrs-eng.html>  
Follow link at bottom of page for NEB Pipeline rupture Excel file

<sup>43</sup> Transportation Safety Board of Canada: <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0083/p09h0083.asp>

<sup>44</sup> PIPELINE INVESTIGATION REPORT P11H0011, TRANSCANADA PIPELINES LIMITED, 914.4 -MILLIMETRE-DIAMETER PIPELINE LINE 100-2 – MLV 76-2 + 09.76 KM NEAR BEARDMORE, ONTARIO, 19 FEBRUARY 2011

<sup>45</sup> <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/pplnrptrs-eng.html>  
Follow link at bottom of page for NEB Pipeline rupture Excel file

<sup>46</sup> [http://switchboard.nrdc.org/blogs/aswift/the\\_first\\_keystone\\_tar\\_sands\\_p.html](http://switchboard.nrdc.org/blogs/aswift/the_first_keystone_tar_sands_p.html)

<sup>47</sup> <http://www.cbc.ca/news/canada/quality-concerns-arose-before-transcanada-pipeline-blast-1.1276144>

<sup>48</sup> <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/pplnrptrs-eng.html>  
Follow link at bottom of page for NEB Pipeline rupture Excel file

<sup>49</sup> TransCanada shuts Alberta gas pipeline after rupture:  
<http://ca.reuters.com/article/domesticNews/idCABRE9AQ1DH20131127>

<sup>50</sup> <http://www.reuters.com/article/2013/11/27/transcanada-gas-pipeline-idUSL2N0JC21S20131127>

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<sup>51</sup> [https://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/brdrdr/nvgs\\_kf\\_002\\_2013-eng.html](https://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/brdrdr/nvgs_kf_002_2013-eng.html)

<sup>52</sup> Ibid.

<sup>53</sup> <http://www.youtube.com/watch?v=NmUifbk46xM>

<sup>54</sup>

[http://article.wn.com/view/2014/01/27/TransCanada\\_gas\\_pipeline\\_that\\_burst\\_in\\_Manitoba\\_was\\_50\\_years/](http://article.wn.com/view/2014/01/27/TransCanada_gas_pipeline_that_burst_in_Manitoba_was_50_years/)

<sup>55</sup> <http://www.calgaryherald.com/technology/Nova+pipeline+ruptures+near+Rocky+Mountain+House/9520808/story.html>

<sup>56</sup> "The Board is of the view that a reduction in numbers and severity of pipeline incidents depends on actions taken by industry" NEB Pipeline Performance Measures. <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnprfrmncmsr/pplnprfrmncmsr-eng.html>

<sup>57</sup> Natural Resources Canada, Frequently Asked Questions (FAQs) Concerning Federally-Regulated Petroleum Pipelines in Canada; 3.6 How are pipeline leaks prevented or minimized? :<http://www.nrcan.gc.ca/energy/infrastructure/5893#h-3-1>

<sup>58</sup> Ibid.

<sup>59</sup> <http://www.cincinnati.com/story/news/local/2014/03/18/crews-investigate-colerain-gas-leak/6554741/>

<sup>60</sup> <http://www.cincinnati.com/story/news/local/2014/03/18/crews-investigate-colerain-gas-leak/6554741/>

<sup>61</sup> <http://www.cbc.ca/news/politics/enbridge-s-kalamazoo-cleanup-dredges-up-3-year-old-oil-spill-1.1327268>

<sup>62</sup> <http://www.reuters.com/article/2011/05/12/idUS418509825620110512>

<sup>63</sup> Canada NewsWire: <http://www.digitaljournal.com/pr/1599255#ixzz2lF9q1QpB>

<sup>64</sup> <http://www.sun-canadian.com/aboutus.htm>

<sup>65</sup> [http://www.huffingtonpost.com/2013/10/10/north-dakota-oil-spill-tesoro\\_n\\_4079323.html](http://www.huffingtonpost.com/2013/10/10/north-dakota-oil-spill-tesoro_n_4079323.html)

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<sup>68</sup> <http://desmog.ca/2013/04/02/pipelines-carrying-tar-sands-crude-us-don-t-pay-federal-oil-spill-fund>

<sup>69</sup> <http://www.prairiebizmag.com/event/article/id/16796/#sthash.1KrJVMlK.dpuf>

<sup>70</sup> <http://www.cincinnati.com/story/news/local/2014/03/18/crews-investigate-colerain-gas-leak/6554741/>

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- <sup>71</sup> [http://billingsgazette.com/news/state-and-regional/montana/n-d-oil-pipeline-break-leaks-gallons-of-crude/article\\_67dad781-6904-5658-8000-26bc1291ca10.html](http://billingsgazette.com/news/state-and-regional/montana/n-d-oil-pipeline-break-leaks-gallons-of-crude/article_67dad781-6904-5658-8000-26bc1291ca10.html)
- <sup>72</sup> <http://desmog.ca/2013/04/03/tar-sands-tax-loophole-cost-us-oil-spill-fund-48-million-2012-will-cost-400-million-2017>
- <sup>73</sup> <http://www.desmogblog.com/2013/04/03/can-we-trust-exxon-pay-pegasus-tar-sands-spill-cleanup>
- <sup>74</sup> <http://desmog.ca/2013/04/02/pipelines-carrying-tar-sands-crude-us-don-t-pay-federal-oil-spill-fund>
- <sup>75</sup> SPILL: The wreck of the *Exxon Valdez* Final Report, Alaska Oil Spill Commission  
Published February 1990 by the State of Alaska  
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- <sup>77</sup> *Exxon Valdez* Oil Spill Trustee Council; Lingerin Oil Updated 2014  
<http://www.evostc.state.ak.us/index.cfm?FA=status.lingerin>
- <sup>78</sup> Transportation Safety Board of Canada, Statistical Summary – Pipeline Occurrences 2012  
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- <sup>80</sup> *Ibid*
- <sup>81</sup> *Ibid*
- <sup>82</sup> Protecting Canadians and the Environment: <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/nvrnmnt/nvrnmnt-eng.html>
- <sup>83</sup> NEB Pipeline Performance Measures. <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnprfrmncmsr/pplnprfrmncmsr-eng.html>
- <sup>84</sup> Appendix III, TransCanada OPR-99 Integrity Management Program Audit, TransCanada Representatives Interviewed and Meeting Attendees: <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/dtrprt/trnscndt211-2012-2013-01ntgrtymngmnt/nxxiii-eng.html>
- <sup>85</sup> February 2014 National Energy Board *Onshore Pipeline Regulations, 1999* (OPR-99) Final Audit Report for Integrity Management Programs, File Number: OF-Surv-OpAud-T211-2012-2013 01 TransCanada PipeLines Limited and National Energy Board-Regulated Subsidiaries (TransCanada) 450-1<sup>st</sup> Street SW, Calgary, Alberta T2P 5H1
- <sup>86</sup> Pipeline Incident Report Investigation Pursuant to Section 12 of the National Energy Board Act into the 20 July 2009 Rupture of the NOVA Gas Transmission Limited Peace River Mainline at KP 379, South of High Level, Alberta, Canada - document in Pipeline Failures - TransCanada
- <sup>87</sup> Natural Resources Canada, Frequently Asked Questions (FAQs) Concerning Federally-Regulated Petroleum Pipelines in Canada; 3.6 How are pipeline leaks prevented or minimized? : <http://www.nrcan.gc.ca/energy/infrastructure/5893#h-3-1>

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<sup>88</sup> <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/pump-station-spill-shuts-keystone-pipeline/article2041087/>

<sup>89</sup> "Amendments to the Navigable Waters Protection Act introduced as part of a sweeping budget implementation bill on Thursday limit its application to 97 lakes, 62 rivers and the three oceans that border Canada. That means construction of dams, bridges and other projects would be permitted on most waterways without prior approval under the act, which currently covers any body of water big enough to float a canoe in."  
<http://www.theglobeandmail.com/news/politics/environmentalists-decry-changes-to-law-governing-navigable-waters/article4622873/>

<sup>90</sup> <http://globalnews.ca/news/941809/what-did-stephen-harper-say-at-the-conservative-convention/>

<sup>91</sup> <http://www.theglobeandmail.com/news/politics/environmentalists-decry-changes-to-law-governing-navigable-waters/article4622873/>

<sup>92</sup>

[http://www.thestar.com/news/canada/2014/04/13/transcanada\\_corp\\_dismissive\\_of\\_employees\\_concerns\\_about\\_pipeline\\_safety\\_records\\_reveal.html](http://www.thestar.com/news/canada/2014/04/13/transcanada_corp_dismissive_of_employees_concerns_about_pipeline_safety_records_reveal.html)

<sup>93</sup>

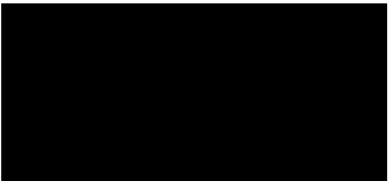
[http://www.thestar.com/news/canada/2014/04/13/transcanada\\_corp\\_dismissive\\_of\\_employees\\_concerns\\_about\\_pipeline\\_safety\\_records\\_reveal.html](http://www.thestar.com/news/canada/2014/04/13/transcanada_corp_dismissive_of_employees_concerns_about_pipeline_safety_records_reveal.html)

**- The potentially devastating impact on our way of life and the consequences to future generations caused by expansion of the oil sands and facilitated by transporting over 1 million barrels of oil per day in the proposed pipeline. A greater volume of production creates much greater pollution and much bigger accidents when they do happen.**

**-The economic benefits are vastly outweighed by the costs of accident cleanup or pollution controls. Governments and taxpayers will ultimately be burdened with these massive uncalculated environmental remediation costs.**

**-The devastating environmental consequences and risks of the Energy East project are not acceptable to most citizens of North Bay as clearly articulated in this discussion. Ontario has the opportunity to turn off the tap on the Energy East pipeline proposal.**

Thank you,



Hello Alex,

Thank you for accepting my written submission at the Stittsville OEB Energy East Consultation. For your convenience I have attached a copy of my submission.

I have taken the liberty to inform TransCanada of this topic as I think it is very important for them to be aware of Prowind's proposed industrial wind turbine project next to their pipeline while this project is still in its early stages of planning.

Kind regards,



(Attachement below)

07 Apr 2014

Ref: OEB Energy East Consultation

Attachment to page four of Community Discussion Guide dated March/April 2014

The ongoing OEB Energy East Consultation process ref. the proposed use of the existing pipeline for the transfer of crude oil from Alberta permits the opportunity to make the OEB aware of potential hazards to this pipeline not envisaged at the time this pipeline was constructed.

At present there is under serious consideration the construction of an industrial wind turbine project, (8 to 10 turbines up to 600 feet tall,) in very close proximity to the pipeline. (The stage of approval of this project is not known to the public.) The turbine project is slated to be built in an area between south of Harbison Road and north of Roger Stevens Drive just west of McCordick road in Rideau Ward, City of Ottawa.

Important concerns with respect to this proposed turbine project can include, but are not limited to the following:

- It actually does happen that occasionally turbine blades separate from the turbine hub and can be projected with huge force some distance. It is therefore possible that the pipeline can suffer catastrophic damage. (These blades have a mass of several tons.)
- The construction of the proposed wind turbine project will involve the movement of extra heavy loads on transporters in the proximity of the existing pipeline. It is possible for such heavy loads to put extraordinary loads onto buried pipe should a transporter be driven across the pipe, again creating the potential of causing pipe failure.
- It is known that wind turbines create vibrations, both audible and inaudible, and such vibrations can be of considerable amplitude. How can it be ascertained that such long term/continuous vibrations in close proximity will not create harmonics with the buried pipe and over time damage the integrity of the pipe?

The above are just three examples how the proposed industrial turbine project has the potential to impose a new hazard not considered at the time the pipeline was constructed. Will the OEB take these new circumstances into account with regard to the approval of the proposed turbine project? This is even more important now, since the pipeline will contain crude oil, not only natural gas, making any cleanup following a pipe failure that much more difficult and expensive.

Should the proposed turbine project proceed, will all the applicable approval authorities and Canada Pipeline demand that the Wind Developer post a sufficient Bond to cover any potential costs caused by locating industrial turbines in such close proximity to an existing pipeline? The public and Canada Pipeline should not be exposed to the huge potential costs should the pipeline be compromised by the proposed wind turbine project.

I am a Professional Engineer and very much appreciate that the Ontario Energy Board has been hosting consultations on the proposed Energy East Pipeline and providing an opportunity for input.

In addition to reading related reports and articles, I attended the TransCanada Open House in North Gower on April 3<sup>rd</sup> and the OEB meeting in Stittsville on April 7<sup>th</sup> and submitted some input in response to the draft summary report. After careful consideration, I believe the risks of this project far outweigh the benefits for both the province of Ontario and the world in general. Any dilbit spill, no matter how quickly contained, would be a huge threat to our aquifers and drinking water supply, and to our recreational waterways. The risk is compounded by the fact that diluent separates from bitumen in water while the bitumen itself sinks, making any cleanup almost impossible.

Far greater concern is the daunting challenge of Climate Change. A multi-billion dollar investment in the proposed pipeline would lock Canada into expanding the oil sands making it more difficult to achieve GHG reductions through investments in renewable



energy technologies. The increased emissions would more than offset Ontario's significant accomplishments achieved through the Green Energy Act and the laudable action to discontinue all coal fired electricity generation plants in the province.

In summary, the OEB should recommend to the National Energy Board that Ontario does not support the Energy East Pipeline.

Sincerely,

A solid black rectangular box redacting the signature of the sender.

Reka

Thanks! Here is is. Please send me the link when it is posted.

Best

[REDACTED]

From: [rsivarajah@swerhun.com](mailto:rsivarajah@swerhun.com)

To: [REDACTED]

CC: [aheath@swerhun.com](mailto:aheath@swerhun.com); [Alan.Findlay@ontarioenergyboard.ca](mailto:Alan.Findlay@ontarioenergyboard.ca)

Subject: Fwd: Energy East Comment/Question Submitted

Date: Tue, 15 Apr 2014 13:42:55 +0000

Good morning [REDACTED]

It was nice meeting you at the Stittsville meeting last week. Sorry for the delay in getting back to you. I have your hardcopy of the presentation that you have provided us at the meeting. Kindly forward me your electronic copy when you get a chance.

Please feel free to contact me if you have any questions.

Thank you,  
Reka

Begin forwarded message:

**From:** <[webmaster@ontarioenergyboard.ca](mailto:webmaster@ontarioenergyboard.ca)>

**Subject:** Energy East Comment/Question Submitted

**Date:** April 14, 2014 at 8:17:08 PM EDT

**To:** <[energyeast@ontarioenergyboard.ca](mailto:energyeast@ontarioenergyboard.ca)>

**ENERGY EAST COMMENT/QUESTION (via online form)**

**Comments:** Hi

I went to the Stittsville OEB hearing with the understanding that I could speak and had prepared my presentation to deliver to the OEB at the hearing. I was told by the facilitation team that was not possible. I was told by two members of the facilitation team that I could give them my brief and that I would receive an e-mail so I could send an electronic version and it would be posted to the OEB website as a submission. I did so but it has not yet happened. None of it has happened - no email, no place on the website - that I could find - where submissions by individuals have been posted. Can this problem be sorted out please!

**Name:**

**Email:**

**Postal:**



# **My Concerns about the Energy East Tar Sands Oil Pipeline: Threat to Canadian People, Environment and Economy**



## **Summary**

My presentation tonight is about some of my concerns about the impacts that the Energy East Tar Sands Pipeline will have, should the proposal be allowed to go ahead. I will leave my written presentation with the OEB, but given the time constraints I will present a few of my concerns and summarize the rest of them:

### **Natural Gas Shortage**

I am concerned that Enbridge Gas – which just announced a 40% increase in the price of natural gas in March because of the cold winter - warns that the conversion of the existing natural gas line could send winter heating bills higher and leaves many in the city without heat during the coldest months.

Enbridge met with the City of Ottawa and told them “As it stands now for example, post conversion, Enbridge would be as much as 25 per cent short of capacity needed to serve the Ottawa area on the coldest days of winter.” “TransCanada is creating the impression that most or all of the pipe they are considering for re-deployment is excess capacity — this is far from the case for the Eastern Triangle (east of North Bay).”

TransCanada has denied any new construction would be necessary although Enbridge states that “While there is sufficient excess capacity on the mainline west of North Bay, a new line will have to be built to replace any capacity that is taken out from North Bay to Iroquois.”

I came to the Energy East open house in Stittsville in October and asked a TransCanada representative at the open house about my concerns about the lack of natural gas if the Energy East project went through. He said that he had not heard of that concern. I find that difficult to understand as this was less than a month after the Citizen article and I would assume that spokespeople at the open house would be well-briefed.

I was even more disconcerted when he went on to tell me that TransCanada had no responsibility in ensuring that there was enough gas for the citizens of Ottawa. I was totally shocked at the lack of concern that he had for the safety and well-being of people who are dependent on his company for their home heating natural gas – which, by the way, has a monopoly. We cannot find another source of natural gas to heat out homes.

### **UNESCO World Heritage Site**

At the open house, I asked three separate representatives from TransCanada Pipelines if they knew that the Rideau River was a UNESCO World Heritage Site. Not one did! And several did not know what a UNESCO World Heritage Site was. This is not reassuring! The focus is on building a pipeline – not being knowledgeable about the impacts the pipeline will have on the communities and land it goes through. I am concerned that they cannot make accurate decisions if they do not know the value of the places that they want their pipeline to traverse.

### **TransCanada’s Mis-leading Marketing**

TransCanada's messages appear on billboards, buses, in newspapers, magazines and on social media – heavily promoting Energy East to Ottawa residents. This marketing often contains false information with respect to pipeline safety, employment opportunities and energy security. Do truth in advertising rules apply to this project? I am concerned about who will provide the truth to Ottawa residents so we can make informed decisions about the pipeline?

### **NEB Process Flawed**

The National Energy Board (NEB) process is flawed as all decisions are ultimately approved or denied by the Prime Minister and the criteria to be part of the NEB process is too limited and eliminates many important voices from the conversation. I am grateful that the OEB has engaged on this issue – but it must hold the Federal Government to account!

### **Additional Important Issues**

In summary, other important issues that I am concerned about that I elaborate on in my full brief include:

- The additional climate change that this pipeline would cause by increasing the rate of exploitation of the tar sands
- The erosion of the health and livelihoods of the First Nations who live downstream of the Alberta tar sands
- The increase in rail traffic caused by the return of the diluent from the East Coast to Alberta
- The oil spills - which would be inevitable - which would contaminate land, surface and ground water
- The proprietary information of the contents of the oil which makes it difficult for first responders to react appropriately putting themselves and others at risk
- The cost of the clean-up of tar sands spills which, history shows us, would be borne largely by Canadians not by the oil companies
- The consistency and composition of tar sands dilbert which makes clean-up of oil spills essentially impossible
- The profits of the pipeline would be privatized while the risk would be borne by society
- The oil would be mostly or completely exported. It is not about providing Canadians with oil or jobs
- The project would be a poor investment for Canada – as the same amount of investment in energy conservation and renewable energy will result in energy and more jobs for Canadians
- The project would be shortsighted as the experts say that 2/3 of the energy in the ground cannot be burned if we are to avoid catastrophic climate change. Decisions in the rest of the world may cause tar sands oil to be stranded and unsellable.

## Presentation

TransCanada wants to convert a 40 to 55 year old pipeline designed to carry light natural gas into a pipeline that will carry corrosive and toxic tar sands oil and bitumen. I am concerned that the old pipeline will not be up to the task. I am also concerned that the age of the pipeline seems to be unknown – as the age varies significantly in the literature.

Pipelines leaks are inevitable. In Canada, on average, they now occur at a rate of 94 per year or 1 per 769 km of pipeline. This project proposes to use 3,000 kilometres of an existing pipeline and construct up to 1,400 kilometres of new pipeline. Do the math, there will be many, many spills a year.

I am concerned that when the pipeline breaks - that land as well as surface and ground water will be contaminated in many places along the route from Alberta through Ottawa to the East Coast. TransCanada had 12 spills in their first year after building a similar pipeline project in the US. Although the company claimed that it was built with “state of the art” design features and was predicted to spill no more than once every seven years.

I am concerned that TransCanada’s literature at the open house in Stittsville stated that the pipeline is 99% safe. And in a follow-up document of information requested by a City Councillor, TransCanada stated that “This number relates to the overall Canadian pipeline performance, TransCanada’s safety record is better than the Canadian average that is shown here.” I am baffled how these TransCanada statistics can be correct and request that the OEB examine TransCanada’s statements, facts and assumptions carefully and thoroughly to identify how many spills will be anticipated over the lifetime of the pipeline and what the human health, environmental and economic costs of the spills will be and identify if the company has adequate capacity to manage the spills, pay for the clean-up as well as pay full compensation for the health and environmental damages that individuals will suffer.

Even after being thinned, the tar sands oil is thicker and heavier than conventional crude, and when it hits water, it sinks, making it impossible to fully clean up. I am concerned that if the pipeline breaks as it crosses the Ottawa River that toxic bitumen – the same heavy oil that spilled in the Kalamazoo River in Michigan in 2010 and in Mayflower, Arkansas in 2013 - will destroy the river and cause serious health impacts to all that lies downstream, essentially for ever. This human and environmental tragedy would be made worse as the Rideau Canal is a UNESCO World Heritage site.

I am concerned that toxic chemicals are added to thin out the oil so that it can be pumped through the pipelines. The thinning chemicals have serious negative health impacts. Tests of the Mayflower spill identified some 30 toxic chemicals. The chemicals detected in these tests matched the negative health impacts experienced both in the immediate neighborhood of the spill and in the surrounding community.

I am concerned that the oil companies consider their diluent formulas proprietary and don’t share their exact contents which make it impossible for emergency responders to know how to respond to a spill appropriately. What is known is that even a casual contact with the dilbert vapour will increase lifetime

cancer risk. And with a pipe that's over a meter in diameter and pumping at high speed and high pressures, a small spill is out of the question.

The 2010 bitumen oil spill clean-up in Kalamazoo has cost over \$1 billion to date and continues to contaminate the Kalamazoo River. I am concerned that the citizens of Canada will be left paying for the clean-up as the companies will not have the financial resources or the desire to do so.

I am concerned that Canadians will not benefit from the oil as the oil will mostly or totally be exported. This project is not about jobs nor providing the east coast or any part of Canada with oil. The same amount of investment in renewable energy and conservation would provide more energy and more jobs.

I am concerned that fossil fuels are a major contributor to climate change, which already kills millions around the world each year and causes devastating destruction. The TransCanada pipeline will allow for the expansion of the Alberta Tar Sands, which have been called a ticking time bomb for the climate.

The experts say that 2/3 of the energy in the ground cannot be burned if we are to avoid catastrophic climate change, Thus this project is short-sighted and not a good investment for Canada as the rest of the world begins to address climate change in a serious manner and is likely to refuse to take our oil – as this is happening in the European union with the Fuel Standards legislation.

I am concerned about the health and livelihoods of the First Nations people who live downstream of the tar sands in Alberta.

I am concerned that there would be more trains carrying dangerous loads because the chemicals that are added to dilute the Tar Sands bitumen must be shipped back from the East Coast by train. There will be up to 500 cars per day of dangerous diluent.

I am concerned that Enbridge Gas – which just announced a 40% increase in the price of natural gas in March because of the cold winter - warns that the conversion of the existing natural gas line could send winter heating bills higher and leaves many in the city without heat during the coldest months.

The Ottawa Citizen reported on September 10, 2013 that “Enbridge Gas Distribution is voicing concerns over TransCanada Corp.’s planned Energy East Pipeline project, warning the conversion of an existing natural gas line could send winter heating bills higher and leave many in the city without heat during the coldest months.”

According to the City of Ottawa’s lobbying registry, on Aug. 22 Jamie LeBlanc, Enbridge Distribution’s director, energy supply and policy, and Michelle Wasylshen, manager of government relations, met with three Ottawa city councillors and the City of Ottawa’s general manager of planning and growth management, John Moser, to express reservations about TransCanada’s proposal.

According to a copy of the presentation Enbridge delivered to Moser and councillors Marianne Wilkinson, Doug Thompson and Eli El-Chantiry, “As it stands now for example, post conversion, Enbridge

would be as much as 25 per cent short of capacity needed to serve the Ottawa area on the coldest days of winter.”

“TransCanada is creating the impression that most or all of the pipe they are considering for re-deployment is excess capacity — this is far from the case for the Eastern Triangle (east of North Bay).”

Enbridge says that TransCanada may need to build a second pipeline along some parts of the Energy East route to handle transporting the natural gas that it plans to displace although TransCanada denied any new construction would be necessary.

“While there is sufficient excess capacity on the mainline west of North Bay, a new line will have to be built to replace any capacity that is taken out from North Bay to Iroquois,” an Enbridge spokesperson said.

I came to the Energy East open house in Stittsville in October and asked a TransCanada representative at the open house about my concerns about the lack of natural gas if the Energy East project went through. He said that he had not heard of that concern. I find that difficult to understand as this was less than a month after the Citizen article and I would assume that spokespeople at the open house would be well-briefed.

I was even more disconcerted when he went on to tell me that TransCanada had no responsibility in ensuring that there was enough gas for the citizens of Ottawa. I was totally shocked at the lack of concern that he had for the safety and well-being of people who are dependent on his company for their home heating natural gas – which, by the way, has a monopoly. It’s not like we can easily find another source of natural gas to heat out homes.

At the TransCanada open house in Oct 2013, I asked three separate representatives from TransCanada Pipelines if they knew that the Rideau River was a UNESCO World Heritage Site. Not one did! And several did not know what a UNESCO World Heritage Site was. This is not reassuring! I am concerned that the focus is on building a pipeline – not being knowledgeable about the impacts the pipeline will have on the communities and land it goes through. I am concerned that they cannot make accurate decisions if they do not know the value of the places that they want their pipeline to traverse.

TransCanada’s messages appear on billboards, buses, in newspapers, magazines and on social media – heavily promoting Energy East to Ottawa residents. I am concerned that this marketing often contains false information with respect to pipeline safety, employment opportunities and energy security. Do truth in advertising rules apply to this project? Who will provide the truth to Ottawa residents? I am concerned about who will provide the truth to Ottawa residents so we can make informed decisions about the pipeline.

I am concerned that the National Energy Board (NEB) process is flawed as all decisions are ultimately approved or denied by the Prime Minister and the criteria to be part of the NEB process is too limited and eliminates many important voices from the conversation. I am grateful that the OEB has engaged on this issue – but it must hold the Federal Government to account!



- The cancer-causing properties of these materials makes very long term effects of a spill difficult to accurately measure, and most certainly would be at the expense of the individual and the taxpayer funded health care system.
- In total volume, this [diluent that would be shipped to or back to Alberta for reuse] represents perhaps 1/3 of the volume of dilbit transported out of Alberta by pipeline. *(This also competes for rail capacity with manufactured goods made in Ontario and - as shown in the recent grain-shipping situation in Canada - this can lead to economic difficulties for other shippers outside the fossil fuel industry. I don't recall this last issue being raised during the meeting, and I did not get a speaking opportunity after the presentations and prior to adjournment. )*

Best regards,



Hi

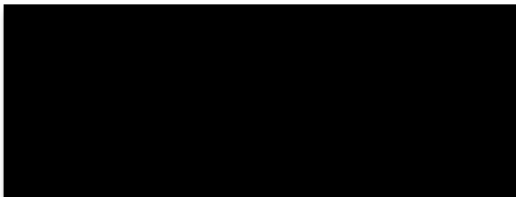
I offer the following comments re the proposed Energy East pipeline:

1) **Negation of Ontario's elimination of coal-based power:** Ontario has succeeded in reducing GHG emissions by terminating the use of coal for power generation. This pipeline will enable an increase in GHG emissions which will totally negate the positive step already taken by Ontario.

2) **Pipelines spill, damaging water, land, and health:** The history of pipelines in Canada and the United States shows us that pipelines spill, and spill often. We can expect old gas pipelines, converted to dilbit pipelines, to fare no better and probably worse. There is evidence that the bitumen component of dilbit sinks in water making cleanup virtually impossible, and long-term contamination a certainty. Also, the diluent component of dilbit is volatile and contains chemicals injurious to health.

3) **Complicity in devastation of tar sands area:** If Ontario does not energetically oppose this pipeline, we are complicit in the immoral activities devastating water, land, forest, and health in, around, and downstream of tar sands operations.

4) **Ontarians will share cleanup costs for toxic dumps in Alberta:** Mining activities in Canada have left a legacy of thousands of extant toxic dumps at old mine sites across the country. Canadian citizens are covering the costs of cleaning up these contaminated sites. We can expect tar sands corporations to find reasons not to clean up the toxic mess that they are creating in Alberta (too expensive, bursting carbon bubble, real or manufactured bankruptcy). All Canadians, including Ontarians, will be saddled with the cleanup costs.



Dear Ontario Energy Board:

I am writing to express my concerns regarding the Energy East Pipeline Project.

The early signs of climate change are already exhibited by extreme weather events, rising global temperatures and rising sea levels. The resulting food shortages in the areas most affected and rising cost of groceries will have an adverse effect on Canadians and those who are the most marginalized in our local and global communities.

The increase in Alberta oil sands production from the current two million barrels per day to five million barrels per day by 2030 is short-sighted on our government's behalf because it does not take climate change and the desire of Canadians to facilitate a shift away from fossil fuel based energy sources into account.

Canada is on the wrong track from an economic as well as an environmental perspective, given the shift is already underway as sales of hybrid and electrical vehicles spiked with the increase in fuel prices in 2008.

I reject the argument that for reasons of public safety pipelines are the preferred option over rail for transporting oil as development is proceeding simultaneously in both sectors. I am greatly disturbed that the corporate interests pushing the Energy East pipeline are moving to push the project through as soon as possible. This is an indication that the market for fossil based

energy is in question. What's the rush when so much is at stake?

With two major pipeline projects delayed and unlikely to proceed; including the Keystone XL and the Northern Gateway pipelines, TransCanada's Energy East pipeline is expected to pick up the slack at a grave cost to our environment through carbon emissions or the high likelihood of a leak as pointed out by the engineer for TransCanada Evan Vokes who was fired for questioning the safety practices of that corporation which was later substantiated by the NEB.

TransCanada's record on pipeline safety is abysmal with eight major events in the past 20 years. The failures are often the result of stress corrosion cracking, the structural deterioration of the steel pipe after a period of years buried underground. Even more troubling is the proposed conversion of the pipeline designed to move natural gas to transport diluted bitumen from the tar sands which is a recipe for environmental disaster.

Given the 15 kilometer distance between shut-off valves and the remote location of where much of the pipeline is located in Northwestern Ontario the difficulty of detecting and responding to leaks and line breaks is increased. Even after the valves are closed, the 15 million liters of oil contained within the 15 kilometers of pipe will be released into the environment. It should be noted that the majority of pipeline leaks are detected by individuals in the communities they occur in. Considering the remoteness of the proposed pipeline; how much oil would be spilled before the shut-off valves were turned? This is the most

disturbing prospect of all because of the pristine ecosystems that are potentially affected by such a spill.

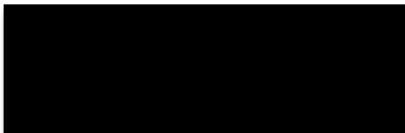
Diluted bitumen is the worst thing to pump. There's potential for a greater volume of oil spills that are much more difficult to clean up. This particular project is not safe, the pipeline is 40 years old and prone to stress corrosion cracking.

I also think it is essential that we place a carbon tax on existing and future rail transport through our province and that this would mean smaller profit margins and ultimately bring the oil industry to a heel.

I also wonder about the extreme weather conditions we face in this part of the world; the prospect of forest fires, and minus 40 temperatures which could impact an already aged and weathered pipeline.

If the public was more aware of the issues associated with the Energy East project I believe they would be inclined to oppose the project as vehemently as I do. The public will should be represented in the political will of our government but it is not.

Sincerely,

A solid black rectangular box used to redact the signature of the sender.

Dear Ontario Energy Board,

Thank you for this opportunity to share my thoughts about the proposed Energy East pipeline. I attended the Stittsville community meeting in April because I believe the Ontario Energy Board should say no to Energy East.

I grew up in Alberta and lived in British Columbia for six years before making Ottawa my home over a decade ago. I've been closely watching the developments of the Northern Gateway proposal for a few years, and now it seems its Ontario's turn to defend itself.

I will keep my submission very simple and list 4 of my key concerns:

1. Climate change. As documented by the Pembina Institute, The Energy East pipeline would increase the industry's greenhouse gas emissions enough to wipe out all the gains caused by Ontario's elimination of coal-fired power plants (eg. <http://www.pembina.org/pub/2519>).

2. Spills. We only need to look as far as the ongoing clean-up of the Kalamazoo River to see the effects of a similar oil pipeline spill (eg. <http://www.epa.gov/enbridgespill/>). 3. Water. Ontario is home to a huge portion of the world's fresh water. It's simply not worth putting our rivers and drinking water at risk by allowing a tar sands export pipeline through Ontario.

4. Economics. Aside from the the need for Ontario to further invest in renewable resources, which would create far more long-term jobs for the province, the focus on exporting mostly foreign-owned tar sands oil works against Canada's economic interests (eg. <http://www.vancouverobserver.com/environment/oil-sands-bitumen-exports-undermine-canadas-economic-future>).

Thank you again for your time.



Ottawa, ON

Having attended meetings in both North Gower and Stittsville, it is clear the vast majority of general persons attending are against this proposal to grow the pipeline. I am very much opposed as well. The oil company could not properly address issues of pipe construction, liability and insurance issues, and really took it for granted that spills and accidents are inevitable. It is really scary that someone would just start shipping this kind of heavy product in a very old pipeline that was build and constructed for something entirely different.

I say do not proceed with this seemingly reckless initiative and find other alternatives to this shipment process.



Nepean resident

To: Ontario Energy Board  
RE: Energy East pipeline

We are vehemently opposed to the Energy East pipeline that TransCanada proposes to run through Ottawa and on eastward, to carry tar sands oil laced with toxic chemicals.

This pipeline is a threat to our water and soil. It would go across the Rideau River, as well as other rivers and farmland in south Ottawa. The Rideau River flows into the Ottawa River, which supplies a good deal of the drinking water in Ottawa. A spill from this pipeline-which is more likely than not, based on what has happened with other such projects in Canada and the U.S.-would poison not just the land, but especially our water, the water we rely on for every- day life.

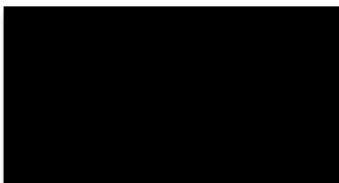
And since diluted bitumen (dilbit) - a mixture of oil and toxic chemicals --- doesn't float, but sinks in water, it would be impossible to clean up. They found this out in Kalamazoo, Michigan, when a spill of dilbit contaminated the Kalamazoo River, which is still polluted after over \$1 billion of cleanup efforts. What makes it worse is that the pipeline TransCanada plans for Ottawa is the 40- year-old line already in place, which is now transporting natural gas. It isn't designed for dilbit, which contains highly corrosive chemicals.

We are extremely worried about this. A bitumen spill would be catastrophic, for our own life here, and for Ottawa as a whole. The Energy East project is not a source of energy security for Canada, either, since the oil that reaches eastern Canada through the proposed pipeline network is for export, not for domestic use. This oil will be sold to foreign countries, and TransCanada will net the profits, which we get the pollution.

We're also concerned about the extent to which the pipeline will exacerbate climate change by facilitating expansion of tar sands oil extraction, which is a major source of greenhouse gas emissions.

This pipeline project, if constructed, will profoundly affect the well-being of our city-and of other towns and cities along the route.  
We think it should definitely not be approved.

Sincerely,





Dear Ontario Energy Board,

I believe TransCanada's Energy East project is all risk and little reward for Ontarians, for the many reasons listed below.

I believe so strongly that Ontarians and the world in general would be better off without the Energy East Pipeline, I wrote the song "#TarFree613", and collaborated on a project to record the song and release a music video. My views are best expressed in the song: <https://velacatalyst.bandcamp.com/track/tarfree613>

And here are more facts, courtesy the Council of Canadians:  
The pipeline would carry diluted bitumen produced in the tar sands across some of Ontario's most important waterways. Diluted bitumen is unlike conventional oil. The Enbridge pipeline spill in Kalamazoo, Michigan demonstrated that diluted bitumen sinks when spilled in water, causing devastating environmental impacts that are nearly impossible to clean up.

It would take only one spill into waterways like Lake Nippissing, Trout Lake, Rideau River or the St Lawrence to cause serious damage. The pipeline also crosses important aquifer and groundwater drinking water sources such as the highly vulnerable Oxford aquifer.

Not only could a spill threaten the integrity of these drinking water sources, it could impact people's health and damage an important pillar of local economies and source of community pride.

The pipeline would result in more than 650,000 barrels per day of additional tar sands production, which means even more toxic exposure for downstream communities.

The increased production would also generate up to 32 million tonnes of carbon emissions each year, which is equivalent to the

annual emissions of all the cars in Ontario.

In addition to transporting diluted bitumen, the pipeline would also transport fracked Bakken shale oil, the substance that exploded in the Lac-Mégantic tragedy.

The Energy East pipeline would cut off the supply of western natural gas, Energy East would make Ontario and Quebec more reliant on fracked gas imports from the U.S. As fracked gas becomes increasingly regulated it will be less available and more expensive, leading to even higher home heating costs for Ontarians.

Meanwhile, the vast majority of the crude that will be pumped through Ontario will be exported to foreign markets. We get all the risk while oil companies get all the reward.

I call on the OEB to recommend that Ontario say "no" to TransCanada's proposal and focus instead on safer, more sustainable energy sources.

Sincerely,



Even if the pipeline could be guaranteed to never spill – which it can't – I still think the pipeline is a bad idea. The tar sands are already the fastest-growing source of climate change pollution in Canada, and this pipeline would only serve to accelerate tar sands production. I would like Canada to start setting an example for the world that we are taking climate change seriously.

Please say NO!

regards,



Groundwater studies show that 90% of our region is sitting on an aquifer that has been designated at *high risk* or *highly vulnerable* for groundwater contamination because of the shallow soil cover and the fractured bedrock of the area. I am attaching the link to the groundwater study that I have referenced.

[http://www.mrsourcewater.ca/assessment\\_report/Text/MV%20Chapter%205.pdf](http://www.mrsourcewater.ca/assessment_report/Text/MV%20Chapter%205.pdf)

Best regards,



Resident of Lanark County

To: Ontario Energy Board

I am a resident of the city of Ottawa. I attended the TransCanada Pipeline open house in North Gower Ontario on April 3, 2014, as well as the Ontario Energy Board hearing in Stittsville, Ontario on April 7, 2014. I have since obtained and read the Deloitte report on the EnergyEast project

I am an ordinary citizen who has serious concerns with this project. These concerns are shared with many of my fellow citizens living in and around Ottawa, but also across Canada. Aside from the serious consequences of increased GHG emissions which no doubt will occur with additional transportation options for heavy crude produced by the oil sands, there are serious environmental concerns with the pipeline project itself. First of all, the fact that a 40 year old pipeline will be used to transport a material it was not designed for. What are the precautionary oversights by NEB or OEB to ensure that the retrofit will be sufficient. Also, the pipeline will have to be drilled for and installed under quite a few waterways including the Rideau River and Canal System, an ONESCU designated site. The risk of a pipeline rupturing and causing significant environmental damage to the Rideau and other rivers, including the important Ottawa River (by the way, I was really impressed and reassured by one of TCPL's head engineers who asked me if the Rideau River ran to Belleville) is huge. The clean up would be complicated and expensive and the damage irreparable.

This of course is not included in Deloitte's report. Only the assumed economic benefits are outlined. These benefits are based on a number of assumptions which cannot really be validated, and appear to reflect a very optimistic bias. Following are considerations, comments, and questions related to the Deloitte analysis:

1. There is no justification provided for using the Stats Can I/O model; what does working with Stats Can actually mean? Does Stats Can actually agree with the use of this model for this purpose? Many variables are not included and are only estimated qualitatively or strategically(see note 5, page2); flowery language but not very meaningful
2. It is said repeatedly that this project represents **significant economic benefits for Canada**. Yet, it represents \$632M per year for 40 years if this pipeline lasts that long and assuming their generous assumptions are correct. The entire oil and gas industry is only 4.2%GDP at \$52B per year. This means that this project represents .000005% of Canada's GDP, in other words a drop in the bucket and not worth the high environmental and economic risks to Canadians.
3. Even Deloitte recognizes that all these numbers can (and probably will inevitably) change as project decisions and assumptions change (as per page 5)
4. Enbridge have just requested an increase in transportation costs for NG to Ontario customers due to shortage of pipeline capacity and yet TCPL's is underutilised. How is this possible and why is the consumer always paying to subsidize corporate greed?
5. It sounds as though Eastern Canada could become dependent on the US, the Marcellus deposit for our NG. Why, in this resource rich country, can we not be energy independent? Again because of corporate greed and the lack of a real national strategy!
6. Because the cost of transporting crude (relative to NG) how can this project be viable, with the installation of so many pumping stations? It doesn't make sense unless TCPL intend to install more than one pipe. It is suspicious, and for all ordinary Canadians know, our Gov't is already on board with such plans. Therefore Canadians can conclude that the Gov't has no regard for the environment, only corporate profits for their friends and royalties for Alberta no matter the cost.
7. According to the report, demand for crude by Canadians will level off or decrease, so why the maniacal pace at which the oil sands are being developed? There will be nothing left for future generations. Again corporate greed. And Canadians do not believe that transport by rail will reduce, given the rate of development of the oil sands., invalidating the argument that pipeline installation is desirable since it is a

safer way to transport crude. It won't matter as they will do both.

8. There is no mention, much less a guarantee, that the jobs generated by this project, will be filled by Canadians. In fact some TCPL engineers at the open house were Americans. TFW's perhaps?

9. There is no mention, much less a guarantee that suppliers (the supposed "indirect" benefits) would be Canadian. Why not?

10. Kinder Morgan incorporated economic benefits of potential spills. Canadians were appalled and would like to know if that is also the case for this project.

11. The \$100M used for refinery investment was pulled out of the air, which makes ordinary Canadians think this is a scam, and is not worth the paper it is written on. Let TCPL be honest and admit this crude is for export, since Enbridge's 9th line will provide enough crude to fully utilize the refineries in the East. This destroys the argument that refineries will get crude at a better price because of this project. On the other hand, Deloitte allude (contradictorlly) to this project reducing the discount on Alberta crude, but there is no evidence that would occur. Again credibility very questionable! And when a TCPL representative tries to tell me at the open house that Ontario would receive royalties for the oil produced, then I realize that Canadians are being out and out lied to! By the way this representative was present at the OEB hearing in Stittsville. Of course I caught him in his lie and he backed down.

In summary, I am completely opposed to the EnergyEast project. And today's announcement by Rickford does not assuage any fears Canadians have about oil spills. All the measures are remedial not preventative. Michigan has not been successful with etting Enbridge to clean up their spill yet after all this time. How will we like it when we have crude flowing into the Rideau and Ottawa Rivers and what leverage will our Gov't possibly have to convince these giants to clean up their mess and much worse how will we be sure they can be prevented. The TCPL representative engineer could not even tell me what their back up configuration is, should communications to the Alberta site go down! Not very reassuring. I hope that the OEB and the Ontario Gov't fight this project and that the NEB rejects it. Unfortunately our Federal Gov't seems to be treating it as a fait accompli. How short sighted and obstinate and foolish and frankly dishonest. Canadians are not being listened to. I hope that changes soon.



**Subject:** Commentary on the Energy East proposal by TransCanada

Ontario Energy Board,

Thank you for the opportunity to attend the OEB hearings and to send you my opinion on the issue.

Please accept and read the comments I have made as a concerned citizen.



<Report to OEB.odt>

[REDACTED]

I attended the OEB hearing in Stittsville, Ontario on April 7, 2014. I came away convinced that there is no net advantage to Ontario to allow the Energy East pipeline to be built. Following is a list of the reasons why I oppose this pipeline.

**1. The dependence of our economy on oil must be reduced.**

- > Changing the pipeline from a gas carrier to oil will encourage more development in the tar sands which will mean
- > more greenhouse gas emissions
- > more risk to Canadian soil and water from pipeline accidents
- > more severely polluted outflow from the tar ponds into the Athabaska River
- > more acres of dangerous polluted ponds in Alberta
- > increased use of diluents (needed to dilute the bitumen so that it can flow) which are sourced in Saudi Arabia and shipped by rail from the Atlantic Coast. 1

**2. There is little benefit to the Ontario economy.**

- > There are very few jobs in the pipeline for Ontarians after the construction. The largest proportion of the bitumen is destined for foreign markets and will not be processed or used in Canada.
- > There is a risk that there will be shortages of natural gas and the price of gas will go up. Ontarians from the Manitoba border to the Quebec border are dependent on gas for heat and industry.
- > Ontario's rich farmland and water resources are at risk if there is an accident. We took this land away from the indigenous Canadians. It is Algonquin territory that has never been ceded to Canada by treaty. It is immoral to take the risk of a bitumen spill. No pipeline should be contemplated without the permission of the Algonquins.
- > There might be some benefit to the Ontario economy if the entire pipeline were new and a large share of its components were manufactured in Ontario, which is unlikely.

**3. TransCanada cannot be trusted to understand the environment and public health.**

- > TransCanada, in their original plan for the Keystone XL pipeline, placed the route through the Ogalalla Aquifer. When the public objected, they moved the route, but why didn't the company plan to avoid the OA in the first place? What kind of expertise and respect for the environment do they have?
- > TransCanada had a large pipeline rupture in the Dene lands of Northern Alberta in 2009, but the public did not hear about it. The NEB warned TransCanada that their field inspections were inadequate, but again this was not publicised. The information was only released to the public through an access to information request (CBC, January 2013).
- > Leaks from a broken gas pipeline in Southern Manitoba occurred this past winter. The pipeline was 50 years old (Global News, 26 January, 2014). For Energy East TransCanada



wants to put diluted bitumen into one loop of their old gas pipeline – is this a good idea? Transmission of oil puts cyclic pressures on pipes that gas pipelines are not designed to tolerate.

- > In Ontario, TransCanada provided the expertise to the Ontario government for the construction of the Gas Plants. It was TransCanada that chose the location, that was subsequently found to be unsuitable for the nearby community. Why should I trust TransCanada's assurances that there is no risk to people of Eastern Ontario?
- > TransCanada has offered the Ottawa public no chance to discuss the pipeline with their environmental experts. In North Gower the Company has had an open house and information session, i.e. a lot of fancy posters were displayed and one could ask question of individuals. However, what we need is a true question/answer session so that all of us could hear each person's questions and the company's answers.
  - > TransCanada treats the public with disdain. Are we supposed to believe that pipe passing under our lakes and rivers will never leak? **If TransCanada were to propose a completely new line with steel manufactured and built in Ontario according to the latest highest standards, I might think I could consider putting some trust in them.**


#### **4. The NEB has been hobbled.**

- > The NEB has reduced considerably the numbers of people allowed to speak at their hearings. Compare the thousands of speakers regarding the Northern Gateway to the few (60) who were allowed to speak regarding Line 9, even though Line 9 is projected to go through the most populous part of Canada.
  - > Why didn't the NEB inform the public of the 2009 rupture in TransCanada's Peace River Mainline on Dene land in Northern Alberta?
  - > Reducing the numbers of people allowed to speak at the NEB hearings will deny me the right to address the issues related to Energy East. I should have the right to speak because I am a stakeholder since I eat the food grown locally on organic farms and use the water from the Ottawa River Watershed. Why shouldn't I be allowed to speak at the NEB hearings?

#### ***National Oil Policy 1961***

This is not the first time that Alberta Oil has come knocking at Ontario's door because of marketing problems.

Alberta Oil, in spite of tax breaks and subsidies since the 1930s, could not sell its oil because it could not compete with offshore oil (from the Middle East and Venezuela). John Diefenbaker addressed this problem in his National Oil Policy (NOP, 1961). According to it, a line was drawn along the Ottawa Valley, and every Canadian west of the Ottawa Valley Line was required to buy expensive Alberta Oil. Alberta was given a monopoly of the Ontario market. This assured market in Ontario's huge population gave Alberta Oil the opportunity to get solidly



established. Ontarians were paying a premium of as much as 50% over the world price for Alberta Oil.

I remember the NOP very well because my father, an early environmentalist, was opposed to it. He thought that Ontario should continue to buy foreign oil, but tax it and use the revenue to find alternatives. I also remember that it raised the cost of living in Ontario when we were starting our family and buying our first house. Also, Ontario missed an excellent opportunity to reduce its dependence on oil – just think that we could have started a green energy project in 1961!

In 1973, OPEC put the world price up, higher than that of Alberta Oil. Then Albertans started to demand that Ontarians pay the new world price for their oil. They said that, unless Ontario pays the world price for Alberta oil, “let the Eastern bastards freeze in the dark”.

Ontario has never been compensated for helping Alberta oil to its prominence. In recent years, the federal government and Alberta should have been supporting Ontario's green energy project to an extent equivalent in value to the help Ontario gave to Alberta Oil. One reason Ontario should not allow Energy East is that our green energy project has not received the support that is its due.

Just consider how good it would be for the rural economy, if more farmers and native groups could profit from participation in the Green Energy Project – just like Alberta farmers with oil wells on their land. Alberta Oil expanded with help from the federal government and Ontario; it's time for similar help for our green energy project from Alberta and the federal government.

***If this Energy East Pipeline is allowed to be built***

- > Ontario's green energy project must be supported in a manner equivalent to that given to Alberta oil. For the same reason, Ontario's development of chromite deposits must be supported in an environmentally safe manner.
- > TransCanada must build a brand new pipeline to the highest standards suitable for diluted bitumen (cf. Mayflower, Arkansas, where an old line carrying diluted bitumen burst and spilled 210,000 gallons of the toxic bitumen).
- > The pipeline must be made in Ontario by Ontario workers at Ontario steel mills. The federal government has been taking \$12 billion out of Ontario in each of the last few years, and a portion of this should be refunded to Ontario to restore our steel industry and jobs for Ontarians.
- > Before construction, TransCanada should post a bond of billions of dollars so that the money is available to repair damage and remediate spills quickly.
- > Before construction, TransCanada must fund and train emergency response teams in case there is a crisis caused by a pipeline failure.
- .> The supply of natural gas for Ontario must to be assured.

Hello Alex,

I am not sure where to sent my suggestions concerning the Energy East Pipeline, but I am hoping that you will make sure that they get to the right person.

Thank you,



<Municipalities need Oil Pipeline Tanker Train Compensation & Clean-up Funds>

## Who Takes the Risks? Who gets the profits?

The Energy East Pipeline poses considerable risks for Ontario citizens, with the profits going to large oil corporations. All possible efforts should be made to **reduce the environmental, social and economic risks for Ontario citizens**. How much risk are we willing to take for oil sold to Canadians? How much risk are we willing to take for exported oil? Please help to make the Ontario Energy Board and the National Energy Board aware of the following concerns:

- 1. Aquifer & Waterway Risks:** The risk of an oil spill in our Rivers and our Groundwater Aquifers is a major concern. Using a 40 year-old pipeline for a substance it was not designed for increases the possibility of leaks and spills (see YouTube videos OIL PIPELINE / TAR SANDS SPILL KALAMAZOO RIVER MICHIGAN). A spill of diluted bitumen, which has now been shown to sink in water, would therefore get to the bottom of an aquifer, poisoning our drinking water, and would be impossible to clean up. A spill would be equally devastating for our rivers and lakes. Pipelines and tanker trains should be kept away from high-risk areas.
- 2. Community Risks:** (2.1) Oil transportation by pipeline or by train should be kept away from populated areas to prevent accidents such as MAYFLOWER, ARKANSAS (see YouTube videos) and LAC-MEGANTIC, QUEBEC. (2.2) Fewer pipelines and tanker train routes would put fewer communities at risk. How many pipelines or tanker train routes do we need crisscrossing our country? (2.3) Pipelines should also be routed to facilitate early spill detection (i.e. along highways, above ground, etc...). (2.4) All possible safety measures, structural and maintenance, should be investigated and implemented for existing and new pipelines.
- 3. Pipeline & Tanker Train Regulations:** The use of pipelines & tanker trains and all the substances they carry must be adequately regulated.
- 4. Compensation Guidelines for Municipalities:** It should not be left to Oil Companies to selectively finance groups that do not question their policies. Municipalities should be compensated for their increased economic, social and environmental risks . . . Oil Companies should pay rent to each municipality for the territory they use.
- 5. Compensation Guidelines for Private Property Owners:** Those who live close to the pipeline should be fully compensated for the risks to their economic situation, their health and their land . . . Oil Companies should be required to pay rent for the land they use or they should buy the land from the landowner at the going market price.
- 6. Insurance Policy for Pipeline & Tanker Train Clean-up Funds:** Before any drilling or oil transportation begins, by pipeline or tanker train, an Insurance Policy for Clean-up Funds should be set up by each Oil Company with adequate funds for health issues and to restore the environment to its original condition.
- 7. Insurance Policy for Tailing Ponds Clean-up Funds:** Before any further development of the Tar Sands or construction of new pipelines, all existing tailing ponds (176 sq km) should be cleaned up and returned to their original state at the oil companies expense. When Tar Sands oil companies (estimated at 71% foreign owned) have finished with the Tar Sands and gone away with their profits, Canadian tax payers do not want to be stuck with clean-up costs . . . as we are now doing for the Sydney Tar Pits in Nova Scotia (\$400 million for an area the size of 3 city blocks).
- 8. Tar Sands Regulation:** Take a closer look at what is happening there and proceed more responsibly (see YouTube video TAR SANDS OIL EXTRACTION-THE DIRTY TRUTH).
- 9. National Energy Policy:** Canada needs to work towards a National Energy Policy. We need to reduce our reliance on fossil fuels by improving energy conservation, energy efficiency and renewable energy generation; we need to balance our needs versus the needs of oil companies and the world.

Comments to the Ontario Energy Board seeking comments from Northern Ontario residents to the Energy East project that is looking for approval to pipe diluted bitumen across Canada in an old natural gas pipeline- April 2, 2014.

*For the last 200 years a system has been steadily developing, supplying global energy demands, while slowly fuelling activities that destroy the planet's life support systems. From a melting arctic to extremely powerful and more frequent floods, ice storms, typhoons, and wild fires, there is no amount of profit or jobs that can excuse this threat to our amazing earth and the future of our children's children.*

***"Life without oil is extremely difficult, but life without water is simply impossible".***

*Energy East's pipeline project is a part of providing diluted bitumen to that system. Producers, providers, and consumers: we are all entangled in that system. We don't have words to accurately describe our dilemma. Our language has no time for words like sin, or evil. But the entrenched system in which we are trapped is leading the world down a suicidal path. And that is terribly wrong. No matter how great or how small our part in that system, we are all in a doomed box and we can only hope beyond hope that the creative minds who guide both this project and the larger system will turn their efforts "outside the box" and develop energy sources that are less destructive.*

██████████ **North Bay, Ontario.** ██████████

To: Alex Heath

Subject: most heartwarming experience in 80 years

I have been an Activist for good government policies in our immediate and worldwide environment. Recently Maude Barlow and Ariel Deranger from Athabaskan First Nation met with 400-500 kindred spirits at our local legion hall as part of a protest against TransCanada Inc's Energy East pipeline proposal. Part of the proposed pipeline is to run thru Trout Lake where we get wonderfully pure drinking water, and have an up to date water treatment plant. No need to say more.

I am writing you to have my say about the the proposed "Energy East" pipeline and thank you and the Ontario Government for this opportunity. I am an activist opponent of this pipeline proposal.

My general opposition is rooted in my heart felt disgust at the destruction of Northern Alberta and our inaction on the issue of our day, namely climate change. This disgust is profoundly doubled by the growing evidence that I have uncovered that leads me to believe that this pipeline will not contain the fluid that it proposed to carry.

Since I attended and expressed my views about the pipeline at the Stittsville OEB meeting, the news continues to get worse. At the Canadian Natural Resources site, a ground geyser continues to spill to the surface, its source still unknown. Near CFB cold lake, bitumen at a SAGD site has been detected coming to the surface just hundreds of meters from steam injection sites, yet the Alberta regulator does not require the steam injectors to be shut off. The issue of tailing ponds is a mess waiting to rupture. Recently, federal scientists reported very strong evidence that that material in these tailings ponds is leaking into the watershed and the Athabasca River. Predictably, the industry blithely responded that "more study is required". Meanwhile, first nations downstream from are the victims of blood cancer rates that would be rightly viewed as epidemic in a white community.

On climate change the news is equally discouraging. As an Ontarian, I'm extremely proud of my province's effort in the elimination of coal-fired power generation and the promotion of renewables. It is very discouraging for me therefore to see a possibility of a project come across our province that will negate all the greenhouse gas reduction that coal has given us. The proposed project in this case is of course "Energy East" and the data I give was supplied by the Pembina Institute, a very moderate environmental organization if there ever was one.

Finally, I would like to raise the issue of pipeline failure. Neither TransCanada nor Irving Oil have responded to my requests for information and the National Energy Board has responded to my requests for information by simply referring me back to TransCanada. In terms of being an effective regulator the NEB has recently decided not to hold company executives accountable by requiring them be cross examined under oath. Its this blatant disregard for our citizen's interests that leaves me in utter contempt for the NEB and the government that directs it and this is a point a raise at every doorstep during my door to door canvassing on this issue. It also makes me hopeful that the OEB process will be a vector for the truth.

I believe, however, that the pipeline will pump dilbit at over 50 bar pressure and

at over 60°C. It will have relatively high levels of hydrogen sulphide compared to most crudes. This hydrogen sulphide content, along with the operating temperatures and pressures is significant as it is what I believe will lead to a spectacular failure of the pipeline. Although, most research has examined the acidity associated with hydrogen sulphide, and has concluded, perhaps correctly, that the acidity of dilbit is of no more significance than the higher pH in other crudes, the performance of pipelines in dilbit service, is poor as evidenced by spills in Mayflower, Arkansas and Kalamazoo, Michigan. One mechanical engineering professor, has credibly postulated that the threat to welds in older pipelines comes not from the ionic form of hydrogen (H+) but from hydrogen's diatomic form (H<sub>2</sub>). Hydrogen in this form will embrittle steel by forcing iron molecules apart, particularly in the area of welds.

I am not able, so far, to find out what amount the proposed "Energy East" pipeline uses horizontally seam welded pipe. But as pipelines, particularly used ones, are relatively new to dilbit service, I feel due diligence would not be complete without a thorough study of this prospective failure mode. I would hope that the engineering specialist that the OEB will look into this prospective failure mode. It would be my pleasure to work the engineering specialist and provide information to him regarding hydrogen embrittlement.

I look forward to your response and hopefully interest in the concerns I have raised. As you receive this e-mail, would you please do me the favour of acknowledging its receipt.

Regards,



Munster, Ontario.

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2.

According to the NGO Environmental Defence, the carbon pollution from increased tar sands production would be equivalent to the ~~reduction~~ ~~we~~ ~~an~~ entire coal phase-out in Ontario, so we would be no better off; lose all the ground we've gained.

The latest UN report on climate change warns of many severe + dire consequences if we don't act NOW to reduce carbon emissions.

1.

Ontario has a real opportunity to act as a gatekeeper + say no to this pipeline + discourage further production in the tar sands.

Trans Canada is fond of quoting statistics that the tar sands contribute a small percentage of global carbon emissions

3.

BNT as citizens we are taught that each person can make a difference, one light bulb, one litre of water, one litre of gas at a time. When will corporations get this message?

How much water does it take to produce one litre of oil from the tar sands? Here's an idea:

How about leaving the bitumen in the ground and covering the huge desecrated surface, the already savaged landscape, with sun-tracking solar panels? Yes, the pipeline would create jobs, but so would a decision to pursue green energy!

Having attended the Ontario Energy Board's (OEB) Community Consultation in Thunder Bay on Mar. 26, we now oppose TransCanada Pipeline's conversion proposal on several levels. The Alberta tarsands currently produce 7% of Canada's greenhouse gas output. EnergyEast would boost that figure to 10%+. Globally, we hear of China's poor environmental record and yet Canada produces 3 times the greenhouse gas per capita of China. EnergyEast leads us further down that unsustainable road. The OEB should not support the proposal. Expanding the tarsands to satisfy corporate greed and conspicuous consumption is obscene.

On a local level, the proposal calls for converting the 50-year-old natural gas pipeline to transport 1.1 million barrels of diluted bitumen through northwestern Ontario daily. The pipeline crosses the headwaters of the Current, Mackenzie, Wolf, Black Sturgeon and Nipigon Rivers, all of which flow into Lake Superior. Natural gas leaks (even explosions) have occurred but they dissipate into the atmosphere. Dilbit leaks will flow downstream resulting in far more serious impacts on human health and the environment. If the National Energy Board (NEB) approves this project, a new, double-walled oil pipeline must be constructed.

The final question asked of the facilitator at the Community Consultation was: "If my opinion has already been expressed by another member of the public, is it important that I restate it?" The answer was clear: "No, this is not a vote." So the OEB will conclude these meetings knowing that some people support the project, some people support the project with upgrades and some people don't support the project. Common sense tells us that they knew that going in. Clearly, the OEB does not want to be burdened with considering politically-inconvenient statistical data from public input in making its recommendation to the NEB.



## TCPL Energy East Pipeline – Risk/Reward

As a 40 year plus resident of the North Bay area and a baby boomer, I must comment that our young people's future lies within the oil and gas sector whether the protestors to the Energy East Pipeline realize it or not.

Historically, in the 70's, jobs were available at Ontario Northland, CPR, CNR, MTO, MOE, MNR and MGS as well as private firms. Not today. The jobs are simply not there. Are you content with your children and grandchildren working at restaurants and fast food chains forever? Not me!

Ontario, Canadian and North Bay residents have a unique opportunity that could match that of Saudi Arabia in the 80's. We need to understand the big picture, in that we have a product that others want to purchase. Oil and gas!

If we had diamonds, potash, silver or gold, these are all natural resources that we would market. All countries do that. This is business and what we must do to make a living and feed our families. I find it disturbing that protestors and their recruits are so short sighted and our municipally elected officials are so opposed and objecting of the project without consideration of TCPL, with little to no effort to try and work collaboratively with them to help ensure the safety and integrity of the pipeline. TCPL have indicated on several occasions that they are considering installing heavy wall pipe in some sensitive locations, along with other safety measures including strategically located shut off valves, enhanced pipeline monitoring and emergency response plans, coupled with a promise to fix any problems in the unlikely event that any occur.

Readers, I have 4 pipelines that cross the property where I work and I've work within 100 meters of those lines for the past 25 years with no problems what so ever. Trans Canada Pipelines work safely, professionally and are great corporate citizens. Many Canadians are proponents of this project. In the end, most people will never see or know this pipeline is there and in the unlikely event there is a problem, TCPL will fix it at their cost guaranteed. How about that!

In conclusion, the City and its residents need the economic benefits resulting from this project and in my opinion the benefits far outweigh any risks. Our future and our rewards as citizens are imminent and the economic benefits to the city and its residents are definitely worth it.



To Whom it May Concern:

I respectfully urge the OEB to say a resounding “NO” to the Energy East Pipeline.

Even a single spill/leak can potentially devastate the rich network of aquifers and the river system it proposes to cross.

If it were even POSSIBLE to guarantee zero spills (we know that is impossible given the track record for pipelines) this is a project intended to allow expansion of the tar sands, an already egregious blot on the Canadian environmental record. As Canadians we should be doing everything in our power to eliminate the tar sands; the latest UN report on the environment demands no less!

In celebration of Earth Day say, “Yes” to the environment; say, “No” to Energy East.

Respectfully,



Subject: Energy East Pipeline Conversion

We have not been convinced that there is no threat to the City of North Bay's drinking water. Even a minuscule oil leak would be unacceptable. We strongly oppose transporting oil through pipelines anywhere close to our sources of water that could condemn or remotely compromise our City's drinking water.

sincerely,

A solid black rectangular redaction box covering the signature area.



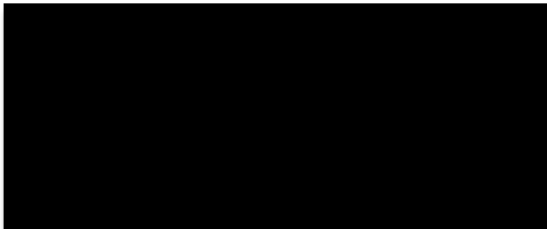
To People with Influence:

If you have not already heard it, would you make a point of listening to the CBC broadcast on "The Degrowth Paradigm". (<http://www.cbc.ca/ideas/episodes/2013/12/10/the-degrowth-paradigm/>). My view is that our political leaders need to start preparing the public to accept the idea of degrowth, or at least no growth. By continuing to build infrastructures that lead to growth, we defeat ourselves. At some point we need to get off the bandwagon of constant growth. Saying "No" to Energy East is a small way to at least slow growth and begin getting people used to adjusting their life styles to be more in keeping with preserving the planet.

Canadians don't need the oil stemming from Energy East. It is intended for export. Preventing the flow will of course have some economic impact, but investing in renewable resources could go a long way to compensating for it.

Please encourage the kind of leadership that will move us off the path of self-destruction. Say "No" to Energy East.

Sincerely,



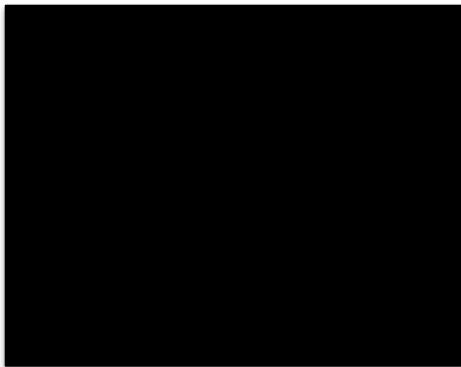
Hi

I've tidied the e-mail version and send as a Word attachment

Looks a lot better without the black sections

I've also updated the remarks

Cheers



## Comments Following the Cornwall OEB hearing

Thanks to all who organized a successful OEB meeting in Cornwall.

As I mentioned we own 100 acres – or is that 40 hectares – and various companies have pipelines therethrough

TransCanada 2 gas and looking to build a third

Enbridge Line 9B

I successfully accomplish many activities in the community and therefore bring a number of perspectives to the table. Therefore my comments are not just as a landowner.

1. The first time we dealt with pipeline construction some 40 years ago we were not impressed for a number of reasons. And I set these out to show the contrast in present approaches. They also show why we are less than impressed with oral comments
  - i. The person with whom we dealt often arrived inebriated – he was later fired or so we were told
  - ii. He threatened us with expropriation and zero compensation if we refused to sign
  - iii. Post midnight blasting during construction – illegal at the time – stopped only after we complained. We were told it was company policy to disobey the law until called on it
  - iv. The option agreement was written to include all our property – including location of our home - even though the representatives showed where they intended to install the pipeline
  - v. People who didn't read the contract carefully were signing away all of their property
2. We are now dealing with both Trans Canada and Enbridge
3. TransCanada paid us \$ 1 K to conduct a survey for possible new pipeline construction  
We are assured it is for gas transmission although we have also heard rumours to the contrary. They probably could have done the survey without our permission
4. The lands to be surveyed in the agreement presented included all 100 of our acres  
Our questioning this provision led to an agreement regarding a strip along the existing pipeline



5. We have also signed some agreements with Enbridge

Despite written promises to be advised when work is to be done on our property – we have dogs which we often walk off leash - we would not have known about work which occurred the other day had I not come upon a crew about to go across our neighbour's property to do the work

That is also the route for access to our property so what they were doing was OK  
No prior notification despite written internal company message to do so

6. We have signed contracts which contain minimum amounts of payment

5 for repairs to possible pipeline compromise welds, etc.	@ \$ 1 K Total \$ 5 K
overall compensation use of land	\$ 3.9 K
inconvenience	\$ 1 K

7. I'm not convinced that these amounts especially for fixing the pipeline are even necessary in light of first right-of-way agreement

8. We are in the midst of having a further discussion involving another problem. We understand the total compensation for this one correction will be at a minimum of \$ 5.9 K

You can see the total value is almost \$ 16 K for our minimum right-of-way in the scheme of things. Totally length across our property is 1320 feet.  
And that's without TransCanada's \$ 1 K and further before construction even starts!

My concern is for the single mom having to choose between food and heat for her family next winter. I'm not sure how energy charges are set but if they are set above expenses then surely those expenses should be examined

A few other general pipeline issues in addition to the ones above

1. If the experience on our property is any indication Line 9B is quite compromised and it is doubtful whether the increased pressure of reversal will be a safe enterprise

These deficiencies did not become public until the study was ordered by the NEB –  
AFTER approval

It would indicate that the NEB's approval does not depend upon effective correcting of deficiencies

2. Should the whole of the pipeline along our property be replaced? How would we know?

3, Who does the inspections – the pipeline company or one of the Energy Boards – and who is entitled to the information?

Can we see the results of the pig running down the pipeline or do we have to wait until the pipeline company tells us?

3. Is the NEB involved in ensuring the remediation necessitated by the approval conditions for 9B? Is the OEB?

Or is the pipeline company on its own to determine and fix any problems

4. Are pipelines required to do annual pig inspections? Who gets the results?

Does the OEB require inspections for non oil pipelines?

Who determines the type of inspection? Are there different types of pigs?

We understand the first problems dealt with possible weld deficiencies and the second with thinness of the walls of the pipeline for the reversal of 9B project

5. I understand that not all (oil) spills are reported.

Who is entitled to this information and how is it accessed?

And has any company been charged with not reporting a spill?

Is there such a possibility?

6. I understand that pipeline construction conditions are less stringent in rural than urban areas.

Why? Are lives worth more in some areas than others?

Is an entire watershed less important than a paved parking lot?

7. Are there studies which show the devaluation of property due to pipeline rights-of-way?

Does MPAC take these into account when assessing property?

At what level ( s ) are the Ontario government programs interconnected?

8. Why does the province allow pipelines to make grants instead of paying municipal taxes in order to prevent landowners from deducting the latter from taxes owing

9. Is the pipeline allowed to use blasting techniques in order to install the next pipeline? Even though other pipelines carrying gas are very close?

10. Who sets the conditions for liability in case of an accident? Will pipelines be given the same exemption as the nuclear industry regarding accidents? etc. etc.

Will there be a limit on the liability for any single incident?

Is this a question for the OEB even for oil pipelines? Which Ontario laws apply to such companies?

And these are only 10 and that's not the top 10!!!!

The new breed of people arriving from the pipelines is quite different from the earlier ones. In fact with one of them we discussed the courses he took at university in Alberta about dealing with landowners

For the football player: "When to kick and when to pass and when to run"

Assess the landowners and if they are at all questioning offer to come back another day after solving their concerns

Good luck as you continue

I always enjoy watching the project owners listen as the pros and cons are debated at a meeting while they remain mute.

Often not even answering questions for which they would have the answers

Not surprised when that occurred at the Cornwall meeting

This isn't a comment on the facilitation but rather on the silence of the Trans Canada personnel

It's a rather condescending attitude towards the public

Because oral promises – and sometimes even written ones – aren't followed we are currently seeking from Enbridge the name/position of person who will send written replies to our written concerns.

I also worry that we talk only about the pipeline as a "project" unto itself and less discussion given to the content of what is to be delivered

The German trains ran very well during WWII. And that may have been one of the problems for those who didn't survive

I know this metaphor is out-of-context but I hope it helps to make the point

By isolating the content and context of the conversation we limit legitimate concerns

And I also realize that there were parameters set for the meeting – just wish they had been more encompassing

Thanks for listening

Please contact for further elucidation!!!

Concerned landowner

Hi Alex,

I've read the draft report and share most of its concerns.

It is unfortunate that there is not one organization to represent all of the different groups, so that we could speak with one voice. I fear that without a consensus, we will not be taken seriously (ex. cold fusion?).

What was missing was a description of an actual dilbit leak along a pipeline. Leaks at pumping stations did not cause much of a problem but I couldn't find anything (so far) for a pipeline leak. Without a factual event, it's hard to convince anyone of the ramifications of "what if?".

### **Coal Tar Cleanup**

I remember the coal tar cleanup project on the Rideau River south of Lees Avenue, Ottawa in 1986. (Google search: Rideau River coal tar cleanup).

It cost millions of dollars for the cleanup of a relatively small volume of stable coal tar from the bottom of the river.

I want to pursue this research further to see how this could relate to a future dilbit spill along the Energy East Pipeline. A liquid spill is not the same as a gas leak.

We're not alone in this: [Toxic coal-tar cleanup to cost New York \\$3 billion](#) 02/07/10

Thanks,



Hi Alex,

I'll give them a call to ask: how much of that Western gas comes from the existing Energy East Pipeline to be converted to dilbit? How will that affect the price of gas to service our area?

[REDACTED]

Begin forwarded message:

**From:** [CustomerCare@enbridgegas.com](mailto:CustomerCare@enbridgegas.com)

**Subject:** **Subject: Email Us Form**

**Date:** April 22, 2014 at 2:36:02 PM EDT

**To:** [REDACTED]

Dear [REDACTED]

Thank you for your email.

Please accept our apologies for the delay in response to your inquiry. We had to reach out to find out as much information for you as we could. The figures below are for this year.

For 2014 we have budgeted approximately 16 percent of the total supply to come from the United States, and approximately 42 percent of the total supply to come from Western Canada. The remaining 42 percent is from our direct purchase customers who deliver gas directly into the EGD franchise area. We do not know where these supplies are procured.

If you require further assistance, please reply to this email or contact our Billing department at 1-877-362-7434 between 8:00am to 6:00pm Monday through Friday, with the exception of statutory holidays.

Regards,



Customer Care  
Enbridge Gas Distribution

**Did you know?** If you sign up for paperless billing by May 15, 2014 you have a chance to win up to \$5,000. *Learn more.*

Get more on our [April Rate Change](#) and a [Budget Billing Update](#).

**From:**



**Sent:** April 9, 2014 19:32

**To:** CustomerCare

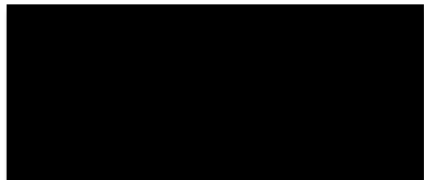
**Cc:**



**Subject:** Email Us Form

Subject: Email Us Form

Account Number :  
Writing about :  
Customer's Name :  
Email :  
Home Phone :  
Work Phone :



Question/Comment: On your website, it is stated that the gas comes from the West and from the US. What percentage of the gas supplied to the Ottawa area last year came from the West?

Thanks

# EnerCare

Your Intelligent Energy Partner

April 22, 2014

Service Address:

[REDACTED]

Re: Enercare Connections Inc. Account # [REDACTED]

To Whom It May Concern:

This letter serves to confirm that [REDACTED] is a customer of Enercare Connections Inc. Our records indicate that they have the following payment history with Enercare Connections Inc. from the period of March 24, 2010 to present:

Number of Disconnection notices: 0

Number of NSF's: 0

Account status: Active

Based on the credit history, Enercare Connections Inc. considers this customer to have a very good credit rating with our company.

If you have any further inquiries, please do not hesitate to contact our office.

Yours truly,

[REDACTED]

*Customer Care*

ENERCARE CONNECTIONS INC.  
1-866-449-4423

**Subject:** re: Submission to the Ontario Energy Board regarding Energy East Project

Good Morning

**With regard to the Energy East Project** which proposes to change the transportation of Natural Gas to Dilbit in their line NPS 42 which passes into the United States at Iroquois, ON.

This pipeline was constructed to supply Natural Gas to the Eastern United States in the early 1990's but due to the U.S.'s sudden boom of shale extracted natural gas and light Crude oil this pipeline has become under utilized and probably will become redundant as Eastern Canada has become a net importer of natural gas from the U.S. I used the HTML medium because hyperlinks to relevant documents is easier for the reader to access than the constant reference to a back pages for bibliography, notes, index, etc. This subject is complex so by way of a summary I broke this into sections with headers (I had planned to hyperlink these portions of document but have run out of time and expertise in HTML.)

While I am scared of the changing of this pipeline from transporting Natural Gas to transporting DILBIT. The most likely alternative (which seems to have already **become the norm and will increase with or without this change**) is, at least, equally scary and that is transportation of DILBIT and petroleum products by rail. Abandonment of major portions of the **transcontinental mainline** railway network a couple of decades ago has already put Southern Ontario in a number of various precarious situations as there is now a very narrow and congested pair of tracks along Georgian Bay, through Southern Ontario and municipalities, the Greater Toronto area, the north shores of Lake Ontario and the Saint Lawrence River and municipalities and the Greater Montreal area. This traffic has increased by nine times in the last few years and will continue to grow no matter what. This is going to make Ontario's proposed \$26 billion dollar transportation network at least that expensive but this could save considerable funding there, lowering the risk and giving a number



of job opportunities to the North Eastern Ontario. So I also included some documentation and suggestions regarding this.

[Here is a link to my submission](#)

If there are any problems or queries please notify me. Best Regards



To the Ontario Energy Board

### **With regard to the Energy East Project**

which proposes to change the transportation of Natural Gas to Dilbit in their line NPS 42 which passes into the United States at Iroquois, ON.

This pipeline was constructed to supply Natural Gas to the Eastern United States in the early 1990's but due to the U.S.'s sudden boom of shale extracted natural gas and light Crude oil this pipeline has become under utilized and probably will become redundant as Eastern Canada has become a net importer of natural gas from the U.S. I used the HTML medium because hyperlinks to relevant documents is easier for the reader to access than the constant reference to a back pages for bibliography, notes, index, etc. This subject is complex so by way of a summary I broke this into sections with headers (I had planned to hyperlink these portions of document but have run out of time and expertise in HTML.)

### **I consider this whole problem is**

- **The artificial mixing of scrap natural gas condensate with Alberta Tar Sands bitumen (which, as extracted, does not contain any condensate.) and which, if accidentally, released from pipelines and/or railway or truck tanks is exceptionally dangerous to the environment particularly waterways.**
- **A series of Transportation Problems that started with the abandonment transcontinental railway main line within the Province of Ontario bringing all freight rail traffic down into Southern Ontario through the GTA, along the north shores of Lake Ontario and the Saint Lawrence River to the GMA through a very congested corridor and highly populated and developed area of Ontario.**
- **I believe that TCPL, the National Energy Board and the Ontario Energy Board do not fully realize the dangers of either of the above!**

---

### **Summary Headings.**

1. **\* The Danger of DILBIT is it's neutral bouyancy in water.**
2. **\* Any waterway, gully, ditch, etc., even if it has been dry for decades, that this pipeline corridor intersects is SIGNIFICANT**
3. **\* The rocky areas of the Canadian Shield has been particularly prone to full catastrophic pipeline eruptions in the past! They must be carefully studied.**
4. **\* The oil game suddenly changed throughout the world - The U.S. is self sufficient in Natural Gas and almost there in Crude Oil. That crude they used to buy will go to the rest of the world making DILBIT very hard to get rid of - especially in eastern Canada where all the refineries save one (Imperial, Sarnia) can't process it. Just who are they going to sell this DILBIT to?**
5. **\* The Lac Megantic disaster was the result of a completely unnecessary combination of greed, carelessness and absolutely chaotic actions top with a load containing a lot of unnecessay Natural Gas Condensate.**
6. **\* Since 2010 when 30,000 carloads of crude where shipped this has risen to 400,000 carloads - seems like rail is growing competition of pipelines.**
7. **\* Much of the direct Main Line railroads in Northern and Central Ontario have been abandoned forcing all rail freight traffic into a very narrow and very congested corridor right through Ontario's most populated and developed sections.**
8. **\* Reports indicate railroad traffic has increased by 9 times in Canada**
9. **\* The solution, to me, is obvious. Simply revitalize the National Transcontinental Railway that was abandoned a few decades ago and move the ultra long and ultra dangerous freight traffic onto that line.**
10. **\* North Eastern Ontario has 16 million acres of potential Agriculture land that could grow the basis for bio-fuel!**

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**\* My concern with TCPL's East Energy pipeline conversion is that it will transport considerable amounts of scrap Natural Gas Condensate mixed with bitumen to form a liquid mixture they call DILBIT.**

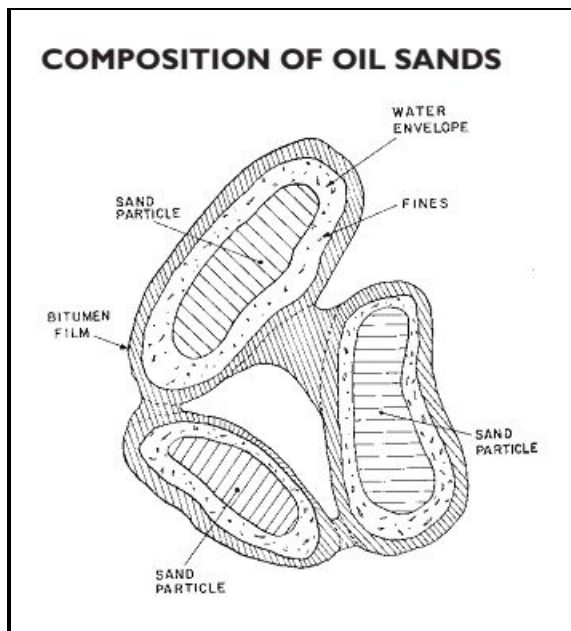
Sep 6, 2013 I was watching CBC news and surprised at what viewed so I watched it again two hours later and then a few days after that I accessed CBCnew's archive copy [Enbridge's Kalamazoo cleanup dredges up 3-year-old oil spill](#) and watched that video for the third time.

- I could not believe that DILBIT was suspended in the water column (neither floating, as I thought it should be) or sinking to the bottom (as the EPA people in the video assumed.) **It had been that watershed for 3 years and was still giving off gases, even though a billion dollars had been spent cleaning that up!**
- Later I went to show this video to another person and the video was no longer available (revision-Sep 13, 2013.) Taking that video offline bothered me and has continued to bother me for some months as I researched the transportation of DILBIT.
- One of my family found it on youtube [Enbridge oil spill still a mess Environment.mp4](#) it shows:
  1. at 0:51 minutes - there is a **shot of oil globules flowing within (not on) the river taken from above the water**
  2. at 1:00 minutes - there is a **shot of oil globules flowing within (not on) the river taken from below the surface (underwater)**
  3. this was immediately followed by the reporter Margo McDiarmid sitting in a boat, with EPA workers,
    - saying this oil spill happened over 3 years ago and **"if she looked carefully at the water she could still see an oily slick coming off the surface of that river."**
  4. an EPA worker explained that was a "spontaneous sheen" and said it was actually caused by oil stuck in the mud giving of gasses!
    - **Natural Gas condensate was still coming out of that mixture even after three whole years had passed!**after 1:50 minutes this video went on and on as these things do until finished at 3:50 minutes.

**DILBIT is a man made mixture of 25% to 40% scrap Natural Gas Condensate(with the methane, propane, ethane and Butane already removed) that was left which used to be and sometimes is still [burned off to get rid of these toxic gases.](#)**

**For those of you not familiar with the Origin, Properties and Processing of the Alberta Oil Sands bitumen I prepared a [condensed version of this.](#)**

An infographic outlining what a group of the oil sands looks like:



"OIL SANDS ARE HYDROPHILIC OR WATER WET. Each grain of sand is covered by a film of water, which is then surrounded by a slick of heavy oil (bitumen)." by Karl A Clark who defined the bitumen extraction process still in use to-day."

**I was surprised to see this graphic showing the bitumen on the outside of the water envelope (with sediment) which surround the quartz sand grains.** I would have thought that the bitumen would have adhered directly to the sand grains. Is this the reason why this bitumen has neutral buoyancy and suspends in the water column instead of floating like normal crude oil would?

## 1. \* The Danger of DILBIT is it's neutral bouyancy in water.

[API gravity](#) under Classifications has this:

1. "API gravity, is a measure of how heavy or light a petroleum liquid is compared to water.
2. **If its API gravity is greater than 10, it is lighter and floats on water; if less than 10, it is heavier and sinks."**
3. "Crude oil with API gravity less than 10 °API is referred to as extra heavy oil or bitumen."
4. **"Bitumen derived from the oil sands deposits in the Alberta, Canada area has an API gravity of around 8 °API."**
5. **"It can be diluted with lighter hydrocarbons (*natural gas condensate*) to produce diluted bitumen, having an API gravity of lower than 22.3 API, or further "upgraded" to an API gravity of 31 °API to 33 °API as synthetic crude.[6]"**

From this I deduced that on release from the confines and pressure of the pipe those natural gas condensate start to release from the DILBIT into the air (their normal state.)

1. should water be encountered (or colder temperature) the viscosity of the bitumen lowers trapping the remainder of that condensate within it.
2. That is why this DILBIT has a tendency towards neutral buoyancy and why it suspends in the water column.
3. If DILBIT gets into standing water  
it will kind of half float around "like clouds" in a random haphazard fashion where it might also be [subject to the twice yearly water Turnover](#) which would distribute these "clouds of DILBIT" even more, further and for much longer .
4. or when it gets into moving streams it could go hundreds of kilometres downstream until lakes are encountered.

These conclusions are confirmed by the Concerned Professional Engineers in their following reports!

1. [Reports from the Concerned Professional Engineers](#)
2. [Environment Canada's own scientists are not convinced that tar sands oil can be cleaned up](#)
3. [Can Diluted Bitumen be Cleaned Up?](#)

**Being as how they presented this to the Northern Gateway Joint commission how could the (Pipeline Companies, National Energy Board and the Canadian Government) ignore this?**

The fact a DILBIT spill can and does suspend in the Water Column is really, really scary because **in the area I mapped (from the arctic watershed on highway 11 to the crossing of the Rideau River there are, at least 133 potential spill sites into watercourses which ultimately drain into major watercourses like the Ottawa River, Lake Nipissing, Mattawa River and Ottawa River (all less than 50 kilometres away!) and this is a very small part of Ontario**-- The following waterbodies are also in jeopardy of a spill - Lake of the Woods, Lake Superior, Lake Nipigon and James Bay as well as the streams running into them. The pitiful list (less than 30 significant water crossings) that was in TCPL's Energy East propaganda just doesn't cover potential problems.

**2 \* Any waterway, gully, ditch, etc., even if it has been dry for decades, that this pipeline corridor intersects is SIGNIFICANT**

**because multiple millions of cubic metres of DIBLBIT might be released from that pipe NPS 42 on a catastrophic accident (and there have been at least a dozen such since this pipeline was first started in the mid 1950's) Each of these waterways and there destination must be carefully studied for Risk Assessment and documented Emergency Preparedness with solutions and mitigation be prepared and submitted given prior to Approval!**

I was surprised that most citizens didn't know which pipeline was going to be converted, where it was, what the effects may be, etc. but after attending a few of the public information centres and trying to navigate TCPL's Energy East propaganda on their web pages I began to understand why! So I decided to map the areas and put these maps into pdf format because that can be read by almost any PC, MAC, tablet, etc. and gives the ability to pan, zoom or print them.

1. [SC1-ArcticWatershed-TemiskamingShores.pdf](#)
2. [SC2-TemiskamingShores-Hwy64.pdf](#)
3. [SC3-Hwy64-NorthBay-Hwy630-NipissingMattawa.pdf](#)
4. [SC4-Hwy630-DeepRiver-MattawaOttawa.pdf](#)
5. [SC5-DeepRiver-Renfrew-Ottawa.pdf](#)
6. [SC6-Renfrew-RideauRiver-Ottawa.pdf](#)

**I decided to restrict the above mapping of scenarios to the area that I know well (there are likely 3 or more hundred more crossings just in Ontario.**

By way of explanation:

after 35 years I retired from the Planning and Design Division of the Ontario Ministry of Transportation's Northern Region and now after 21 years of retirement I have had 56 years to learn and become more aware of the geology, history, waters, and forests because of a lifelong passion I have for the outdoors (particularly canoeing.) **In any case, I know this country, these waters and their characteristics better than most.** My home is on Lake Nipissing and my summer home is on the Ottawa River both of which at risk from this pipeline's DILBIT.

**3. \* The Rocky areas of the Canadian Shield has been particularly**

# prone to full catastrophic pipeline eruptions in the past! They must be carefully studied.

If you go through the maps you will probably notice the red explosive symbols - these indicate some of the following list of pipeline ruptures that were carefully documented by TSBC. In all, only the major catastrophic spills that occurred in North Eastern Ontario were shown.

- All of which were Natural Gas that went up into the air.
- **At atmosphere Natural Gas and DILBIT are at the same volume!**
- It is also **interesting to note that all of these disasters occurred on the rocky Canadian Shield but there has been no incidents on the glaciolacustrine soil areas.** This should be carefully studied as the pipes in these areas have less than a meter of cover over them, in most winters little or no snow covers them so they must be watercourses between the two frozen side which would wet or could even wash out the beach or blow sand that these pipes rest on over the very sharp and pointy blown trenches. In addition to that the MTO and others have had very significant problems with Galvanized Corrugated Steel pipe (covered with creosote, bitumen, etc.) corroding to the point that they have to be replaced after only about a third of their life span. You don't have to believe me on this one either as the following was taken from [August 7, 2013 Road Weary](#)

## **Where do these problems exist – are the regionalized?**

"Yes, to a degree they are regional in nature, for sure. With respect to CSP, we experience bigger problems in the north than in Southern Canada and bigger problems in the east than in the west. To a large extent the Canadian Shield defines Northern Canada; not only is it one of the most challenging places in the world to build infrastructure, but its environment is also extremely sensitive to such things as acid rain. Infrastructure in Eastern Canada is generally older and more industrialized than in the west, and westerly winds bring additional challenges to the east." ... "So, when designing and building infrastructure components, you had better have a good understanding of the local environmental and weather conditions in which you're working, as well as an intimate knowledge of soil types and water chemistry, climate stats and any other relevant anomalies or vagaries of the area, specifically in the area immediately surrounding the installation."

... **"And you should also be revisiting previous design strategies and decisions that you and/or other engineers have made in the past at the site – whether it was installed a decade or a century ago – to see if they worked as planned and, if not, how they might be modified or improved this time around.** - See more at:

<http://www.cspi.ca/node/391#sthash.5Aju9VVR.dpuf>

- Back in the early 1990's TCPL seemed to prefer to put pipeline corridors in these inhospitable areas **probably because of cost savings as this was usually crown land or couldn't be developed (in either case very cheap) and this was also away from built up areas meaning they could use the lowest possible class of pipe possible, (also very cheap.)**

I couldn't see any value in re-repeating the excellent documentation of the [2010 Marshall, MI DILBIT disaster](#) which only spilled a volume of 3,300 cubic metres (m3.) of product lost making this disaster very tiny compared to some of the following incidents reported to the [Transportation Safety Board of Canada - pipelines.](#)

The following gives catastrophic spill as discussed above:

*Date / link TSBC report/ volume product lost / comment or relative order of magnitude to Kalamazoo spill*

1. Feb 19,2011 [P11H0011 Beardmore ON](#) -- 2,790,000 m3. (this was 846 times greater than Kalamazoo)
2. Sep 26,2009 [P09H0083 Martin River ON](#) -- 1,430,000 m3. (this was 433 times greater than Kalamazoo)
3. Sep 12,2009 [P09H0074 Englehart ON](#) -- 3,420,000 m3. (this was 1,036 times greater than Kalamazoo)
4. Jul 23,1991 [P94H0036 Latchford ON](#) -- 4,194,000 m3. (this was 1,271 times greater than Kalamazoo)
5. May 30, 1979 Englehart ON [Timmins Times](#) (this was news media)
6. Oct 13, 1977 North Bay ON [Nugget\(near Hwy 17\)](#) (this was news media)

7. Oct 13, 1975 Englehart ON [Wikipedia](#) (this was wikipedia)

8. May 17,1961 North Bay ON [Nugget Airport Road](#). (this was news media)

The largest spill is #4. Latchford at 4,194,000 m<sup>3</sup>. (cubic metres) which must be considered as the worst case scenario and should be compared with the Kalamazoo spill (3,300 cubic meters) which fouled 56 kilometres of the Kalamazoo waterway in August, 2010 and it hasn't been cleaned up yet!

I have to wonder if Trans Canada Pipe Lines, the Federal, Provincial and Municipal governments along with the citizens **really realize what the effects of changing the "cargo" of that pipeline from a gas to a liquid like DILBIT** could be to the people and the ecology of these lands and waters.

**I expect that a clean-up of a worst case catastrophic spill would be in the hundreds of billions of dollars!**

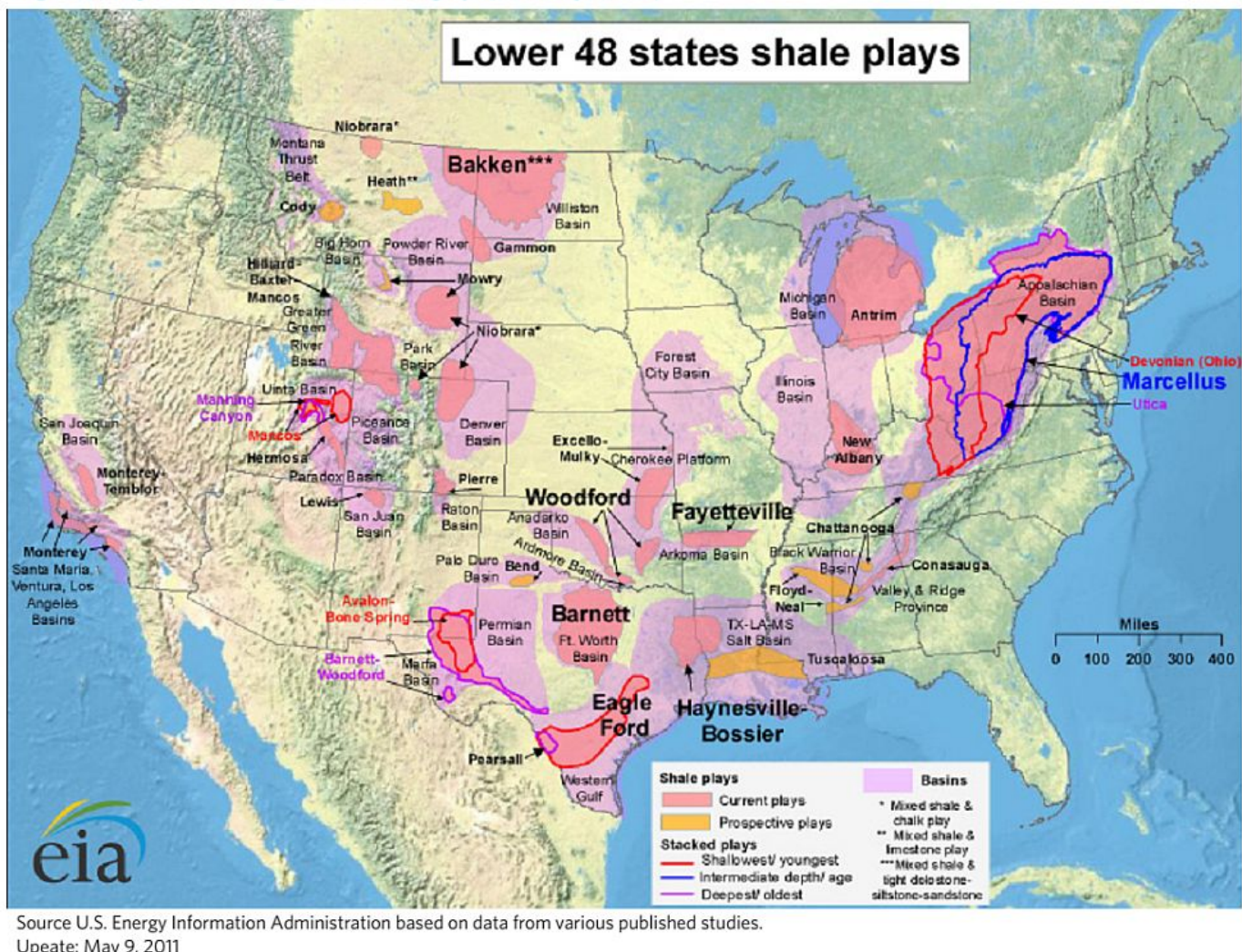
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**4. \* The oil game suddenly changed throughout the world - The U.S. is self sufficient in Natural Gas and almost there in Crude Oil too. That crude they used to buy will go to the rest of the world making DILBIT very hard to get rid of - especially in eastern Canada where all the refineries save one (Imperial, Sarnia) can't process it. Just who are they going to sell this DILBIT to?**

Tired of being held hostage by their demands for energy, particularly crude oil, the USA did a lot of research and in 2011 published - [Review of Emerging Resources: U.S. Shale Gas and Shale Oil Plays](#) The result is that they have a lot more hydrocarbon resources than even they thought - seems like a change in administration was good as the following map shows. Let us hope that shale gas/crude extraction isn't as dangerous or as short lived as some say. However, recent reports indicate it is going to continue or expand.



Figure 1. Map of U.S. shale gas and shale oil plays (as of May 9, 2011)



A series of media articles:

1. A 2013 May 14 Bloomberg's article - [Oil Shockwaves From U.S. Shale Boom Seen by IEA Ousting OPEC](#) indicates that there has been a major change in Oil Supply that will hit economies of the world fairly hard. Canada isn't immune **but because of the composition of the Alberta Bitumen the U.S. Gulf Coast refineries still want it as it produces a lot more diesel fuel than shale crude and the fact that they have already invested heavily in coking refineries to process this bitumen! This is probably the only place in the world (because there aren't all that many cokers) that wants Alberta's DILBIT !**
2. A 2012 Oct 10 Reuters article - [To use cokers, U.S. refiners scour Europe and Africa](#) states that:
  - "U.S. refineries invested heavily in delayed coking units, anticipating they would be processing increasing quantities of heavy crude from sources such as Venezuela, **Canada** and Saudi Arabia".
  - "Instead they have found themselves processing light crudes from shale plays such as North Dakota's Bakken and the Eagle Ford in Texas."
  - So, these mega refineries and cokers got caught the same as the ones now delayed or cancelled in Alberta.
  - They didn't expect the U.S. shale gas/oil boom either
  - this has up-ended the economics of the refining business throughout the world.
3. A 2014 Jan 1 Financial Post article - [How upgrader plants are giving way to new oil sands technologies:](#) confirms the above. In 2008 the Alberta players had delayed and/or cancelled over a 100 billion dollars worth of upgrader plants which would have converted bitumen to syncrude (which is bitumen processed by cokers in Alberta to produce a product very similar to light crude oil.)



"Rather than sink billions into on-site processing, Imperial and Suncor plan to use a novel technique dubbed paraffinic froth treatment to convert molasses-like initial output into a product able to flow in pipelines." ... "The strategy reflects a view that deep discounts for less-processed heavy oil will collapse as export pipelines are built. The gap, or differential, has widened to more than US\$40 in recent months against the U.S. benchmark West Texas intermediate." ... "There "will be some market problems in terms of dealing with more light crude oil barrels in the marketplace, especially after the BP Whiting [Ind.] refinery switches over to a diet of all Canadian heavy," Mr. King said in a report this month. The switchover will push more than 100,000 barrels of light oil into an already saturated market, he said, exacerbating pressure."

**However, the Prairie Provinces have been and are shipping a lot of Syncrude not by pipeline but by rail and shipping it to the world! TCPL's propaganda indicates that this Syncrude could be used to dilute the bitumen but is that practical as it would have to be over 50-50 and that stuff is mixed so this must be re-refined. I am no expert but I am not stupid!**

4. Fortunately this [2014 Alberta report on Upgrading and Refining](#) shows that neither Alberta or it's Oil Companies have just sat back but have moved forward creating valued added processing (upgraders) so that as the 2008 recession declined and the price for these products resumed it's upward climb and the demand for their value added products such as syncrude increased. There are now 5 operating upgraders and four operating refineries with 3 more new project.
5. The Canadian Government have been counting on major pipelines particularly, George W. Busch's **Keystone XL** (but there already is a Keystone pipeline that has been transporting DILBIT to refineries into the U.S. Gulf Coast and some of the refineries there are equipped to handle Alberta Oil Sands bitumen. They don't seem to be having much luck and I attribute that to the new tank cars with steam heating coils that can carry Alberta bitumen to any selected U.S. Coker Refinery. The abilities and flexibility of the rail lines once they have awakened have really put pipelines in jeopardy.
  - o Whatever U.S. political party that okays the XL might never ever get enough votes to govern for decades.
  - o Why doesn't the Canadian government understand this?
  - o And don't they realize that there is also a growing number of Canadians getting very angry about this DILBIT transportation in pipelines near them too?
  - o This is growing much faster than Federal Government ken!
  - o Push and win these pipelines into Eastern Canada to export to countries offshore and I doubt very much that they will stay in power beyond their current mandate.
6. **Because Eastern Canada only has ONE refinery with coking ability (already supplied with DILBIT by the Endbridge pipeline of Kalamazoo fame) it is logical to assume the other destinations for the DILBIT transported by this proposed Energy East project pipeline has to be shipped offshore and to undemocratic countries who are desperate but can't afford coking facilities**
7. And why do the Canadian Oil Producers and Federal Government people complain when their barrel of DILBIT is discounted? Do they really think that somebody would pay willingly pay 100% of the cost and shipping of DILBIT when in shipping the recipient would lose 30% to 40% of that to worthless natural gas condensate (and they must dispose of it) along with a further 15% loss in coking it into Syncrude so that they can refine it?
8. Who else do they think that they can sell this DILBIT too, when all of a sudden, the world is awash in much cheaper and more easily refined light crude oil simply because the United States does not need as much crude oil as it did just a few years ago! That light crude oil that the US had relied on and no longer wants will be sold to other countries (but probably not to those in the European Union which is already well supplied by the North Sea and Arabian crude oil producers!)

I don't see the rush, particularly by the Canadian government, because that bitumen will still be there (as it has been for over the last few million years) if it can't be sold at a decent profit and to the benefit of Albertans and Canadians?

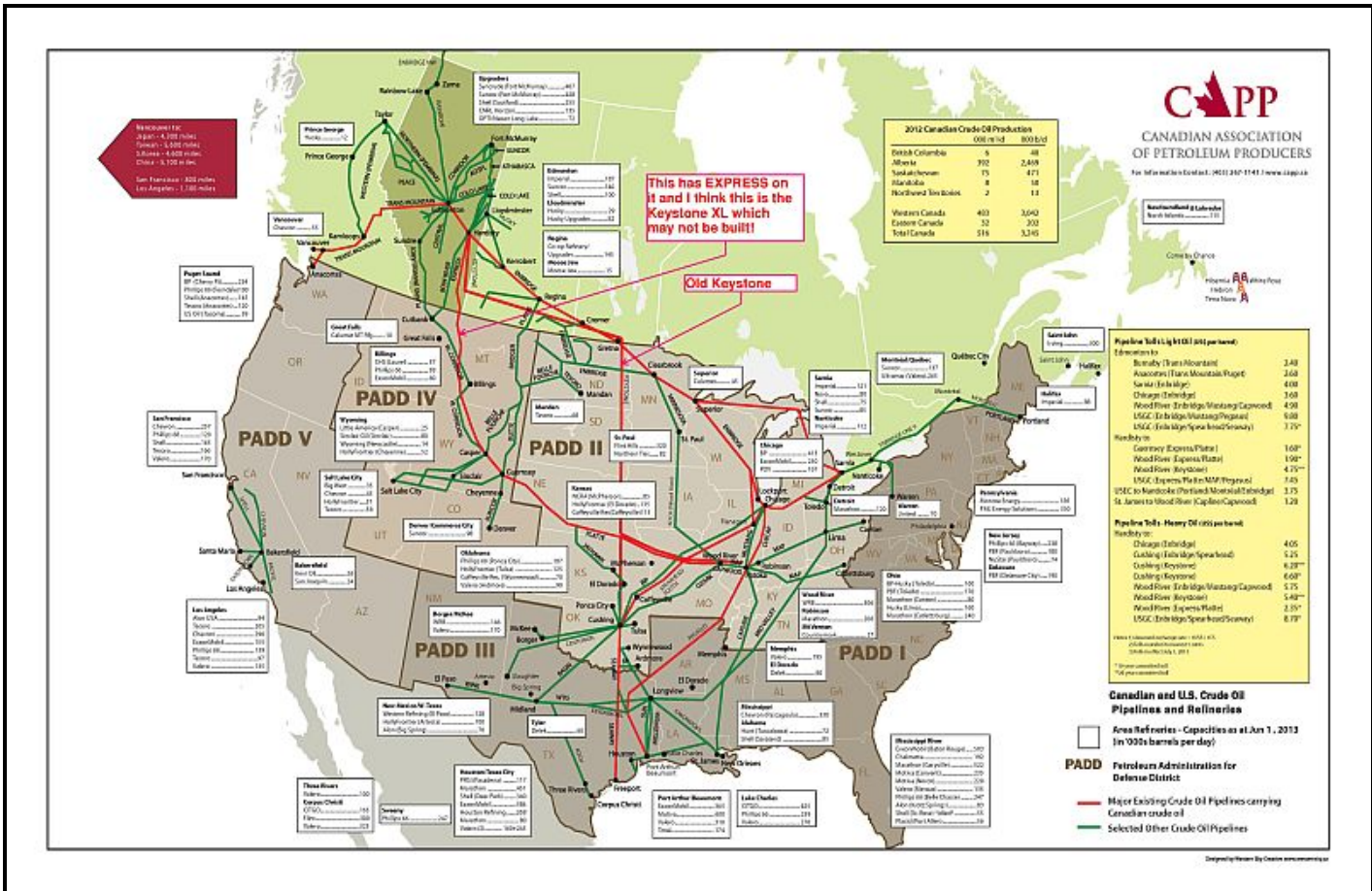
1. **Why worsen the situation in Alberta if it isn't necessary, especially when the extraction alone is so hungry for water and natural gas energy? I have read reports that suggest that Alberta might run out of natural gas to extract that bitumen by 2028.)** I hope I am wrong because when these energy resources (natural gas) are used up prior to 2028 -- **that may be the end of Alberta Oil Sands extraction, period!**

2. Why else would a [Nuclear provider targets oilsands](#)
3. I suspect that Ontario's Natural Gas Electricity Generating Plant was cancelled when they discovered that natural gas from normal western sources was in short supply and that the prices could get to be astronomical.
4. The \$13.5 billion price tag of the abandoned Voyageur upgrader and coker and its demise is evidence as to why the Eastern Canada refineries (except for Imperial Oils Sarnia facility - supplied by Endbridge DILBIT pipeline of Kalamazoo notoriety) **have no intention of constructing or simply can't afford a coking facility.**
5. Bitumen and heavy oils are not drawing anywhere near the price of sweet crude and or syncrude and the above article also refers to "steep discounts of \$15 to \$18" applied to Alberta crude. Actually a discount of only \$18 is a very good deal for Alberta DILBIT as it is 25 to 40% DILuent (which is scrap and can only be burned (or released to the air but the US has hefty fines for that) and the rest is bitumen.  
if light crude is getting a \$100/barrel the discount for a barrel of raw DILBIT has to be \$30 (.30 x \$100) as there is only 70% of the barrel is bitumen in that mixture.) Then because that bitumen still needs to be coked an additional 15% will be lost which is an additional \$4.50 is waste then **the discount would have to be \$34.50 to equal light Crude.**
6. This tells me that there isn't much chance of somebody buying the Alberta DILBIT crude that has been pumped to the Atlantic coast because right now there is a glut of sweet crude or syncrude in the world simply because the U.S.A. is not buying so much of it!
7. And an Apr 10, 2013 Financial Post's article - [Can pipelines in Eastern Canada boost refineries?](#)
  1. This article repeats that Imperial's Dartmouth refinery in Nova Scotia is for sale... "Imperial's stance underscores that while TransCanada Corp.'s Energy East pipeline are welcome relief valves for the Canadian energy industry **they may do little to boost the prospects of some refineries in Central and Eastern Canada.**
  2. A little further along in this same article states that "Brent-linked OPEC and [North Sea crude](#) roughly make up 82% of Eastern Canadian imports, while Mexican and U.S. oil makes up 6%, according to EcoResources Consultants."  
The Canadian Government and has stated on several occasions that these Eastern Canadian refineries are reliant on non democratic countries. So what? We actually have relatives and friends and good relations in non-democratic **Norway, Sweden, Denmark, Holland, and Belgium.**
  3. The South Portland, Maine to Montreal, QC pipeline now feeds offshore crude from the Atlantic Ocean to Endbridge's Line 9 **which has just received NEB permission to be reversed so that oil or BITUMEN feeds from the West from Endbridge's pipelines in Michigan to Montreal, QC to South Portland, Maine to be shipped overseas.**
  4. Curiously enough nobody asked the Citizens of South Portland, Maine [and now it seems they want to pass a law](#) forbidding Alberta DILBIT from passing through their city and on to their seaport. In this topsy-turvy world that may or may not happen but I expect it won't!
  5. **For years this pipeline has been receiving off shore light crude oil from South Portland, Maine west to some refineries in Quebec and Ontario.**
  6. **The latest approval was to reverse this flow so it went to the east.**
  7. To where?
  8. **It is obvious that this pipeline will no longer be able to deliver this offshore sweet crude to Quebec and Ontario refineries!**  
This same article says "Enbridge estimates its Line 9 reversal will save refineries about \$23-billion over 30 years from accessing lower cost crude." **Don't they mean no crude? These refineries can't process DILBIT!**  
**Are these savings going to occur because these refineries are going to be shut down because of Lack of Crude? Will Endbridge or the Canadian Government reimburse them for losing their businesses? How many Canadians will lose permanent jobs? Is Ontario and Quebec's fuel supply (gasoline and diesel) in danger of being cut off?**  
Maybe I am stupid but didn't anybody in the Canadian Federal Government or the NEB realize what was going to happen with the line 9 reversal?
9. Right now quite a number of people weekly cross the US border to fill their gas tanks up - is the Canadian Federal Government trying to encourage this?
10. Following are two very recent articles about the RECENT GLUT OF OIL in the world

1. [2014 04 09 North American Oil Glut to Keep Prices Low, IMF says](#)

2. [2014 04 10 Gulf Coast Storing Oil Due to Supply Glut](#)

11. Why are the Federal Government and TCPL trying to change the material carried in that pipeline to something that nobody wants?
12. This conversion of a 42" pipeline to carry DILBIT is something that, to me, doesn't seem to be very well thought out!
  - Who are they going to sell DILBIT to?
  - Have these (unknown) recipients made any commitment(s) to purchase at an agreed price which won't leave Canadians holding the bag?
  - Has this even been presented to those recipients yet?
13. [Harper Lobbies Europe as Canada Fights Dirty-Oil Label](#) This just continues the above dialog about the efforts of the Canadian Government and the responses to it.



[Click](#)

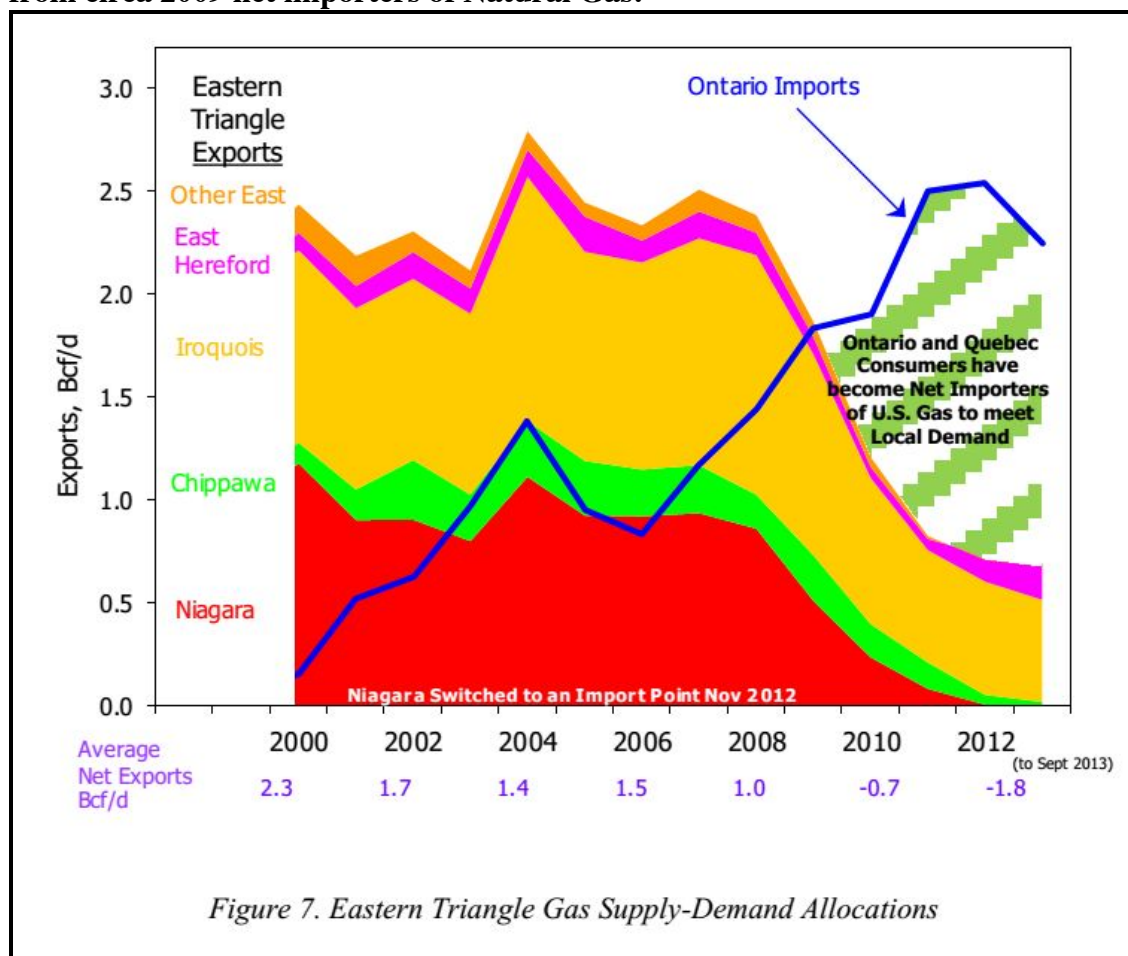
[for a PDF](#)

With the PDF it is possible to zoom in on this so that you can see and read the name or the current crude oil pipelines on the continent:

- on the right side there is a table of the current pipeline tolls!
- there is also the 2012 Canadian Crude Oil Production figures
- and all the current refineries along with their daily capacity.
- It also shows that there is already a pipeline from Hardisty, AB to the Gulf Coast called the **Keystone** (it's Pegasus extension owned by Exxon ruptured in Mayflower, AK in 2013 spilling more Alberta DILBIT.)
- At best, the proposed **Keystone XL is a shortcut or are they worried the older Keystone pipeline will rupture again?**
- Why wasn't this map included in TCPL EEP public information centres and/or propaganda? I didn't come across any hints of this in Federal Government literature either.



The Ontario Energy Board's background paper -- [Ontario Natural Gas Pricing and Supply](#) shows that from 2000 to today Quebec & Ontario have steadily become dependent on U.S. Natural Gas and from circa 2009 net importers of Natural Gas.



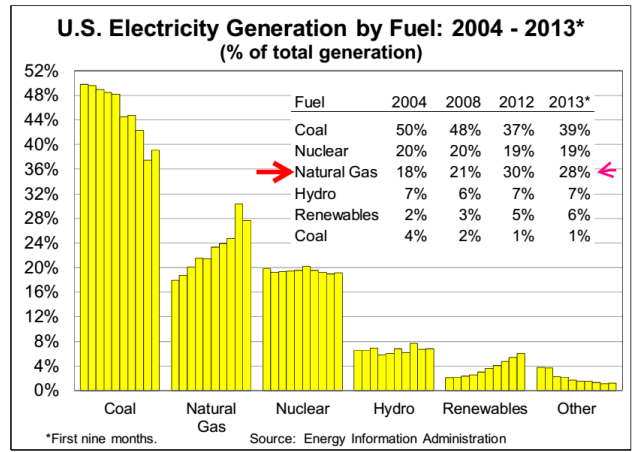
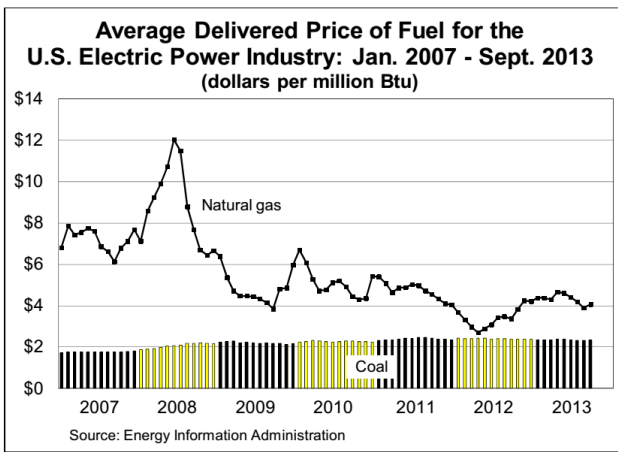
- A puzzle [Enbridge seeks nearly 40 per cent hike to natural gas rates](#) and it says nothing about the cheaper natural gas from the U.S. that only needs to be shipped about a tenth the distance! Just how stupid do they think Canadians are?
- [Alberta deficit soars on natural gas bust](#) "Plunging natural gas prices are gutting the Alberta treasury, with the once-booming province staring at a deficit of almost \$7-billion, its biggest ever."
- From this it looks like the USA shale gas boom has affected TCPL's Bottom line too:
  - Their pipeline NPS 42 (in the preceding graph the orange one labeled Iroquois) is now the one they now want to change that pipeline cargo over to DILBIT,
  - but it only ever delivered Natural Gas to the USA (none to Canada) and it looks like it will soon become redundant.
  - C'est la vie.
  - Obviously this didn't happen overnight the trend of this boom seemed to started 14 years ago. Were these people and our Federal Government asleep at the wheel?
  - I am sorry but I think that if a company takes a risk, builds a pipeline and it doesn't work out it is the company's problem especially if they have had over couple of decades of profits to recover their money!
  - I don't see why the Canadian Government is helping TCPL out as this is the same pipeline that they now want to convert to transporting DILBIT.
  - Especially when there is much market for Alberta Dilbit anywhere but the U.S. Gulf Coast.

About the same time as I found the above map in OEB's background documents that showed the switch of Quebec and Ontario's import of natural gas, the **Ontario's Gas Generating Plant boondoggle** hit the media again So I started researching the background of this too.

On Sep 30, 2009 TCPL issued the following media release -- [TransCanada to Build \\$1.2 Billion Power Plant in Southern Ontario](#).

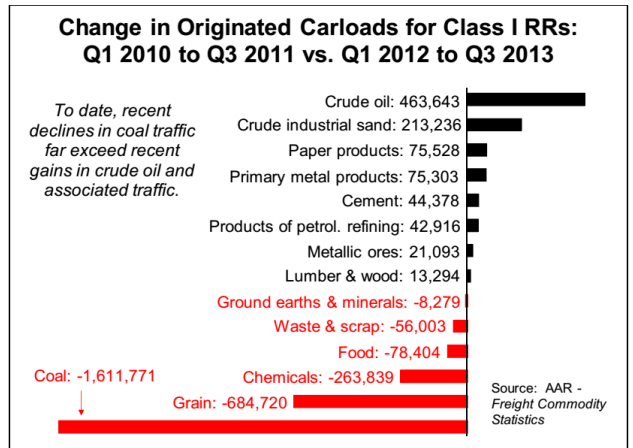
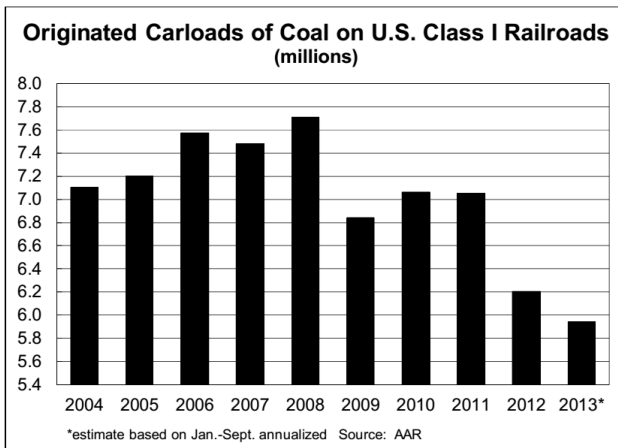
- On reading this I couldn't help but notice the similarity of this announcement and the news media [hype that TCPL's Energy East is now pitching](#).
- Some how, some way this gas plant got cancelled, we Ontarion's lost a billion dollars and **I find it hard to believe it was NIMBY "Not In Back Yard" which the Ontario government blamed it on.**
- I suspect that: **the Ontario Government found out there wasn't going to be enough natural gas to feed these generating plants in the future but had had signed a twenty year contract at very inflated prices compared to what they would have had if they imported natural gas from the USA.**
- In either of the above cases, I think the Ontario government must have been embarrassed by the mistake they made in contracting with TCPL.
- Being in the pipeline transport business TCPL must have seen the U.S. natural gas exports increase and their incomes erode.
- Why did TCPL not advise the Ontario government that they had a pipeline that was under utilized and passed through a lot of areas on the Canadian Shield that were not good for farming and/or development but were within a kilometre or two of Ontario's Hi Tension Electricity Transmission Network lines that could have easily been used to transport gas generated electricity to where it was needed?
- Or was it simply because there is not enough Canadian natural gas left to power these generating plants? Has all the natural gas in Canada been used up? (I say this because that must be the energy that drives the Alberta Oils Sands extraction, upgrading and refining? I understand that processing this stuff is very energy intensive.)
- **Why aren't the TCPL simply applying to reverse this line to supply Ontario customers with U.S. Natural Gas for energy (generating stations, heating, etc.) there piples cover every aspect of Ontario and this pipeline is 30 to 40 years younger than the original ones that are now blowing up.**
- Given that TCPL were instrumental, to some degree, in the Ontario Gas Line Scandal should we trust TCPL with a conversion of a natural gas pipeline to DILBIT that could jeopardize our waters?

Speaking of gas plants the [U.S. Energy information Administration: Crude and Natural Gas](#) states it has converted a great many of their coal burning electricity generating plants to natural gas - lowering their Green House Gas emissions - this is shown below



Can this mean that there is going to be a "glut" of cars that used to carry coal??

Reduced electricity generation from coal has meant a big decline in rail carloads of coal. U.S. Class I railroads originated 6.2 million coal carloads in 2012, the lowest annual total since 1993. Coal carloads could dip below 6 million in 2013 (see the chart below left). Over the past few years, the decline in coal carloads has far exceeded the increase in carloads of crude oil and frac sand for U.S. railroads (see the chart below right).



Notice the lower red negative bar in the lower right hand panel of this info graphic. There were 1,811,771 fewer (rail) carloads of coal delivered to U.S. coal fired generating plants in less than 3 years!

The Globe Apr 27, 2014 article - [U.S. LNG export can have large impact overseas](#)

**If U.S. really wants to export this stuff why not to Ontario! Perhaps we should be reconsidering Natural Gas Electricity Generating stations but through private corporations in direct competition with Ontario Power Generation!** As mentioned above the pipelines are there and smaller and/or larger plants could cover many areas in Ontario.

But "TCPL did not advise the Ontario government that they had a pipeline that was under utilized and passed through many areas on the Canadian Shield that were not good for farming and/or development but were within a kilometre or two of Ontario's Hi Tension Electricity Transmission Network lines that could have easily been used to transport gas and/or gas generated electricity to anywhere it was needed in the Province."

## In the U.S. it seems that trains are gaining on Pipelines

[Mar. 2014 Trains magazine page 28 - "All Oiled up"](#) states the following"

- o (page 28c1)"James Cairns is jazzed as well the should be. The Canadian National Railway marketing

executive is standing at a podium in Calgary Alberta, facing 200 movers and shakers of the Canadian oil business. Three years ago they wouldn't return his phone calls. Now these same people hang on his every word. He starts with a 102-second video that graphically delivers (over a fast, loud rhythm) CN's transportation advantage, that it goes from the heart of the Alberta oil fields to the Atlantic, Pacific, and Gulf coasts and most places in-between. The Cairns leans into his presentation. The CN network, he says, looks a lot like the pipeline network today and where it wants to go tomorrow." **At its core, his message in the next 30 minutes is this: I can help you make a lot more money. The audience eats it up.**"

- (page 28c2) "The reason the rail share isn't already 15 or 20 percent may well be that the specialized tank cars and unit train transload terminals that will drive down the cost of moving oil don't exist; There's a two-year backlog of orders for new tank cars. "A savings of \$1 a barrel returns \$450 million a year back to our business," remarks Joe Gallagher of refiner Philips 66, reflecting that industry's focus. "We're on the hunt for that dollar."
- (page 28c3) "But it's also because the oil business has changed, too - it's been turned on its head. "The U.S oil infrastructure is a puzzle someone just threw on the floor, and it's being completely redrawn" says Jay Harbison, senior vice president of EDF Trading. New drilling methods opened up oceans of oil until recently thought untouchable. Now the centers of growing oil production are new locales the pipelines barely reach, places like North Dakota (the Bakken shale deposit), Alberta (oil sand), and South Texas (Eagle Ford shale). "The past is almost irrelevant today" says Stephen Bradley, vice president of oil marketing for Continental Resources."
- (page 28c3) "**The fly in the ointment the disastrous safety record involving Bakken shale on railroads. Three explosive derailments in less than six months, all involving oil from North Dakota, expose a problem railroads don't know how to solve (or even its cause). After all, crude oil isn't normally thought of as explosive. Yet 47 people are dead as a result, and public mistrust of railroads as safe custodians of this substance is on the rise.**"

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## **5. \* That Lac Megantic disaster was the sad result of a completely unnecessary combination of greed, carelessness and absolutely chaotic actions top with a load containing a lot of unnecessary Natural Gas Condensate.**

Mention of this disaster has and is being used very frequently by TCPL, the Federal Government and the news media to push pipelines by slamming the reputation and use of Railway transportation.

To understand this sad and really nasty event I tried to shorten the story of [what led up to this disaster and what actually fueled those fatal flames!](#)

**In Summary -- there was too much "Natural Gas Condensate" in the crude oil from the Bakken Field, and make no doubt about it, DILBIT is the same mixture with a different name to protect the "innocent"**

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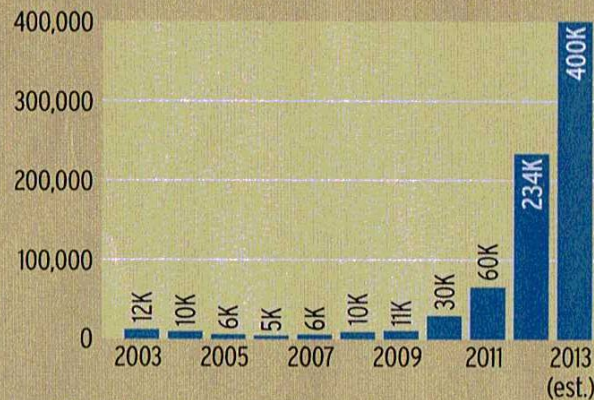
## **6. \* Since 2010 when 30,000 carloads of crude where shipped this has risen to 400,000 carloads - seems like rail is competition of pipelines.**

Lets return to the Mar. 2014 Trains magazine - "All Oiled up"



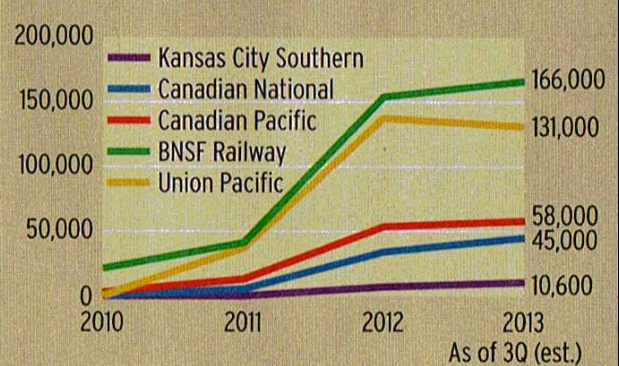
## OIL BY RAIL'S RAPID RISE

Originated U.S. rail shipments of crude oil (carloads)



Source: Association of American Railroads

Class I railroad crude oil shipments (carloads)



Source: Railroad annual reports and investor presentations

28 **Trains** MARCH 2014

- "Currently the largest group of refineries capable of processing Alberta Oil Sands bitumen is the U.S. Gulf Coast (capacity 9 million barrels/day) so the rail-pipe competition is between Alberta to the Gulf Coast."
- "At first it seems that all the advantage is toward the pipes."
- but later writes "shows that rail has "noticeable cost advantage over pipeline" in that to get bitumen to flow through a pipeline DILBIT must be used (approximate mix of 30% diluent/70% bitumen) which makes the pipeline about 70% efficient." "Plus, you have to buy the diluent and ship it to the pipeline source"
  - Diluent has become scarce in Canada and must be shipped in from overseas according to Enbridge - ([In the Northern Connection documentation](#)) Endbridge wanted to purchase it in Africa or Asia, transport it by ship it to Kitimat, BC; construct new facilities and Condensate storage tanks, and then send it by a new second smaller pipeline to Bruderheim, AL, where additional new storage tanks would be constructed.
  - This can't help but continuously push the per barrel price of these condensate even more than it already has.
  - **After studies of Lac Megantic, QC Marshall, MI & Playfair, AK I wouldn't be surprised to see that U.S. legislation will not allow the shipments of crudes containing natural gas condensate (DILBIT is 30% condensate and 70% bitumen) over U.S. soils by any means be it pipelines, rail or truck.**
- "And of course, when it gets to the other end of the pipeline, the refinery gets an ocean of diluent and must dispose of it." "diluent is the box that bitumen comes in and nobody wants" says engineer Scott Smith of Cenovus Energy. "It just adds transportation costs."
- "Using ordinary tank cars, you also need dilbit."
- "But if you load the oil into an insulated tank car outfitted with steam-heat coils (reportedly, this describes the bulk of the 60,000 tank cars to be built through 2015), "you can fill it with railbit that is, 83 percent bitumen and only 17 percent diluent." "...At the destination, steam heat is applied to warm the railbit to a flowable temperature."

**To me, this doesn't seem much sense nor is not much of a gain because "these same insulated tank cars can also haul raw bitumen which must be steam heated to 200 degrees Fahrenheit to flow." But research shows that DILBIT**

1. at 10C=50F bitumen is the consistency of a hockey puck,
2. at 20C=68F bitumen is the consistency of peanut butter (even held upside down it doesn't pour out.)
3. at 35C=95F bitumen is quite fluid about like maple syrup. and so can easily and economically be heated for bringing into the refinery because it's temperature has to raised for processing



**in any case.** The different mean temperature between Alberta and the U.S. Gulf coast will lower the viscosity and amount of heat required.

....

- 
- See the Financial post article [Late to oil-by-rail, Canada faces risks in rush to catch up](#) states "For the last three years, Canada has lagged the United States in using its rail system to haul crude oil, hindered by a lack of loading terminals and a shortage of specially built rail cars that reheat viscous oil sands crude." ... "Now it's on the brink of catching up. Over the next 12 months, producers like Cenovus Energy Inc and logistics firms like Gibson Energy Inc will load up mile-long dedicated trains with ultra-heavy bitumen oil and move them thousands of miles in heated and coiled rail cars that eliminate the need to dilute the crude for pipeline shipments."
  - [Wikipedia's Oil Sands](#) under 7.4 Rail states that "Producers of new oil in Alberta, North Dakota, and West Texas are now shipping oil by rail to coastal refiners who are having difficulty obtaining international oil at prices competitive with those in the interior of North America. **In addition, crude bitumen can be loaded directly into tank cars equipped with steam heating coils, avoiding the need for blending it with expensive condensate in order to ship it to market.**"

- 
1. Back in Alberta at the initial processing plant clean bitumen is already in a flow state so it is possible to pump that [processed bitumen](#) directly into these railway tank cars (c/w steam heating coils) while it is still warm.
  2. This shouldn't require some elaborate super train station just well placed sidings and a yard engine because once filled to the proper line the tank car can sit out in the open for as long as it takes to get a full train load **meaning that heated storage facilities, diluents, etc. are not required** - just let the bitumen go to whatever viscosity the temperature calls for.  
It will always shrink as it cools (from 95F) and so will leave space for the bitumen can expand as it gets into warmer climes (like Texas.) Expect the bitumen's viscosity will improve while on the journey given black cars and direct sunlight for a few hours might even bring it to a fluid state.

- 
3. **During it's stay in the tank bitumen wouldn't be particularly dangerous and/or explosive, and it definitely wouldn't suspend in the water column or sink into the ground if spilled making it far less expensive to clean up should a spill occur - the dangers of BLEVE or domino effect exploding cars are eliminated.**
  4. It would only be at the receiving end where steam heating would be applied, if required at all, and that won't cost much more because that heating has to be done within in refinery process anyway. [Here the much higher mean temperature of Texas](#) could be of advantage.
  5. Here is what I think the advantages of transporting bitumen this way would bring.
  6. it eliminates DILBIT (circumvents the reason to purchase, ship, store and then mix condensate with the bitumen that can cause so much trouble and if an accident occurs, cost so much to cleanup.
  7. **95%** of the bitumen would be delivered meaning a **25%** increase per barrel on delivery.
    - **Most of the newer tank cars mandated by Canada would be the cars that are shipping bitumen from Alberta to the U.S. Gulf coast so that not a great number of them will be required. There might be enough now.**
    - **I can't see where anybody else in the world would want this bitumen especially without coking capability.**
    - **Without having DILBIT the bother the receivers have with getting rid of those "oceans of diluents" also goes up in the air.**
    - **I have read where multiple railway tanker cars are usually simultaneously unloaded directly into the refineries' processes!**

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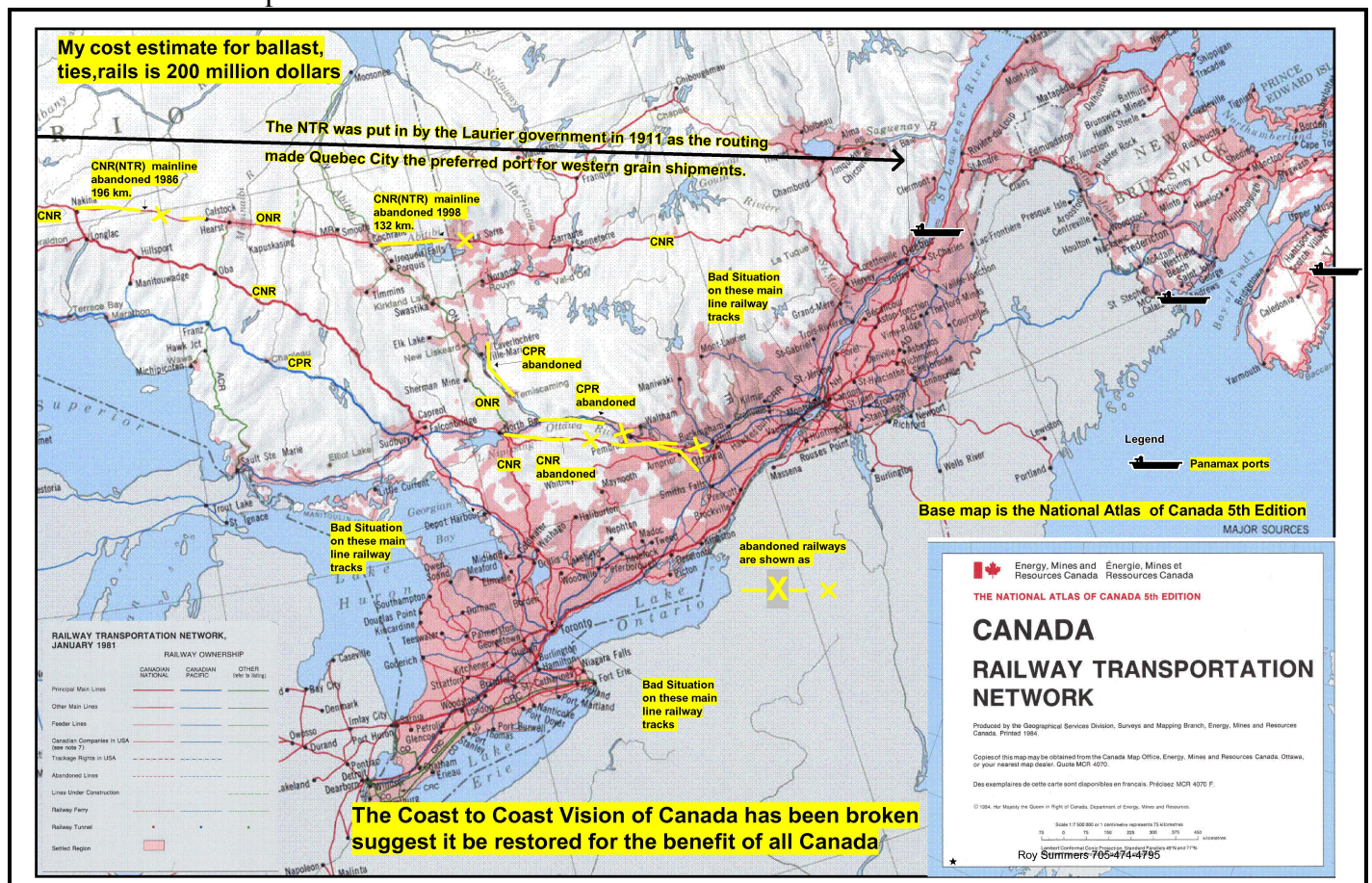
Before I go any further I want to applaud the Federal Government as they say they will conduct risk assessment of routes where dangerous goods are transported (and now crude oil is one of them) and there is a lot more, particularly about fixing up the railway infrastructure and boosting safety.

May 5, 2014 The Star [Railways ordered to stop using older tank cars in Canada for hazardous goods](#) is an exceptionally good article on this.

It is about time, because it seems to me, that Canadian Railways need to be dealt with severely the ROWs and/or railbeds (which weren't paid for in first place) should be taken back, fixed up and then tolls charged for using them to ensure the safety of these railbeds which generally seem to be in such horrible shape. I say as far as I am concerned these companies have let these railbeds deteriorate simply for the sake of a dollar.

## 7. \* Much of the direct Main Line railroads in Northern and Central Ontario have been abandoned forcing all rail freight traffic into a very narrow and very congested corridor right through Ontario's most populated and developed sections.

Leave this status quo and I will bet Ontario can outdo Quebec's Lac-Megantic disaster and that is only a matter of time! Don't have to believe me, following is a copy of the 1995 Canadian Atlas with focus on the Railway networks and developed areas.



[click for a PDF](#)

One can plainly see from this map of the Railway Network in Canada once one of the world's best was almost completely shattered just in Ontario alone. It doesn't seem to have happened in any of the other provinces!

As a result of the recent "Great Grain Disaster"

- the shortest route from the Prairie provinces to a deep sea port (with Panamax freighters) was [Hudson](#)



## [Bay Railway \(HBR\)](#)

- which terminates at [Port Churchill, MN](#).
- **The HBR was also about to be abandoned by the CN but the railway and port became owned by an American Company named Omnitrax and then it and the port was [subsidized by the Harper government](#)**
- and shipped many thousands of tons of grain (even though many more thousands tons have piled up in the Prairies for the last couple of years.
- Was this meant to replace the abandoned lines in Ontario?
- Railroad built on permafrost plus a six plus months of ice on Hudson Bay, even now, equals a short shipping season?
- Seems like that grain is now being threatened as [Oil producers eye Arctic backup plan as pipelines face uncertain future](#).

Treatment of the HBR is very different from the abandonment of the CN National TransContinental tracks from:

1. Nakina, ON to Cal stock, ON
2. Cal stock to Cochrane, ON (the Ontario Northland Railway acquired this to promote a mill for the First Nation Reserve there.)
3. Cochrane, ON to the Quebec Border (the abandonment of mailing tracks in Eastern Ontario.)
4. the abandonment of the (CNR main line track from Capreol, ON to Smith Falls, ON)
5. the abandonment of the (CPR main line track from Mattawa, ON to Ottawa, ON.)

**Just what was the rationale of these abandonment which resulted in all freight rail traffic from the east and west now squeezed down to two mainline tracks into a narrow corridor along Georgian Bay of Lake Huron, south and into the Greater Toronto Area, along and through the municipalities on the shores of Lake Ontario and the Saint Lawrence River until it goes through Greater Montreal area and then crosses the Saint Lawrence west of Quebec City?**

**there was great lack of foresight in this and probably was the MAJOR cause for a number of disasters in the past and more in the future!**

1. **One of these super trains was that fatal train that exploded at Lac Megantic, QC and that could have had that accident anywhere along that route!**
  - [Details - Lac-Megantic](#) -  
That "train was composed of five head-end locomotives, one remote-control "VB" car (a former caboose) used to house the Locotrol equipment necessary for MMA's single engineer train operation, one loaded box car used as a buffer car followed by 72 non-pressure dangerous goods DOT-111 tank cars loaded with petroleum crude oil (Class 3, UN 1267). Each tank car was filled with 113,000 litres (25,000 imp gal; 30,000 US gal) of crude oil."
  - **"3,830 rail cars of Bakken crude were shipped by 67 trains in the 9-month period preceding the derailment.**
  - This equates to 7.5 trains per month or 4 trains per week that entered Ontario on CPR tracks near Windsor, going through Toronto and all along the north shores of Lake Ontario and the Saint Lawrence River to the middle of Montreal where it was turned over to contractors of the CPR.
  - Any one of those 67 trains could have had that accident on this very restricted and congested route through Ontario.
2. **That isn't all - the number of tanker cars shipping oil across Canada has more than tripled to [14,217 cars as of April 2013](#), according to a report by energy and ocean transportation industry advisor, Poten & Partners. And the number of tankers cars is projected to steadily increase as the fate of proposed pipelines become unclear."**

## 8. \* More recent Reports indicate railroad traffic has increased by 9 times in Canada

### 1. Apr 24, 2014 [Oil industry scrambles to retrofit rail cars](#)

- "Two of Canada's biggest oil sands producers said Thursday that they are well positioned to manage any crunch because they are acquiring heated cars to move bitumen, and those cars typically are either being built or are newer models that meet current safety standards.
- "We're okay," said Rhona DeFrari, spokeswoman for Cenovus Energy Inc., which is acquiring 825 cars to move 30,000 barrels per day – mostly oil sands bitumen – by rail by the end of the year. Imperial Oil Ltd. said the new regulations would have little effect on its joint venture with Kinder Morgan Inc. to build a 100,000-barrel-a-day rail terminal near Edmonton, because it is acquiring new rail cars."

I think the two statements above will not increase the rail traffic in Ontario much as these are servicing the U.S. Gulf Coast and West coast facilities.

- "“CN has supported the retrofitting or phase-out of the old DOT-111 cars used to transport flammable liquids and a reinforced standard for new tank cars built in the future, with the rail car owners assuming the cost as a normal course of business,” spokesman Mark Hallman said.
- Hunter Harrison, chief executive officer of CP, said capping speeds for trains carrying dangerous cargo at 80 kilometres an hour does not address the causes of railway accidents. CP, which has video cameras on the nose of most locomotives, is calling for cameras that record the train crew, **as well as a reduction in the number of crossing at which road and train traffic meet.**"

### 2. May 5, 2014 [Canada Sees Nine-Fold Jump in Crude Exported by Rail over Past Two Years](#) The video within this explains it well.

3. Don't forget the grain trains are now transporting two year old grain along with last years on those same tracks also with super long trains.
4. There will also be long trains coming through with potash, lumber, biofuel, processed petroleum products, etc.
5. The Lac Megantic disaster prompted The Globe to publish [What could prevent another Mégantic disaster? Sadly, not very much!](#) "So what are the options?"

- "One might think that it would be wise to reduce the number of freight cars carrying dangerous or flammable chemicals. That is easier said than done. Those materials have to move somehow and the risk would not change much if those materials moved by road instead of rail."
- "In Mississauga in November, 1979, when propane cars exploded and took off like missiles, they flew into empty field. No one was hurt by the explosions. Today that same area is heavily occupied, and the burning propane cars would smack into buildings. No matter where rail lines are located, eventually people catch up."
- "The obvious solution – or so it would seem – is to move rail lines away from populated areas. This seems logical but it would be expensive and, perhaps, counter-productive."

### 6. Apr 14, 2013 - The Star - [Kathleen Wynne announces \\$29 billion transit and transportation plan](#) I spent 35 years of my working life in the Planning and Design Section of the Northern Region of the Ontario Ministry of Transportation and have some qualification for the following statement.

1. **The \$29 billion dollar effort proposed by Ontario in Ontario will primarily be down around the GTA and the above will make a bad situation much worse. It would be much cheaper, safer and more effective if they first restored those northern tracks from Nakina to and then directed the Unit Trains (long large heavy freight traffic - including - CPR) to pass on that revitalized Transcontinental main line both ways and keeping away from that narrow corridor in Southern Ontario.**
2. Like it or not tolls should cover the cost of revitalization and ongoing maintenance of these main rail lines.

## **9. \* The solution, to me, is obvious. Simply revitalize the National Transcontinental Railway that was abandoned a few decades ago and move the ultra long and ultra dangerous freight traffic onto that line.**

**It is my considered opinion that given other options most of the long unit trains would prefer to use more direct routes that circumvent passing through the very heavily developed and populated areas of Southern Ontario especially if the track beds are up to mainline standards and there is a savings of 500 km. each way.**

The abandoned National Transcontinental portion in Ontario is a relatively new main line (circa 1920) specifically constructed to bring Prairie Grains directly to world markets making it many years younger than the current main lines that go through Southern Ontario.

So what needs to be done:

1. from Nakina to Calstock (196 km.)  
Completely revitalize the abandoned and neglected track sections and infrastructure to modern main line status
2. from Calstock to Cochrane Ontario (208 km.)  
Like the HBR the Ontario Northland acquired and kept the middle section of track intact and usable as a short haul line and the ONR should be given one time funding to return this stretch to modern main line status.
3. from Cochrane to the Quebec Border (120 km.)  
Completely revitalize the abandoned track sections and infrastructure to main line status.
4. from the Quebec Border to the Saint Lawrence River bridge crossing near Quebec City (730 km.) is the CN - National Transcontinental line.  
The CN who owns this stretch should be given one time funding to upgrade this stretch to main line status as it has been using and maintaining it as a short haul line. They too, could charge other railroads to pay tolls for passage.

**Returning the [historic National Transcontinental Railway](#) route to service will save unit trains over 500 km. from Nakina, ON to Quebec City, QC while circumventing the extremely populated and developed areas along the north shores of Lake Ontario and Saint Lawrence River.**

1. I don't care who operates and does required maintenance on revitalized tracks within Ontario but I would like to suggest that once the tracks and infrastructure has been brought up to par - this should be given over to the ONR or Ontario along with federal subsidies **like bill (C-18) similar to those given to the American owned Omnitrax - HBR - Port Churchill (There should be no qualms about this because if the Canadian Government will subsidize an American Company why not a Canadian Province?)**
2. And give the ONR and Ontario (or whoever takes it over) the ability to extract tolls from traffic (other than them) over this route within Ontario so that they (or whoever else maintains it) can be self sufficient and able to maintain that stretch ad infinitum.
3. Legislation should direct unit train traffic to use this more northern route with exceptions for the others as required and documented.
4. But even higher tolls should be set for using the more southern route too, as this requires maintenance also.
5. This could be the salvation of the ONR as the province now owns the main line track between the two abandonments, so far!
6. This just might also be the ticket for access of the proposed Ring Of Fire because they could be doing the required processing much closer to existing water power electrical generating plants (this will require a lot of energy), have far better transportation options either east or west if these lines are open **because now Sudbury is kind of a transportation backwater now that the rail lines are being closed towards the Great Lakes and to the east leaving only two (CN & CP) with almost identical route destinations as the CPR with a lot more distance to go and crowded traffic conditions to deal with.** What they might be shipping could have

unit trains and hazardous cargo too.

7. The areas around most of this suggested line revitalization is not very built up but reduced and enforced speed limits in those areas would be wise.
8. It is also a much needed source of employment in areas that are extremely depressed through no fault of it's own, it's lack of resources but simply because it has a serious lack of transportation for anything it produces!

**This track abandonment also substantially increased the the ultra heavy truck traffic on the two Trans Canada Highways 11 (completed late 1940s) and 17 (completed mid 1960s) that were completed funded (construction and maintenance) by the Ontario Ministry of Transportation and it's predecessors.**

1. When I retired in 1993 not a nickel had ever been given to Ontario for building and maintenance of Trans Canada highways.
2. I think that is still true today even though somebody has been prettying up the highways around the capital, Ottawa.
3. The kicker is that every other province have had their Trans Canada Highway System paid for in full both for construction and maintenance.
4. This is just one of the other ways that past federal governments have shafted Ontario.
5. The two abandonments of the Nakina to Quebec Border transcontinental line has thrown a great deal of extra traffic and extremely heavy loads onto both these highways
6. but more onto Highway 11 because truckers don't use Highway 17 from mid October to April or May because it is just too dangerous with the fogs, freezing rain, lake effect snows, etc. during those months.
7. By now Highway 11 warrants a conversion to be four lanes and the current lane probably needs a complete overhaul because of the overloading since the mid 1990's.
8. That too, is going to cost a bundle and it should to be completely paid for by the Federal Government.
9. Revitizing these tracks and throwing it open to the long unit trains could put some of that expenditure for highways on hold for a while!

Here is another map circa 1927

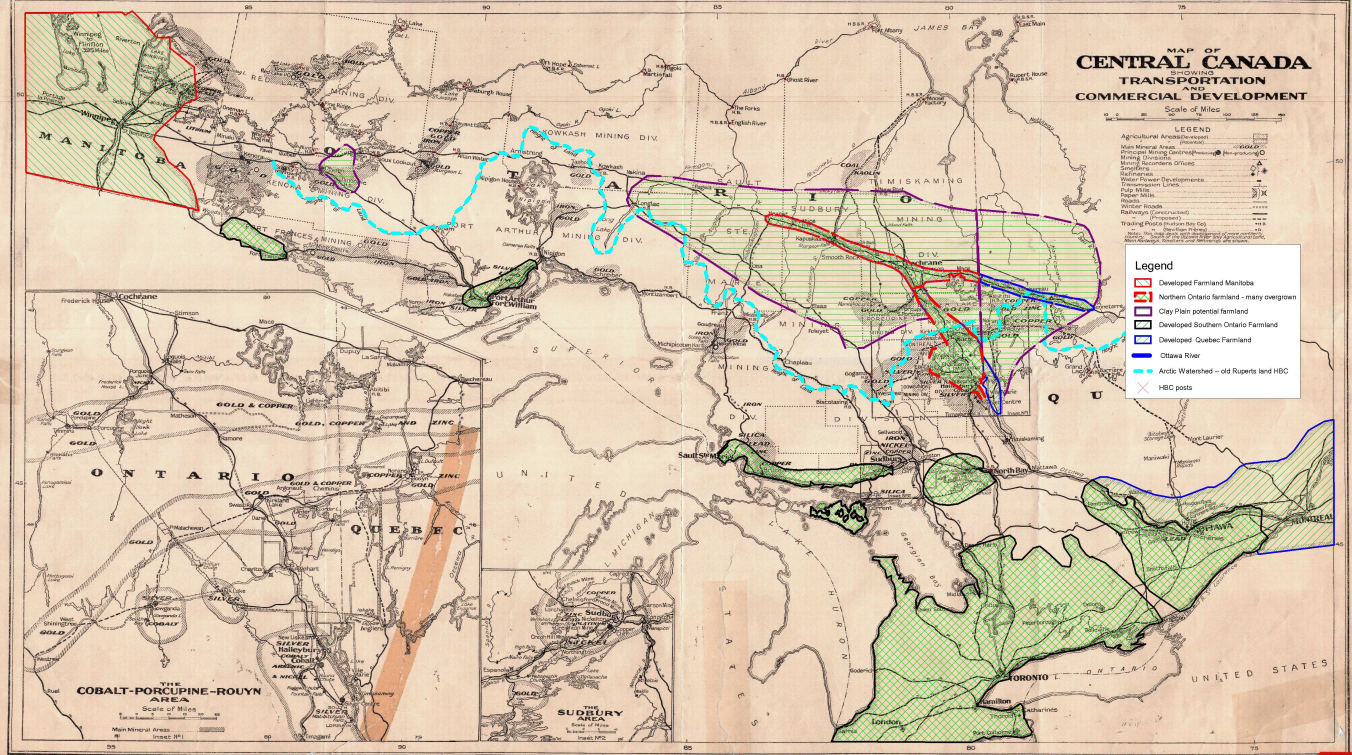


Map is from LAC Rec #24908 of Central Canada - which shows potential and developed farmlands in 1927

At the time of European Contact there were 2 distinct types of First Nations in this area

1. On the Clay Plains (green), Mostly lived on what is now farm land, spoke Iroquian, matrilineal kinship, grew crops, large groups in longhouses with stockades!

2. On the Canadian Shield, migratory, spoke Algonquian, patrilineal kinship, hunter/gathers limited crops, small groups in bark shelters. gathered in groups during summers!



[click](#)

[for pdf](#)

The above 1927 map was put out by the Federal Government to Transportation and Development of Central Canada. Please note the railway lines I have discussed were all in place back then. It also shows the Agricultural areas (Developed and Potential), mining areas which I have highlighted into different areas.

## 10. \* North Eastern Ontario has 16 million acres of potential Agriculture land that could grow the basics for bio-fuel

There are 16 million acres of potentially fertile glaciolacustrine soils within the Great Clay Plain alone.

I am against using popular food (corn, grains, etc.) for the production of ethanol but there are other plants that can produce this same stuff that will grow in this area.

Get an agricultural base going there and in 40 years that will rival or exceed the GDP from this Ring of Fire. This should be tried but it needs better transportation to the outside world to be successful. A few years back the Ministry of Agriculture and Food issued [Northern Ontario Agriculture Facts and figures in Brief](#) which states that:

"Climate change is having a global impact on agriculture, especially in Northeastern Ontario. What could this mean for the future of this region?"

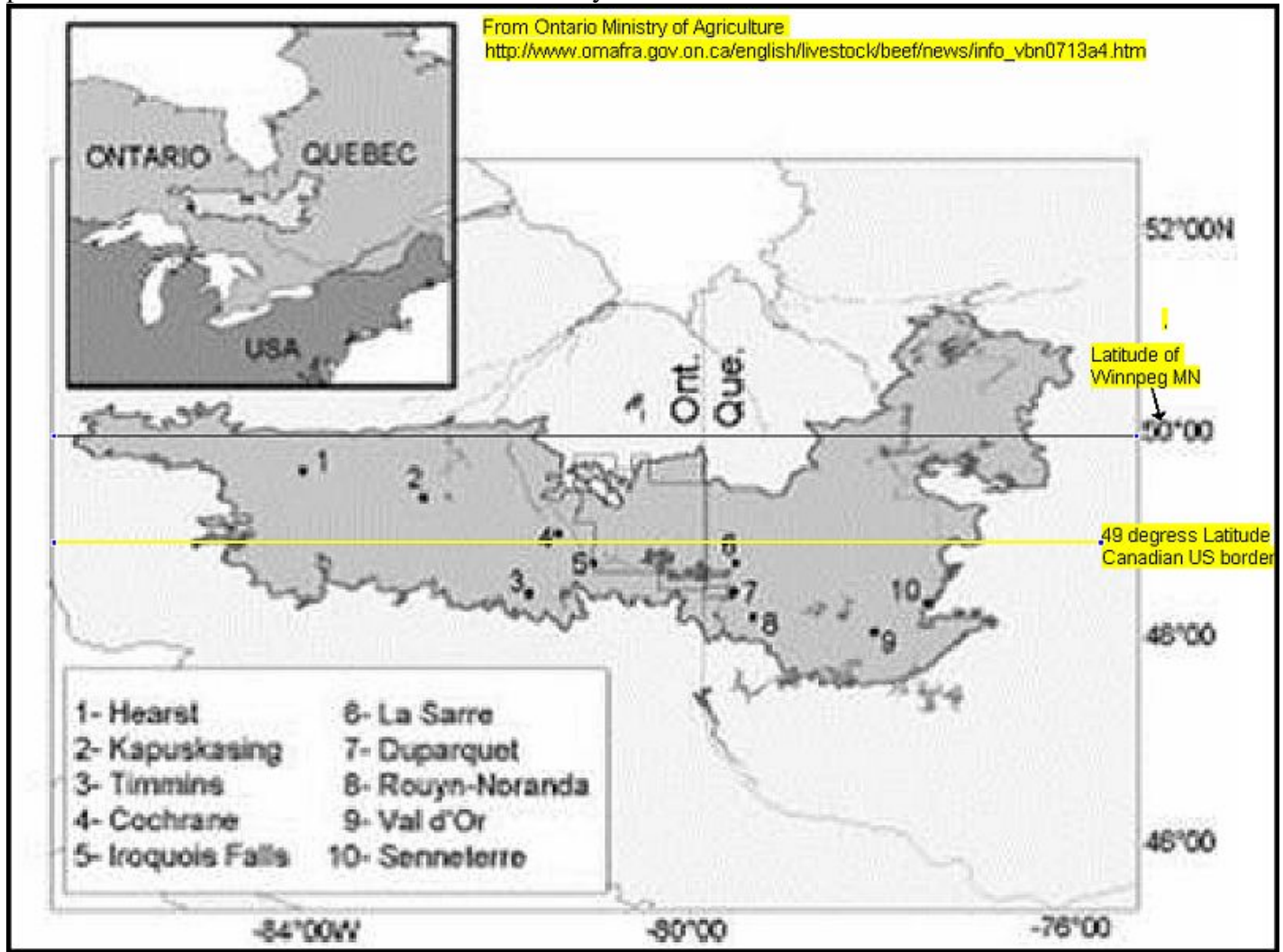
I have to contest this I have many dozens of pictures of successful agriculture in this area prior to the 1920's - agriculture was good then but no market - it might be better now but still no market.

1. "2,800 farms which return \$190 million in agricultural farm cash receipt"
2. "700,000 acres of farmed land."
3. "It has been estimated that most districts in Northern Ontario can increase active agricultural lands from 20 to

50% by drawing idled private lands back into use."

4. "The Great Clay Belt (GCB) in Northeastern Ontario consists of 16 million acres of potentially fertile glaciolacustrine soils. This is double the amount of cropland currently being farmed in the province."

I have expanded the map and drawn in where the 49th and 50th latitudes are as this is where the southern portion of the Prairie Province's "Bread Basket" lays. .



5. "To date only about 2 per cent of this land has been developed for agriculture ."
6. "The Great Clay Plain also stretches into Northwestern Quebec, which contains another 13 million acres."

#### Quebec hasn't ignored their area of the GCP!

You don't have to believe me just [check out Abitibi-Temiscaming](#) which states under Economy :

"The region's workforce has one of the highest percentages in the primary sector of any region of Quebec, with nearly one out of six employees working in that sector.

1. The mining sector is the most important economic activity of the region.
2. **Despite recent declines in workforce, the agriculture and forest industries still contribute significantly to the region's economy. Economic activities are mainly dedicated to exportation products, and are even closely linked to the Middle North region in its development through hydroelectrical and mining projects, and through exchanges with First Nation northern communities.**
3. Sportive tourism, including winter sports, fishing, hunting and cycling competition, is also a significant economic sector even if negligible by comparison with industrial sector."
4. Rural and agricultural settlement

"The agricultural development of northern Abitibi and the northern part of Témiscamingue by a relatively homogeneous population of French Canadian Catholic settlers has introduced a mainly rural land development. There, small towns, gravitating around a low density node generally composed of a



wooden Roman Catholic church, an elementary school and few houses spread over the territory, according to an orthogonal division on the land, with rectangular parcels. Those small towns are gravitating themselves around a larger city, as La Sarre, Amos, Macamic and Ville-Marie, where major institutional equipment are established. If small towns might seem more or less vernacular, major cities are often more planned and influenced by Anglo-Saxon urban planning, with sometime an orthogonal grid with lane network."

7. "The Canada Land Inventory has identified 4.4 million acres of Ontario's GCB as Class 2, 3 or 4, which are suitable for cultivation. The remainder has either not been classified or is unsuitable for agriculture."

I have long applauded the Ontario government's decision to include 5% ethanol into vehicle fuels (The last 3 of my personal vehicles have seldom if ever had straight gasoline in them - without problems) and i am further pleased that now almost all the stations now have 10% ethanol blended into small vehicle gasoline - it cheaper and the vehicle emmissions are down significantly.

## **Ontario has proven the Oil Industry and it propaganda against bio fuels simply wrong and self serving.**

But I am against growing known food crops, such as, corn, wheat, etc. to be converted into ethanol fuels.

**A single species of wheat known as [Red Fife](#) turned the Prairie Provinces into a major crop producer!**

**This might be replicated on the Great Clay Plains of Northern Ontario!**

**A native North American plant that will deliver up to 4 times as much ethanol per acre than corn. It is named Jerusalem Artichoke or Sunchoke, a native sunflower that has been proven to grow very well between 49 and 50 degrees of latitude on the Mordan, Manitoba National Experimental farm where it has been intensely studied.**

I know of fields near Earlton where it has gone wild. They are delicious. I have recently been growing these at home because I am diabetic and can eat it with impunity. Even the extracted sugars or pasta will not raise my blood sugars - be that sugar, pasta, etc. but it is hard to get in Canada. The tubers are a delicacy in Europe and the mid East! And what is left is good cattle food. On top of that they only have to planted every 3 or 4 years.

### [Production of ethanol from Jerusalem Artichokes](#)

Abstract:

- "Disclosed herein is a new method of producing ethanol from the Jerusalem Artichoke (*Helianthus tuberosus*) by removing the sugar juices from the stalk before the sugar moves down into the tubers and directly fermenting the sugar to produce ethanol, thereby eliminating the necessity of converting the resulting starches found in the tubes to fermentable sugars before fermenting the sugar to produce ethanol.
- The method must be very accurately carried out to make use of the maximum sugar content of the Jerusalem Artichoke as follows: the Jerusalem Artichoke stalk must be cut above the tubers immediately before the plant flowers to retain all of the sugar in the stalk;
- the stalk is then ground in a hammermill to release the sugars from the central cylinder, the pith, the ligneous cells, and to a small amount from the bark;
- the sugar juices from the hammermill are collected;
- the remaining mass of the central cylinder, pith, ligneous cells and bark is squeezed to remove the remaining sugar juices; the entire collected sugar juice is then processed by 1) bringing the pH to 4.0-4.5, 2) heating to 80°-82° F., 3) adding yeast, 4) fermenting for approximately 24 hours, and then 5) distilling to produce ethanol.
- The method produces the maximum quantity of high grade ethanol per acre of plant of any known plant source, permitting the leaves to be used to return a high nitrogen content of the soil, the ground stalk mass to provide protein as an animal food, and the tubers to provide human or animal foods.

- The method for the first time uses the entire Jerusalem Artichoke while providing the maximum amount of ethanol as a worldwide energy source by the least costly, least complicated, and most energy efficient process."

Other documentation follows:

1. [Alberta Invoates Technology Futures - Jerusalem Artichokes](#)
2. [Jerusalem artichoke has feed and biofuel potential for Alberta](#)
3. [Optimization of the Economic Potential of Jerusalem Artichoke as a Feedstock for the Production of Biofuels](#)
4. [Alterative Field Crops Manual Jerusalem Artichokes University of Wisconsin](#)

In Southern Ontario the Jerusalem Artichoke is considered as an invasive weed because of it's quick growing habits it will choke out corn and soy bean crops. However, In North Eastern Ontario there are plenty of opportunities to plant and harvest jerusalem Artichoke in areas where these affected crops are not found.

Some test strips and even a small portable hammermill and distillery would prove or disprove it's benefits and hazards.

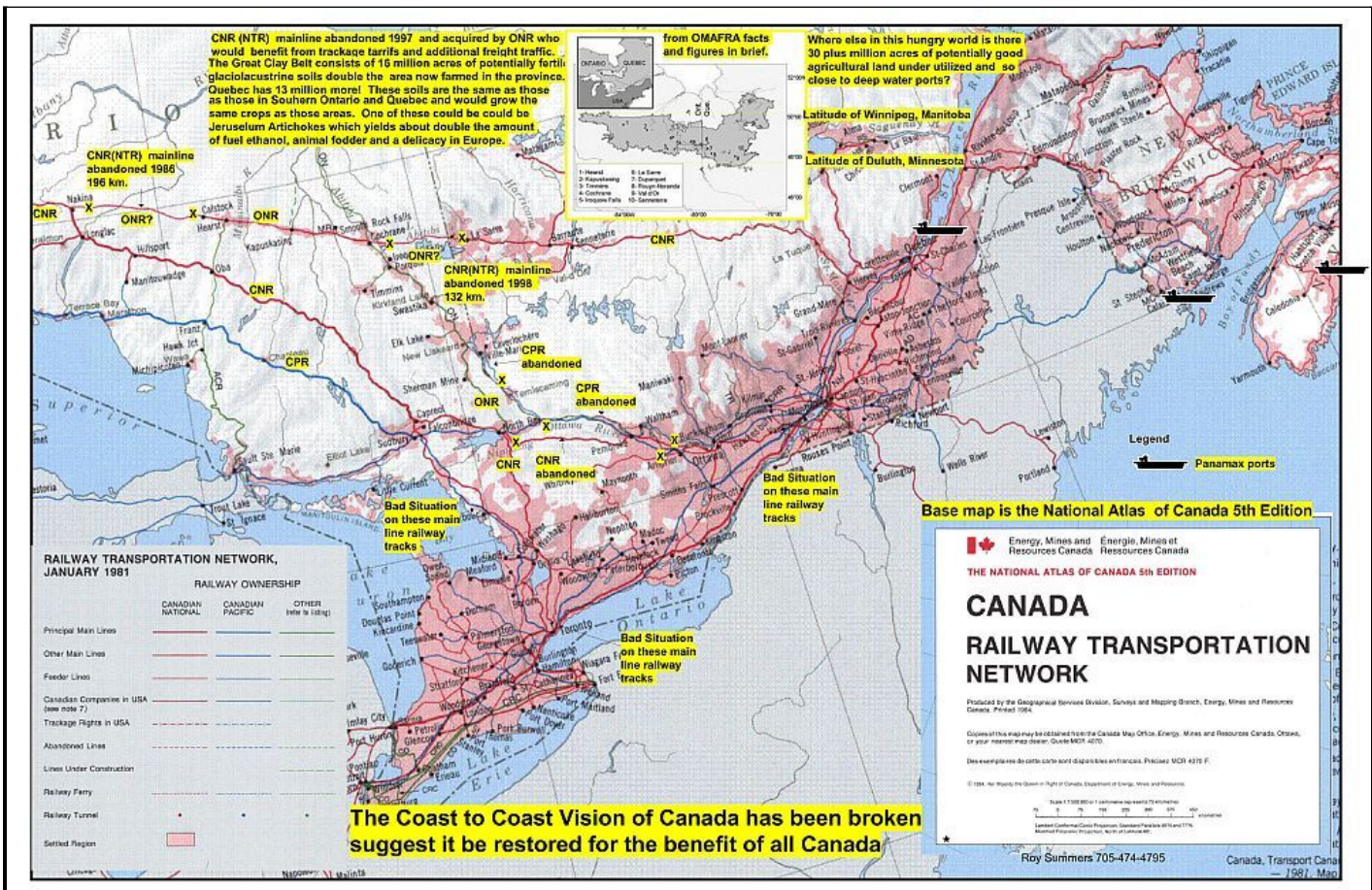
There are also other considerable opportunities to produce (ethanol or biodiesel) from wood waste and/or pulp/paper black liquors.

**Besides that [ALGAE FUEL](#) is another upcoming source< and is being studied from other sources including mining tailing ponds where it is possible to grow huge amount of algae (there are 15,000 abandoned tailing ponds in Ontario.) This is collected by vacuuming and then stressing these plants (which bringing them down to about 5 degrees Centigrade) and presto you have Bio Diesel.**

And as the Ontario Ministry of Agriculture and Food states it is a good area for the commercial raising of cattle and other ungulate production.

But bringing these on line relies totally on having a transportation network available that is mostly a direct line to the target market which is quite probably achieved by re-vitalizing the CN National Transcontinental Line.

Following is the 5th Canadian Atlas Map, but slightly different. It won't hurt to take a second look. If the CN's National Transcontinental Line is reopened it can reach almost all the eastern seaports for export but unlike the pipeline it could also be used to import goods, products, equipment, etc. particularly to the Prarie Provinces without going that extra 500 kilmetres (each way) through major built up and developed areas along the shores of the Saint Lawrence and Lake Ontario.



[click for pdf](#)

Thanks for your kind attention. It you have any queries please feel free to call.

Best Regards



I would like to request that the Ontario Government engage in a full environmental assessment of the Energy East Project, with full public participation. As a province rich in natural resources and an economy which depends on maintaining sustainable resource development and use, I believe the Energy East Project represents a high risk to the residents and businesses in Ontario with little reward. The Ontario government has a responsibility to ensure that they do a full environmental, social, and economic impact assessment of the Energy East Project including baseline studies of all properties within 1 km of the proposed conversion pipe or new pipe. Regulations, conditions of operations need to be established to protect all Ontarians from a potential spill, leak or rupture that could result into a toxic legacy for generations to come. Ontario's needs to protect and guard its clean water, clean air and a clean natural environment so it remains for present and future generations "ours to discover".

I believe that we must know exactly what is being shipped through the gas pipeline prior to approval being given to the Energy East Project. And that we do not rely on assumptions, generalities or proprietary exclusions, that full Material Safety Data sheets must be provided containing all the materials that will be transported within the pipeline, that there is independent peer reviewed scientific proof of the 100% safety and integrity of the pipeline against corrosion, leaks and spills, and that there is a guaranteed end of project plan that details how the pipeline will be safely removed, and disposed of that and a fund placed in reserve to guarantee this plan is paid for by the company and not the residents of Ontario.

With so much to lose and virtually nothing to gain, Ontario must act on behalf of its residents to ensure we protect our current economy and jobs. It is up to the Provincial government to ensure that there are financial and expert resources available to local communities and private landowners to do the proper studies, assessments and provide technical information.

The government of Ontario has a responsibility to ensure we do not

allow materials to cross provincial borders without a full environmental assessment.

Please add my name and contact information to the stakeholder's list concerning the Energy East Project.





I am a citizen of North Bay, Ontario, a town through which the proposed Energy East Pipeline is to run.

I emphatically do not support the proposed pipeline project.

The risks posed by pumping diluted bitumen -- a concoction containing many substances known to be carcinogenic, and many others as yet untested -- through the old natural gas pipeline over the Trout Lake watershed are staggering. This watershed is where my town sources its drinking water, and the project threatens the future of our town's water security. If a spill were to occur, the local people and ecology would bear the burden. The ostensible economic benefits of the project are a far cry from mitigating the risk carried with the proposed pipeline.

If the Ontario Energy Board were to support this project, it would be a loud and clear message that it condones putting public health at risk in favour of tar sands industry profit. There is a high level of public momentum against the project and to support its construction would be a mistake with far-reaching, long-term consequences. The environmental consequences of the tar sands industry are only becoming more well known, and the OEB would do well to act as a voice for the health of our communities' futures by investing in developing alternative methods of energy generation and resource transport, if it wishes to be trusted by its funders -- the taxpayers -- whom it claims to protect.

Kind regards,



TWIMC,

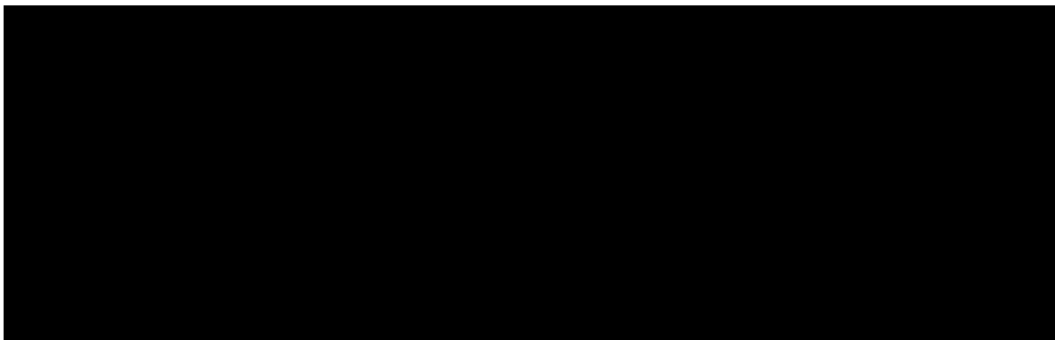
It has been proven time and again that human induced climate change is real; more recently weather pattern changes have demonstrated this fact. This is not up for debate. Our behaviour pattern must change.

As a society we need to think and ACT more responsibly and this begins with regional and local energy initiatives. The heady days of global and cross country energy plays are no longer realistic given the new climate(punn intended).

Factor in the CERTAINTY of a leak in remote areas and in our waters and the answer is clear. There is no need for this project when regarded in the big picture, and most importantly it is not wanted. Certainly not by me.

It is high time that the Precautionary Principle be employed true to its intended nature. I just hope our collective greed has not begun a cycle that is irreversible. Do the right thing - rule against propagating the use fossil fuels. Time will show (has shown already really) this to be the prudent move as job creation pales in comparison to these big picture considerations.

Sincerely,



Thank you for having my concerns. I am speaking about the danger of retrofitting an old pipeline. Thank you for listening. The impact I will discuss is <sup>risk of</sup> retrofitting ~~the~~ an old pipeline. I am old. Even older than the Energy East pipeline. And as an old person, I have some advice.

Safety impact  
Dear pipeline,

At 55, you must be suffering the wear and tear of age. I know I spend much of my time in maintenance and repair, particularly for my joints. Many of my friends have had hip or knee replacements. Their new joints are often weak -- and sometimes fail. Are you any different?

And, dear pipeline, remember you were designed to carry gas. Don't let them now force you to carry heavy bitumen, laced with toxic chemicals, across Ontario's land, rivers and streams.

When you're old you have to recognize your limits. I know I can't do as much as I once did. But you are being asked to do more! This does not make sense.

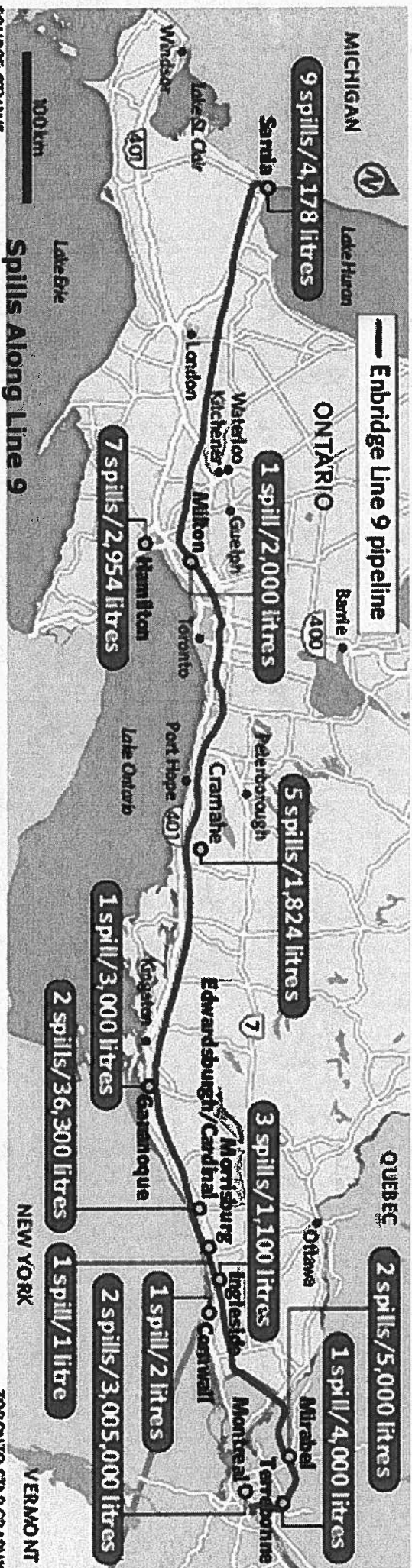
The slick reassurances from Transcanada ring hollow to anyone knowing their track record. The danger to our waterways is too great a risk.

Instead of expanding and expanding the tar sands for export, we should be developing expertise and jobs in renewable energies, sustainable in the long run.

The federal government wants to get as much bitumen out of the ground and into the market as possible, as fast as possible. That's why they are giving more than \$1.4 billion in tax subsidies for fossil fuel. Think what could happen if this went to renewables instead!

The time to stop this pipeline madness is now.





SOURCE:CTV NEWS

There have been at least 35 spills along Enbridge's Line 9 since it began operation in 1976, according to an investigation by CTV's W5. The W5 investigation showed that far more spills have occurred on Enbridge's 38-year-old pipeline than previously reported. Federal regulators have records of seven spills and the company released information on 13 leaks or ruptures. But records from the company, the National Energy Board and Ontario's Ministry of Environment show at least 35 incidents.

TORONTO STAR GRAPHIC

✓ Please turn over - spills along current line 5-7 times reported.

---

✓ concern with ads eg debt is NOT corrosive (It is under the temperature + pressure needed)

---

✓ Please consider the externalized costs, who will pay for all of the inevitable cleanups / water / air / cancer. Will taxpayers be on the hook? How much? Unless we extract a huge fund from TCP to cover these costs, the innocent will pay.

---

If the central issue is to keep the economy running, and if (as science tells us) this project will rapidly increase CO<sub>2</sub> beyond limits tolerable to the planet, then HOW will this improve the economy.

We would like to register our opposition to TransCanada Pipelines conversion proposal through northern Ontario. This line is too old and too thin to allow this new product to be pumped safely. We fear that leaks will occur polluting the Lake Superior watershed and this is not acceptable.



I would like to request that the Ontario Government engage in a full environmental assessment of the Energy East Project, with full public participation. As a province rich in natural resources and an economy which depends on maintaining sustainable resource development and use, I believe the Energy East Project represents a high risk to the residents and businesses in Ontario with little reward. The Ontario government has a responsibility to ensure that they do a full environmental, social, and economic impact assessment of the Energy East Project including baseline studies of all properties within 1 km of the proposed conversion pipe or new pipe. Regulations, conditions of operations need to be established to protect all Ontarians from a potential spill, leak or rupture that could result into a toxic legacy for generations to come. Ontario's needs to protect and guard its clean water, clean air and a clean natural environment so it remains for present and future generations "ours to discover".

I believe that we must know exactly what is being shipped through the gas pipeline prior to approval being given to the Energy East Project. And that we do not rely on assumptions, generalities or proprietary exclusions, that full Material Safety Data sheets must be provided containing all the materials that will be in transported within the pipeline, that there is independent peer reviewed scientific proof of the 100% safety and integrity of the pipeline against corrosion, leaks and spills, and that there is a guaranteed end of project plan that details how the pipeline will be safely removed, and disposed of that and a fund placed in reserved to guarantee this plan is paid for by the company and not the residents of Ontario.

With so much to lose and virtually nothing to gain, Ontario must act on behalf of its residents to ensure we protect our current economy and jobs. It is up to the Provincial government to ensure that there are financial and expert resources available to local communities and private landowners to do the proper studies, assessments and provide technical information.

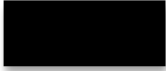
The government of Ontario has a responsibility to ensure we do not allow materials to cross provincial borders without a full environmental assessment.

Please add my name and contact information to the stakeholder's list concerning the Energy East Project.

[REDACTED]

Kitchener Ontario

I feel the oil should be refined before it is put in the pipe, the bitumen is very abrasive, oil will have a longest pipe life, if we study this too long the refiners will invest their money elsewhere, where they can make more \$ and less risk, all parties have to give something to get something great seminar, well run time lines was an important fact, some people think these events are their social outings not a business process, thanks



Dear OEB Energy East Consultation Team,

Thank you for providing community hearing session on the TransCanada Energy East Pipeline proposal.

I would like to submit my written concerns to you as outlined in the attached document.

Best regards,



North Bay, Ontario

# **The Predictable Path to Disaster**

## **TransCanada's Energy East Pipeline**

(Please see endnotes for sources)

On the "Frequently Asked Questions" section on the Natural Resources Canada website regarding federally Regulated Pipelines it states:

"there has not been a single rupture on a federally-regulated pipeline built in the past 30 years"  
(1)

Buried in National Energy Board (NEB) documents is a list of 39 ruptures on federally-regulated pipelines.

Information on the NEB website states:

"In Canada, the NEB regulates nearly 71,000 kilometres of pipelines that move approximately one billion barrels of oil per year. In fact, between 2000 and 2011, 99.9996% of the crude oil and petroleum product transported on federally regulated pipelines was done so safely." (2)

Using these NEB numbers means that 645,960 litres of oil spilled; that they know of. The NEB does not require companies like TransCanada to report spills less than one thousand five hundred litres. (3)

The TransCanada Energy East Pipeline will convert an existing Natural Gas pipeline to Dilbit or Tar Sands Bitumen dissolved in extremely dangerous chemicals so it will flow.

TransCanada can spill up to 1,500 litres of Dilbit and they don't have to tell you, they don't have to tell first responders, they don't have to inform the public and they don't have to tell the NEB because under Federal regulations they don't have to, it is non-reportable.

This means thousands upon thousands of litres could leak all along the TransCanada Energy East pipeline route and as long as TransCanada estimates the volume spilled at less than the reportable volume, Trout Lake, Lake Nipissing and hundreds of lakes, rivers and tributaries in Ontario which we consider precious along the route can be irreversibly contaminated.

TransCanada's best in practice remote monitoring for leak detection is typically able to detect leaks down to approximately 25 to 30 percent of the pipeline flow rate. (4) In the case of Energy East, TransCanada's SCADA (supervisory control and data acquisition) system would not detect a leak below 43 million, 697 thousand, 500 litres at best.

TransCanada's software-based volume balance systems that monitor receipt and delivery volumes are typically able to detect leaks down to approximately 5 percent of the pipeline flow rate. (5) In the case of Energy East, TransCanada could not detect a leak smaller than 8 million, 739 thousand, 500 litres per day using this advanced system.

The absolute very best TransCanada volume leak detection threshold is 1.5% to 2% of daily flow if they use computer based volume trending. (6) Therefore in the case of Energy East no leak can be detected by TransCanada less than 2 million, 621 thousand, 850 litres leaking every day.

Back in 1996 the NEB admitted that " There are typically 30 to 40 failures each year on pipelines regulated by the NEB,..." (7)

Natural Resources Canada goes onto state:

"Pipeline companies have primary responsibility for ensuring pipeline safety and environmental protection" (8) Not the Federal Ministry of the Environment, not Natural Resources Canada, not the NEB; Industry. Natural Resources Canada and the NEB have passed pipeline safety over to pipeline companies.

Alright, lets examine how that responsibility has been handled...

### **TransCanada Pipeline Failures**

1969 July 8 is of special note. TransCanada had a pipeline failure 9.8 kilometers away from the September 26, 2009 Marten River pipeline explosion. The exploded pipe was manufactured by A.O. Smith and was full of defects to the degree that TransCanada decided to replace all the A.O. Smith pipe. Unfortunately this defective pipe was randomly placed throughout the natural gas pipeline system and TransCanada despite knowing that this was defective pipe which had proven itself as an explosion hazard, left some of the A.O. Smith pipe in the ground. TransCanada decided not to replace all known defective pipe unless the population in the area grew and then would decide if the defective pipe should be replaced. (9) The NEB was well aware of the defective pipe yet allowed TransCanada to continue with this unpredictable explosion risk for 30 years until the same A.O. Smith pipe exploded in 2009 near Marten River. (10)

1979 May 30, TransCanada pipeline explodes near Englehart Ontario. (11)

1985 March to 1986 March - In just one year TransCanada pipelines ruptured three times in Northern Ontario. (12)

1985 March 10, Ignace Ontario TransCanada pipeline exploded. (13)

Less than 5 months later...

1985 August 20, TransCanada pipeline ruptured near Lowther Ontario. (14)

1986 TransCanada 36" pipeline ruptured, Callander Ontario. (15)

1989 July, TransCanada pipeline rupture near Brandon Manitoba. (16)

1990 June 6, TransCanada Pipeline rupture near Marionville, Ontario. (17)

1991 January 17, TransCanada pipeline ruptured near Cochrane, Ontario. (18)

Later that year...

1991 December 8, TransCanada pipeline rupture near Cardinal, Ontario. (19 & 20)

Seven months later...

1992 July 15, TransCanada Pipeline exploded near Tunis and Potter, Ontario. (21 & 22)



1994 July 23, Latchford, Ontario, TransCanada's 36 inch pipeline exploded. (23)  
An OPP officer noted that rocks and debris from the explosion 1,148 feet away had landed on the highway. (24)

3 months later...

1994 October 6, Williamstown, Ontario TransCanada pipeline ruptured. (25)

4 months later...

1995 February, TransCanada pipeline explosion near Vermilion Bay in Northern Ontario. (26)

Less than 6 months later...

1995 July 29, rupture on TransCanada's pipeline near Rapid City, Manitoba, resulting in a major explosion. (27 & 28)

8 months later...

1996, April 15, TransCanada pipeline ruptured followed by an explosion and fire. La Salle River crossing, 10 km southwest of Winnipeg, near the town of St. Norbert, Manitoba. (29)

8 months later...

1996 December 11, TransCanada's pipeline exploded at Stewart Lake near Vermilion Bay, Ontario. (30)

less than a year later...

1997 December 2, TransCanada's pipeline exploded near Cabri, Saskatchewan. (31)

2002 April 14, , Brookdale Manitoba, 36" TransCanada pipeline exploded. (32)

2002 October 8, TransCanada's PMRL pipeline ruptured and TransCanada took over 7 years to submit the final pipeline failure report to the NEB on 4 December 2009. (33)

2003 December 1, TransCanada pipeline ruptured 120 kilometers south of Grande Prairie Alberta. (34)

14 hours later just 15 kilometers away another TransCanada pipeline exploded. (35)

2009 July 20, TransCanada's Nova Gas, Peace River Mainline Alberta exploded. (36)  
From 1973 up to this explosion this TransCanada pipeline experienced 16 leaks and 6 ruptures. (37)

less than two months later...

2009 Sept. 12, , near Swastika, Ontario a 36 inch TransCanada pipeline exploded. (38)  
TransCanada didn't know about it until the Englehart fire department called it into TransCanada's Emergency Notification Line. (39)

then days later...

2009 Sept. 24, TransCanada's Line 100-1 ruptured near Marten River, Ontario. (40) The Transportation Safety Board of Canada states it was a rupture. (41) But the NEB states it does not meet the definition of a rupture. (42) Even though the 30 inch pipeline "exploded". (43) Leaving a large crater with pipeline fragments scattered up to 100 meters away.

17 months later...

2011 February 19, Beardmore Ontario, TransCanada's 36 inch pipeline exploded. (44 & 45)

just 3 months later...

2011 May 29, The first Keystone tar sands pipeline, constructed less than a year ago, has sprung its twelfth leak even though meeting minimum design requirements for conventional pipelines. (46)

less than 2 months later...

2011 July 20, near Gillette, Wyo., The TransCanada Bison pipeline exploded 6 months after it went into service. (47)

2013 Oct. 17, TransCanada Nova pipeline ruptured north of Wabasca Alberta. (48)

One month later...

2013, Nov. 25, another natural gas pipeline rupture on TransCanada's Nova system near Boyle, Alberta. (49) It was the second rupture on the Nova system in a six week period. (50) NEB documents show that...

"the inspection officer has reasonable grounds to believe that a hazard to the safety or security of the public, or employees of a company or a detriment to property or the environment is being or will be caused by the construction, operation, maintenance or abandonment of the pipeline." (51)

and goes onto state:

"The cause and contributing factors of the Flat Lake Lateral Loop rupture have not yet been determined;" and " The ruptured section of the Flat Lake Lateral Loop will soon be put back in service". (52)

This clearly demonstrates the dismissive and cavalier attitude of the NEB and the cowboy attitude to safety by TransCanada Limited. There is tremendous risk allowing a pipeline to go back into service when the cause of the failure is unknown.

2014 Jan 25, Otterburne Manitoba, TransCanada's pipeline exploded. (53) Karl Johannson, TransCanada executive vice-president of natural gas, told reporters and community members that the half-century-old pipeline had been well-maintained and that TransCanada held the highest standard for its pipelines, to ensure service and maintain public safety. (54)

less than a month later...

2014 Feb. 18, TransCanada's Nova pipeline ruptured near Rocky Mountain House. (55)

The 30+ TransCanada pipeline failures listed above defy the NEB's claim that "Safety and environmental protection are of paramount importance to the National Energy Board (NEB)," when they add that reduction in pipeline failures depends on industry (56) and as Natural Resources Canada states "Pipeline companies have primary responsibility for ensuring pipeline safety and environmental protection" (57)

The 30+ TransCanada pipeline failures listed above are all failures which defy Natural Resources Canada's claim that "there has not been a single rupture on a federally-regulated pipeline built in the past 30 years". (58)

The 30+ TransCanada pipeline failures listed above also defy TransCanada's written information provided to the public attending the Ontario Energy Board (OEB) hearings on the TransCanada Energy East Pipeline proposal, stating "TransCanada has been building safe, reliable pipelines for over 60 years"

The above list of TransCanada pipeline failures may not be complete.

**Other notable pipeline failures:**

January 2005: Carrollton, Ky. Sunoco Mid-Valley pipeline ruptured sending 260,000 gallons of oil into the Kentucky River. (59)

October 2008: Burlington, Ky. Sunoco Mid-Valley pipeline spilled 115,000 gallons. Eighty homes evacuated. Oil ended up in neighbourhood sanitary sewers. (60)

2010 July, Kalamazoo Michigan - Enbridge Line 6B burst spilling 3.3 million litres or 20,862 barrels of Tar Sands Crude. (61) By comparison, the TransCanada Energy East Pipeline will carry over 52 times that volume every day.

2011 April 29, Plains Midstream Canada Rainbow pipeline system leaked 4,449,200 litres of crude in the boreal forest east of the Peace River, Alberta. The same line ruptured in 2006. (62)

2013, September 10, diesel spill. SARNIA, ON. Sun-Canadian Pipe Line. (63) Sun-Canadian is on record as saying they have an excellent record with respect to safety and pipeline reliability. (64)

2013 September 29, North Dakota - 20,600-barrel oil spill discovered by farmer harvesting wheat. (65)

2011 July 1: Exxon Mobile pipeline burst spilling more than 1,509 barrels into the Yellowstone River near Billings Montana. The leak has caused a forty km plume, fouling the riverbank and forced municipalities and irrigation districts downstream to close intakes. The break in south-central Montana led to temporary evacuations of hundreds of residents along a thirty two km stretch. The Silvertip Pipeline is a 12-inch nominal diameter pipeline which carries Canadian Crude. (66)

Between 2012 & 2013, "751 oil spills were reported in North Dakota, spilling a total of about 4,528 barrels of oil, the Associated Press reported last month. Those figures don't include the 20,600-barrel oil spill discovered near Tioga in September previously mentioned. (67)

2013 March 29 - Mayflower, Arkansas, Exxon Mobile Pegasus pipeline spilled 7,000 barrels of Canadian Wabasca heavy crude from the Athabasca oil sands. (68)

2013 November 18, "More than 55,000 barrels of saltwater (8,739,500 Litres) produced by the oil and gas industry spilled on North Dakota land over the previous 22 months." (69)

2014, March 18, Sunoco Mid-Valley pipeline leaks 20,000 gallons into Oak Glen Nature Preserve in Colerain Township Ohio. Sunoco had no idea that a spill was occurring until a driver passing by noticed oil spread across a marsh in the Nature Preserve. It is the 40th incident since 2006 along this pipeline alone, which stretches 1,100 miles from Texas to Michigan, according to the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration. Sunoco has been fined numerous times over leaks on the pipeline causing millions of dollars in damage and after this leak Sunoco put a simple clamp on the pipe to plug the hole. (70)

2014 March 21, BISMARCK, N.D. 34,000 gallons of crude spilled a broken oil pipeline in north-western North Dakota. (71)

### **Clean up costs for oil spills:**

The estimated cleanup cost for conventional oil runs at about \$2000 per barrel of oil. Tar sands diluted bitumen cleanup is estimated to cost an average \$29,000 per barrel. (72)

In 2011 the United States Internal Revenue Service exempted tar sands oil from tax paid into the spill cleanup fund as the substance did not fit the characterization of crude oil.

In a statement from Exxon Mobile referring to the Mayflower Arkansas bitumen spill Exxon Mobile said, "bitumen is not considered crude oil, and therefore tar sands pipeline operators like Exxon aren't required to pay into the oil spill cleanup fund." (73)

The cost for Exxon Mobile to contribute to the clean up fund would be 0.08 cents per Barrel. (74)

### **A troubling perspective:**

To help place the TransCanada Energy East Pipeline into perspective everyone remembers the Exxon Valdeese oil spill in Alaskan waters twenty five years ago on March 24, 1989. The ship ran aground and spilled 10.8 million gallons of crude oil. (75)

That year Exxon made 3.8 Billion in profit and the following year made 5 Billion. And this occurred while Exxon disputed cleanup costs nearly every step of the way.

Exxon fought paying damages and appealed court decisions multiple times, and they have still not paid in full. Years of fighting and court appeals on Exxon's part finally concluded with a U.S. Supreme Court decision in 2008 that found that Exxon only had to pay \$507 million of the original 1994 court decree for \$5 billion in punitive damages.

Five years ago as of 2009, Exxon had paid only \$383 million of the \$507 million to those who sued, stalling on the rest and fighting the \$500 million in interest owed to fishermen and other small businesses from more than 12 years of litigation.

Statistics as of 5 years ago demonstrate that some of the original plaintiffs are no longer alive to receive, or continue fighting for their damages. An estimated 8,000 of the original Exxon Valdez plaintiffs have died since the spill, while waiting for their compensation as Exxon fought them in court. (76)

### **Some numbers to ponder:**

Animals killed by the Exxon Valdeese oil.

250,000 to 500,000 seabirds

1,000 otters

300 harbour seals

250 bald eagles

22 orcas

billions of salmon and herring eggs

and of course 30,000 human plaintiffs.

On the issue of lingering oil twenty five years later, one of the most stunning revelations by the government funded Exxon Valdez Oil Spill Trustee Council who have been monitoring Prince William Sound is that Exxon Valdez oil persists in the environment and in places is nearly as toxic as it was the first few weeks after the spill. (77)

In perspective, the TransCanada Energy East pipeline will pump four times as much oil spilled from the Exxon Valdeese every day through North Bay...for the next 40 years.

## **So what are the chances of a Energy East pipeline leak?**

Despite Natural Resources Canada's statement that there has not been a single rupture on a federally-regulated pipeline built in the past thirty years, The Transportation Safety Board of Canada lists over one thousand Federally regulated pipeline occurrences over a nine year period between 2003 and 2012. (78)

NEB statistics show that over a brief 5 year period:

- 1 million, 217 thousand litres of oil spilled from their regulated pipelines between 2009 and 2013 and this does not include any spill less than 1,500 litres which TransCanada and other companies are not required to report. (79)
- There were 301 reportable gas leaks over the same time period. (80)
- There were 527 reportable "incidences" over the same time period which include death or serious injury, adverse environmental effects, explosions, spills and leaks and operating a pipeline well beyond it's safety limits. (81)

Therefore the chances of the Energy East Pipeline NOT leaking are so remote as to dwindle to the vanishing point.

The definition of Environmental protection is the practice of protecting the natural environment on individual, organizational or governmental levels, for the benefit of both the natural environment and humans.

### **The NEB States:**

"Safety and environmental protection are of paramount importance to the National Energy Board (NEB)". (82) "Notwithstanding the safety record of NEB-regulated pipelines, the Board has noticed an increased trend in the number and severity of incidents being reported by NEB-regulated companies in recent years. The Board is of the view that a reduction in numbers and severity of pipeline incidents depends on actions taken by industry." (83)

The operative word here is "depends" on industry. Not the NEB, not the Ministry of Natural Resources, not the Ministry of the Environment not the Transportation Safety Board of Canada. None of these. The NEB is leaving it up to industry.

On February 2014 the NEB released the TransCanada "Audit Report for Integrity Management Programs". For this audit the NEB interviewed and met with sixty three TransCanada directors, managers, legal council members, engineers, technicians and operators responsible for TransCanada Pipelines and the responsibilities included:

Liquid Pipeline Integrity,  
Maintenance Programs,  
Business Development and Project Support,  
Facilities Integrity,  
Damage Prevention,  
Engineering and Asset Reliability,  
Mechanical and Civil Engineering,  
Automation Engineering,  
Materials Engineering,  
Regulatory Compliance,  
Program Governance and Compliance,  
Pipeline Corrosion,  
Quality Management,  
and Public Awareness. (84)

A quote from the audit findings:

"The Board finds TransCanada to be non-compliant in four sub-elements of the audit, those being:

Hazard Identification,  
Risk Assessment and Control;  
Operational Control-Upset or Abnormal Operating Conditions;  
Inspection,  
Measurement and Monitoring;  
and Management Review." (85)

It appears that TransCanada has not been held accountable since the July 20th, 2009 NEB Incident Brief on the Rupture of the Peace River Mainline operated by TransCanada Pipelines Ltd.

Those findings were:

"The Board makes seven findings as to the cause and contributing factors"

1. External corrosion was the immediate cause.
2. Microbiologically Influenced Corrosion was a contributing factor.
3. Failed Polyvinyl Chloride coating that resulted in localized shielding of cathodic protection was a basic cause.
4. Inaccurate sizing of the defect by the magnetic flux leakage in-line inspection tool was a basic cause.
5. Inadequate field investigation criteria was a basic cause.
6. Ineffective operational control was a management system cause.
7. Inadequate inspection was a management system cause. (86)

But remember, the NEB states "Pipeline companies have primary responsibility for ensuring pipeline safety and environmental protection." (87) And a reduction in numbers and severity of pipeline incidents depends on industry.

After the twelfth leak on the newly constructed Keystone pipeline Terry Cunha, a spokesperson for TransCanada, said "We've demonstrated we have built a very safe pipeline system because we haven't had a leak on our pipeline," "Unfortunately what we're having is oil releases..."<sup>(88)</sup>

This cavalier attitude toward safety is consistent with the Canadian Conservative Government's actions and statements.

This attitude is consistent with current and past legislative modifications which drastically reduce our environmental protections to our water.

This attitude is consistent with Conservative MP for Nipissing—Timiskaming (Ontario) Jay Aspin voting to remove environmental protections for our drinking water source previously inherent in the Navigable Waters Protection Act. (89)

And the NEB audit findings of TransCanada's non-compliance are consistent with Canadian Prime Minister Stephen Harper's statement:

"In this party, we will not accept that environmental protection must stop economic development." (90)

Back in October of 2012 the then Federal Conservative Transport Minister Denis Lebel said in relation to the changes to the Navigable Waters Protection Act, " that waterways not on the new list will be protected by other federal laws and by provinces and municipalities. (91)

At the recent OEB hearings on the Energy East project TransCanada provided written documents to the public which state " TransCanada has been building safe, reliable pipelines for over 60 years.

Therefore it is absolutely necessary for the Province of Ontario and the Municipality of North Bay to stop TransCanada's Energy East project before TransCanada's pipeline safety and reliability record repeats itself.

**In conclusion:**

On February 24, 2014 a National Energy Board audit found TransCanada was breaking federal rules in areas such as hazard identification, risk assessment, monitoring and management review. (92)

"The thousands of pages of records, released over the past month by the Senate energy and environment committee, show cases where engineers were told in internal emails to stop searching for potential pipeline defects." (93)

The risk to North Bay's watershed, to Ontario as a whole is insurmountable in the highest degree.

TransCanada's Energy East project must be stopped.

Sincerely,

A solid black rectangular box redacting the signature of the sender.

North Bay, Ontario

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Endnotes:

<sup>1</sup> Natural Resources Canada, Frequently Asked Questions (FAQs) Concerning Federally-Regulated Petroleum Pipelines in Canada; 3.6 How are pipeline leaks prevented or minimized? :<http://www.nrcan.gc.ca/energy/infrastructure/5893#h-3-1>

<sup>2</sup> Ibid

<sup>3</sup> National Energy Board, Safety and Environmental Performance Dashboard, Pipeline Incidents: Incident means an occurrence that results in a spill in excess of 1.5 m<sup>3</sup>  
1.5 cubic meters = 1,500 litres: <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/dshbrd/dshbrd-eng.html>

<sup>4</sup> Keystone XL Project APPENDIX Q, Pipeline Risk Assessment and Environmental Consequence Analysis: <http://keystonepipeline-xl.state.gov/documents/organization/205569.pdf>

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> National Energy Board, Public Inquiry Concerning Stress Corrosion Cracking on Canadian Oil and Gas Pipelines. MH-2-95, REPORT OF THE INQUIRY November 1996  
: <http://publications.gc.ca/collections/Collection/NE23-58-1996E.pdf>

<sup>8</sup> Natural Resources Canada, Frequently Asked Questions (FAQs) Concerning Federally-Regulated Petroleum Pipelines in Canada; 3.6 How are pipeline leaks prevented or minimized? :<http://www.nrcan.gc.ca/energy/infrastructure/5893#h-3-1>

<sup>9</sup> Transportation Safety Board of Canada: <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0083/p09h0083.asp>

<sup>10</sup> Ibid

<sup>11</sup>[http://en.wikipedia.org/wiki/TransCanada\\_pipeline](http://en.wikipedia.org/wiki/TransCanada_pipeline)

<sup>12</sup> NEB SSC backgrounder report referenced.  
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<sup>13</sup>Report on a second study of pipeline accidents using the Health and Safety Executive's risk assessment programs MISHAP and PIPERS, Prepared by Casella Scientific Consultants for the Health and Safety Executive 2002: <http://www.hse.gov.uk/research/rrpdf/rr036.pdf>

<sup>14</sup> National Energy Board Public Inquiry Concerning Stress Corrosion Cracking on Canadian Oil and Gas Pipelines. MH-2-95, REPORT OF THE INQUIRY November 1996  
: <http://publications.gc.ca/collections/Collection/NE23-58-1996E.pdf>

<sup>15</sup> Ibid

<sup>16</sup> Transportation Safety Board of Canada : <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0074/p09h0074.pdf>



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- <sup>17</sup> Alberta Energy Regulator, <https://aer.andornot.com/Record/AERCALG23020>
- <sup>18</sup> Commodity Pipeline Occurrence Report: TransCanada Pipelines Limited Natural Gas Pipeline Ruptures:  
[http://books.google.ca/books/about/Commodity\\_Pipeline\\_Occurrence\\_Report.html?id=n3veQgAACAAJ&redir\\_esc=y](http://books.google.ca/books/about/Commodity_Pipeline_Occurrence_Report.html?id=n3veQgAACAAJ&redir_esc=y)
- <sup>19</sup> National Energy Board Public Inquiry Concerning Stress Corrosion Cracking on Canadian Oil and Gas Pipelines. MH-2-95, REPORT OF THE INQUIRY November 1996  
: <http://publications.gc.ca/collections/Collection/NE23-58-1996E.pdf>
- <sup>20</sup> Report on a second study of pipeline accidents using the Health and Safety Executive's risk assessment programs MISHAP and PIPERS, Prepared by Casella Scientific Consultants for the Health and Safety Executive 2002: <http://www.hse.gov.uk/research/rrpdf/rr036.pdf>
- <sup>21</sup> National Energy Board Public Inquiry Concerning Stress Corrosion Cracking on Canadian Oil and Gas Pipelines. MH-2-95, REPORT OF THE INQUIRY November 1996  
: <http://publications.gc.ca/collections/Collection/NE23-58-1996E.pdf>
- <sup>22</sup> Commodity Pipeline Occurrence Report: TransCanada Pipelines Limited Natural Gas Pipeline Ruptures :  
[http://books.google.ca/books/about/Commodity\\_Pipeline\\_Occurrence\\_Report.html?id=n3veQgAACAAJ&redir\\_esc=y](http://books.google.ca/books/about/Commodity_Pipeline_Occurrence_Report.html?id=n3veQgAACAAJ&redir_esc=y)
- <sup>23</sup> The Transportation Safety Board of Canada :  
<http://c66.203.200.38.tidc.telus.com/eng/rapports-reports/pipeline/1994/p94h0036/p94h0036.asp>
- <sup>24</sup> Transportation Safety Board of Canada, Pipeline Investigation Report P94H0036  
<http://www.tsb.gc.ca/eng/rapports-reports/pipeline/1994/p94h0036/p94h0036.asp>
- <sup>25</sup> <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmt/sfty/pplnrptrs/pplnrptrs-eng.html>  
Follow link at bottom of page for NEB Pipeline rupture Excel file
- <sup>26</sup> National Energy Board Public Inquiry Concerning Stress Corrosion Cracking on Canadian Oil and Gas Pipelines. MH-2-95, REPORT OF THE INQUIRY November 1996  
: <http://publications.gc.ca/collections/Collection/NE23-58-1996E.pdf>
- <sup>27</sup> Ibid
- <sup>28</sup> Transportation Safety Board of Canada  
[http://c66.203.200.38.tidc.telus.com/eng/publications/reflexions/pipeline/2002/numero-issue\\_3/pipeline-numero-issue-3-sec1.asp](http://c66.203.200.38.tidc.telus.com/eng/publications/reflexions/pipeline/2002/numero-issue_3/pipeline-numero-issue-3-sec1.asp)
- <sup>29</sup> Ibid
- <sup>30</sup> Ibid
- <sup>31</sup> Ibid
- <sup>32</sup> Transportation Safety Board of Canada : <http://c66.203.200.38.tidc.telus.com/eng/rapports-reports/pipeline/2002/index.asp>

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<sup>33</sup> TransCanada Final Failure Report on the 8 October 2002 rupture of the PRML, submitted to the Board on 4 December 2009. see endnote # 19:

[http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/nvgsrptrpcrvr2009\\_07\\_20/nvgsrptrpcrvr2009\\_07\\_20-eng.html#ftn19back](http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/nvgsrptrpcrvr2009_07_20/nvgsrptrpcrvr2009_07_20-eng.html#ftn19back)

<sup>34</sup> Forensic Appraisal Group Limited : [http://www.forensic-appraisal.com/valuation\\_issues](http://www.forensic-appraisal.com/valuation_issues)

<sup>35</sup> Ibid

<sup>36</sup> Pipeline Incident Report Investigation Pursuant to Section 12 of the National Energy Board Act into the 20 July 2009 Rupture of the NOVA Gas Transmission Limited Peace River Mainline at KP 379, South of High Level, Alberta, Canada

<sup>37</sup> NEB safety investigation; 2.4 Historical Incidents and Performance

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<sup>38</sup> Transportation Safety Board of Canada: <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0083/p09h0083.asp>

<sup>39</sup> Transportation Safety Board of Canada report: <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0074/p09h0074.asp>

<sup>40</sup> Transportation Safety Board of Canada: <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0083/p09h0083.asp>

<sup>41</sup> Ibid

<sup>42</sup> <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/pplnrptrs-eng.html>  
Follow link at bottom of page for NEB Pipeline rupture Excel file

<sup>43</sup> Transportation Safety Board of Canada: <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/2009/p09h0083/p09h0083.asp>

<sup>44</sup> PIPELINE INVESTIGATION REPORT P11H0011, TRANSCANADA PIPELINES LIMITED, 914.4 -MILLIMETRE-DIAMETER PIPELINE LINE 100-2 – MLV 76-2 + 09.76 KM NEAR BEARDMORE, ONTARIO, 19 FEBRUARY 2011

<sup>45</sup> <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/pplnrptrs-eng.html>  
Follow link at bottom of page for NEB Pipeline rupture Excel file

<sup>46</sup> [http://switchboard.nrdc.org/blogs/aswift/the\\_first\\_keystone\\_tar\\_sands\\_p.html](http://switchboard.nrdc.org/blogs/aswift/the_first_keystone_tar_sands_p.html)

<sup>47</sup> <http://www.cbc.ca/news/canada/quality-concerns-arose-before-transcanada-pipeline-blast-1.1276144>

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<sup>50</sup> <http://www.reuters.com/article/2013/11/27/transcanada-gas-pipeline-idUSL2N0JC21S20131127>

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<sup>51</sup> [https://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/brdrdr/nvgs\\_kf\\_002\\_2013-eng.html](https://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/brdrdr/nvgs_kf_002_2013-eng.html)

<sup>52</sup> Ibid.

<sup>53</sup> <http://www.youtube.com/watch?v=NmUifbk46xM>

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[http://article.wn.com/view/2014/01/27/TransCanada\\_gas\\_pipeline\\_that\\_burst\\_in\\_Manitoba\\_was\\_50\\_years/](http://article.wn.com/view/2014/01/27/TransCanada_gas_pipeline_that_burst_in_Manitoba_was_50_years/)

<sup>55</sup> <http://www.calgaryherald.com/technology/Nova+pipeline+ruptures+near+Rocky+Mountain+House/9520808/story.html>

<sup>56</sup> "The Board is of the view that a reduction in numbers and severity of pipeline incidents depends on actions taken by industry" NEB Pipeline Performance Measures. <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnprfrmncmsr/pplnprfrmncmsr-eng.html>

<sup>57</sup> Natural Resources Canada, Frequently Asked Questions (FAQs) Concerning Federally-Regulated Petroleum Pipelines in Canada; 3.6 How are pipeline leaks prevented or minimized? :<http://www.nrcan.gc.ca/energy/infrastructure/5893#h-3-1>

<sup>58</sup> Ibid.

<sup>59</sup> <http://www.cincinnati.com/story/news/local/2014/03/18/crews-investigate-colerain-gas-leak/6554741/>

<sup>60</sup> <http://www.cincinnati.com/story/news/local/2014/03/18/crews-investigate-colerain-gas-leak/6554741/>

<sup>61</sup> <http://www.cbc.ca/news/politics/enbridge-s-kalamazoo-cleanup-dredges-up-3-year-old-oil-spill-1.1327268>

<sup>62</sup> <http://www.reuters.com/article/2011/05/12/idUS418509825620110512>

<sup>63</sup> Canada NewsWire: <http://www.digitaljournal.com/pr/1599255#ixzz2lF9q1QpB>

<sup>64</sup> <http://www.sun-canadian.com/aboutus.htm>

<sup>65</sup> [http://www.huffingtonpost.com/2013/10/10/north-dakota-oil-spill-tesoro\\_n\\_4079323.html](http://www.huffingtonpost.com/2013/10/10/north-dakota-oil-spill-tesoro_n_4079323.html)

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<sup>68</sup> <http://desmog.ca/2013/04/02/pipelines-carrying-tar-sands-crude-us-don-t-pay-federal-oil-spill-fund>

<sup>69</sup> <http://www.prairiebizmag.com/event/article/id/16796/#sthash.1KrJVMlK.dpuf>

<sup>70</sup> <http://www.cincinnati.com/story/news/local/2014/03/18/crews-investigate-colerain-gas-leak/6554741/>

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- <sup>71</sup> [http://billingsgazette.com/news/state-and-regional/montana/n-d-oil-pipeline-break-leaks-gallons-of-crude/article\\_67dad781-6904-5658-8000-26bc1291ca10.html](http://billingsgazette.com/news/state-and-regional/montana/n-d-oil-pipeline-break-leaks-gallons-of-crude/article_67dad781-6904-5658-8000-26bc1291ca10.html)
- <sup>72</sup> <http://desmog.ca/2013/04/03/tar-sands-tax-loophole-cost-us-oil-spill-fund-48-million-2012-will-cost-400-million-2017>
- <sup>73</sup> <http://www.desmogblog.com/2013/04/03/can-we-trust-exxon-pay-pegasus-tar-sands-spill-cleanup>
- <sup>74</sup> <http://desmog.ca/2013/04/02/pipelines-carrying-tar-sands-crude-us-don-t-pay-federal-oil-spill-fund>
- <sup>75</sup> SPILL: The wreck of the *Exxon Valdez* Final Report, Alaska Oil Spill Commission  
Published February 1990 by the State of Alaska  
<http://www.evostc.state.ak.us/index.cfm?FA=facts.details>
- <sup>76</sup> <http://www.desmogblog.com/2013/04/03/can-we-trust-exxon-pay-pegasus-tar-sands-spill-cleanup>
- <sup>77</sup> *Exxon Valdez* Oil Spill Trustee Council; Lingerin Oil Updated 2014  
<http://www.evostc.state.ak.us/index.cfm?FA=status.lingerin>
- <sup>78</sup> Transportation Safety Board of Canada, Statistical Summary – Pipeline Occurrences 2012  
<http://www.tsb.gc.ca/eng/stats/pipeline/2012/ss12.asp>
- <sup>79</sup> [http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/nvgsrptrpcrvr2009\\_07\\_20/nvgsrptrpcrvr2009\\_07\\_20-eng.html#ftn22](http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnrptrs/nvgsrptrpcrvr2009_07_20/nvgsrptrpcrvr2009_07_20-eng.html#ftn22)
- <sup>80</sup> *Ibid*
- <sup>81</sup> *Ibid*
- <sup>82</sup> Protecting Canadians and the Environment: <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/nvrnmnt/nvrnmnt-eng.html>
- <sup>83</sup> NEB Pipeline Performance Measures. <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnprfrmncmsr/pplnprfrmncmsr-eng.html>
- <sup>84</sup> Appendix III, TransCanada OPR-99 Integrity Management Program Audit, TransCanada Representatives Interviewed and Meeting Attendees: <http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/dtrprt/trnscndt211-2012-2013-01ntgrtymngmnt/nxxiii-eng.html>
- <sup>85</sup> February 2014 National Energy Board *Onshore Pipeline Regulations, 1999* (OPR-99) Final Audit Report for Integrity Management Programs, File Number: OF-Surv-OpAud-T211-2012-2013 01 TransCanada PipeLines Limited and National Energy Board-Regulated Subsidiaries (TransCanada) 450-1<sup>st</sup> Street SW, Calgary, Alberta T2P 5H1
- <sup>86</sup> Pipeline Incident Report Investigation Pursuant to Section 12 of the National Energy Board Act into the 20 July 2009 Rupture of the NOVA Gas Transmission Limited Peace River Mainline at KP 379, South of High Level, Alberta, Canada - document in Pipeline Failures - TransCanada
- <sup>87</sup> Natural Resources Canada, Frequently Asked Questions (FAQs) Concerning Federally-Regulated Petroleum Pipelines in Canada; 3.6 How are pipeline leaks prevented or minimized? : <http://www.nrcan.gc.ca/energy/infrastructure/5893#h-3-1>

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<sup>88</sup> <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/pump-station-spill-shuts-keystone-pipeline/article2041087/>

<sup>89</sup> "Amendments to the Navigable Waters Protection Act introduced as part of a sweeping budget implementation bill on Thursday limit its application to 97 lakes, 62 rivers and the three oceans that border Canada. That means construction of dams, bridges and other projects would be permitted on most waterways without prior approval under the act, which currently covers any body of water big enough to float a canoe in."  
<http://www.theglobeandmail.com/news/politics/environmentalists-decry-changes-to-law-governing-navigable-waters/article4622873/>

<sup>90</sup> <http://globalnews.ca/news/941809/what-did-stephen-harper-say-at-the-conservative-convention/>

<sup>91</sup> <http://www.theglobeandmail.com/news/politics/environmentalists-decry-changes-to-law-governing-navigable-waters/article4622873/>

<sup>92</sup>

[http://www.thestar.com/news/canada/2014/04/13/transcanada\\_corp\\_dismissive\\_of\\_employees\\_concerns\\_about\\_pipeline\\_safety\\_records\\_reveal.html](http://www.thestar.com/news/canada/2014/04/13/transcanada_corp_dismissive_of_employees_concerns_about_pipeline_safety_records_reveal.html)

<sup>93</sup>

[http://www.thestar.com/news/canada/2014/04/13/transcanada\\_corp\\_dismissive\\_of\\_employees\\_concerns\\_about\\_pipeline\\_safety\\_records\\_reveal.html](http://www.thestar.com/news/canada/2014/04/13/transcanada_corp_dismissive_of_employees_concerns_about_pipeline_safety_records_reveal.html)

I will be unable to attend the Public Consultation Meeting for Energy East in North Bay this Wednesday. Otherwise I would submit my comments to OEB staff at the meeting as well as participate within the meeting agenda and format. I'm aware my written comments would not fit the meeting agenda and format very well. There are several bullet points at the beginning that would be sort. Please accept my written comments in the attached file and direct them direct them to an appropriate office.

Thanks

A solid black rectangular box used to redact the sender's name.

Mattawa

## *Energy East*

*As soon as the land of any country has all become private property, the landlords, like all other men, love to reap where they never sowed, and demand a rent even for its natural produce. The Wealth of Nations; Adam Smith, 1776*

The material below contains shortened web addresses to pertinent information. A free web service, Tinyurl, is used, and it is the original and best established of shortening services. Rumours persist of possible privacy breaches related to the use of these services. However a web search found nothing specific or current. Persons concerned about privacy issues may wish to take precautions or use a public library computer to access and record the original long web addresses. Information accessed through these links may be important to some people in interpreting the Energy East proposal.

I wrote this paper with intent to contribute to the Public Interest by submitting the paper in public forums related to the Energy East proposal. I intend any distribution of this paper to be limited to persons who are actively attending Energy East meetings or who are planning to submit public input to regulatory boards. If there is general interest in this paper, it should not be published in mass media until after public input to regulatory commissions are summarized and made public. Thank you for your courtesies.

Below is a 'thought piece' I wrote. However, after reviewing the OEB community discussion meeting for Energy East ( <http://tinyurl.com/pdsxejp> ) I realized that my material would be of limited value within the meeting format. Never-the-less, I believe there are good ideas here that would be useful to consider. I also think I have a few contributions to the 'Focused Questions' in the Agenda. I will summarize them a in the bullet-point form below. I may not be able to attend the meeting.

- What are the impacts in my community? My community will see little direct benefit other than temporary increases in accommodation and restaurant demand and perhaps some minor local hauling and aggregate sales during the period of any construction in our vicinity. If approved and completed, immense wealth will flow through our land daily, but we will not share equitably in that wealth. Despite claims made in the economic benefits paper released months ago by TransCanada, the main beneficiaries of the project seem likely to be small elites at both ends of the pipeline, investors and foreign owners. In terms of indirect benefits, the level of inequity in present provincial and national societies also means we will not benefit equitably in any dividends from accelerator/multiplier driven economic growth. Never-the-less my community will experience all the risk of potential catastrophic environmental damage from a pipeline rupture. I am not aware of any assured indemnification or restoration funding by TransCanada to provide fair compensation and restoration to current Provincial environmental standards for any damage done. I also am unaware of assurances of safety and maintenance standards except lofty assertions of excellence from TransCanada. The reality is that failures are inevitable, and the pipeline industry does not have an impressive record of providing adequate compensation or restoration for

- damage resulting from its operations.
- What are the impacts the OEB should focus on? I think the most important impact is whether Energy East contributes to the Public Interest. Ultimately NEB decisions are based on whether a proposal contributes adequately to the Public Interest. The NEB definition of Public Interest is at: <http://tinyurl.com/o4pf9fw> I think that anything submitted to the OEB, and from the Ministry of Environment should be stated in terms of the contribution of Energy East to the Public Interest.

My following comments may repeat some of the above bullet points. I am aware that the Provincial Government may consider some of the content, especially where legal approaches are considered to be unrealistic and unsuitable, but thought is just thought and it loses its power if it is limited by anything except imagination. Perhaps information feeds imagination. In the 1600's, the French mathematician, physicist, inventor, writer and Christian Philosopher Blaise Pascal wrote: Imagination decides everything. We, who live near the pipeline need fair and equitable decisions.

My wife and I live in the Town of Mattawa, and we own a post-logged bush lot within walking distance that we are privately protecting and restoring. Other privately protected property acts to protect a section of creek that flows through a Provincial Conservation reserve upstream and into the Mattawa River downstream. Both properties are crossed by the TransCanada gas pipeline right-of-way, and that pipeline may be converted to carry raw tar-sands diluted bitumen oil (Energy East). The pipeline also crosses under the creek near our property and other locations in our region. It runs through many wet-lands as well. The area is both sensitive and important to our region, to Ontario, Canada and the World. In terms of climate change, our region and much of the pipeline route through Ontario contains one of the last relatively undisturbed Boreal Forests in the World. The region has been called 'Rain Forest North.' The forest removes from the atmosphere and sequesters huge quantities of carbon. It provides habitat for diverse plant and wildlife species as well as the origins of aquifers that maintain the environment and also supply drinking water to rural and town residents. I imagine that our relatively undisturbed natural lands contribute to the public good locally, nationally and globally, despite the presence of an aging gas pipeline.

Despite the diversity, our land is not especially unique among lands on the Canadian Shield. The entire Shield is a fairly integrated eco-system. I've often pondered why any thought would be entertained of running a pipeline that may carry 1.1 million barrels of raw tar-sands oil through this sensitive and irreplaceable region each and every day. Irrespective of all the asserted guarantees of safety, safety and more safety from TransCanada, all systems have potential for failure, and eventually they do fail irrespective of how diligently they are maintained. Failure is inevitable and an oil pipeline has a constant potential to cause catastrophic and permanent damage. I do not understand how such a proposal could be held in the public interest or why such a proposal would be advanced even by a profit maximizing private corporation.

A tar-sands pipeline presents a much more serious and lasting threat to natural land than does a gas pipeline. At maximum flow, by my rough calculation, a volume of tar-sands



oil similar to the Lac-Mégantic derailment oil spill would flow past all points along the pipeline each and every minute of every day. In my mind, the safety and maintenance standards required to adequately indemnify potential damage would be almost unimaginable, considering the consequences. And possibly due to the consequences of spills and contributions to climate change, note should be taken of China's recent policy announcements: “China to 'declare war' on pollution (Reuters and Bloomberg News)

*Chinese Premier Li Keqiang said pollution is a major problem and the government will “declare war” on smog by removing high-emission cars from the road and closing coal-fired furnaces.*

*Pollution is ‘nature’s red-light warning against the model of inefficient and blind development.*

*The NDRC said it would also take action this year to tackle agricultural pollution, including the contamination of farmland by heavy metals, with 3.33 million hectares (8 million acres) believed to be too polluted to grow crops.*

*“ . . . [Recently], the government said it would spend 2 trillion yuan (\$330 billion) on tackling pollution of scarce water resources.*

*Li said China would also aim to convert 333,300 hectares of marginal farmland to forest and grassland and would continue to fight desertification and recover wetlands.*

*The NDRC said China would seek to ensure that polluters pay by establishing a new mechanism to compensate victims of environmental damage and by holding local officials accountable . . . In a separate report . . . , the Ministry of Finance said China would spend 21.1 billion yuan on energy conservation and environmental protection in 2014, up 7.1 percent on 2013. It said 64.9 billion yuan would be allocated to agriculture, forestry and water conservation, up 8.6 percent.”*

Compare recent Chinese policies with our own. China is increasing conservation and environmental protection while our governments are gutting environmental legislation. Everybody must connect their own dots, but I am reminded of role reversals from the heady days of a previous empire. Granted the Canadian economy does face severe economic problems. But perhaps we should be ashamed of ourselves as a people and of our complicit senior governments for I cannot find a serious effort to identify alternative constructive and equitable solutions. A question that might be pondered is whether a market for intensive carbon emitting products will continue for anywhere near the 50-year projection in TransCanada's economic benefits study. In terms of the Public Interest: What might be the consequences of reducing our national economy to virtually a one industry resource exporting economy if the international market collapses? Carbon cap and trade proposals often measure carbon emissions in terms of total life-cycle emissions, which would include the carbon emissions from all tar-sands oil production, refining and transportation in Canada. Tar-sands oil could become a very expensive energy source for

other countries.

I have led by speaking from the heart. Now I continue by speaking from the mind. A thought occurred to me several days ago. The sound system in a local store was tuned to a North Bay radio station. A bright well-produced commercial was playing. It was from Energy East touting the supposed economic and other benefits of the project to Canadians--In North Bay? I wondered what benefits might actually be realized in the localities where the pipeline runs.

To that end, I reviewed the economic benefits study that was released by TransCanada and also referenced in the preliminary NEB submission. In my opinion (for various technical reasons) I consider the economic impact model inappropriate to estimate the economic benefits of Energy East to Canada, let alone to Ontario or Nipissing District. The copyright protected document is available from TransCanada and The Ontario Energy Board at: <http://tinyurl.com/ndxuul7> Appropriate restrictions on use are noted on the OEB site. There also is no QA failure model or quantitative risk assessment study included or mentioned in the preliminary NEB submission. All safety assurances are simply asserted by TransCanada. However, I note that virtually all components in a pipeline and trench construction have stated service-lives. So, constructing a quantitative risk assessment and failure model should be feasible.

I have some training and experience econometric macro-models and a bit in QA, but far short of expertise. However, my comments should be considered to be opinions, rather than authoritative conclusions, and detailed comment is also beyond the scope of this paper. Interested persons may refer to the many detracting reviews that can be found by simple web searches as well as the fewer supportive reviews. Highly interested persons should seek authoritative conclusions from qualified independent professional economists who are experienced in work requiring manipulation of large scale econometric models. Some insight into economic models can be gained by referring to documents such as The Bank of Canada sponsored comparison of twelve models in use within Canada in 2003. See: <http://tinyurl.com/ozwbk3g> Styles may have changed since 2003 but the document still contains relevant information. More insight may be gained by reading TransCanada's benefits study. I found no reference to use of a commercial model such as were described in the Bank of Canada Technical Report 94. The model seems to be based on Statistics Canada's Provincial I/O Tables. The tables were published annually with releases from 2003-2011. The data itself may exist since 1997. There are references that indicate the tables may have been discontinued, or at least not available. The available tables are free, but registration is required ( <http://tinyurl.com/oqzecq4> ). My set of 2010 tables were delivered free by e-mail as Excel spreadsheets. Notes to the spreadsheets describe limitations to interpretations of models based on the I/O tables. For example, one note in a spreadsheet identified as Catalogue no. 15F0046XDB states:

*The multipliers are based on the assumption of fixed technological coefficients. They do not take into account economies of scale, constraint capacities, technological change, externalities, or price changes. This makes multiplier analysis less accurate for long term and large impacts as firms adjust their production technology and the IO technological coefficients become outdated.*

*Assuming that firms adjust their production technology over time to become more efficient implies that multipliers will tend to overestimate the impact of a change in final demand.*

Indeed, the TransCanada benefits study itself states: “. . . I/O Model runs should be considered directionally correct rather than scientifically precise.” I wonder how useful a 'directionally correct' projection over 50 years would be. Other notes to the Statistics Canada tables and other web pages also are interesting. In my experience, Statistics Canada staff analysts are very helpful in identifying relevant materials. Interested persons may benefit by telephoning Statistics Canada.

A credible Economics Benefits study seems important to assess the potential contribution of Energy East to the Public Interest. However, it should be noted that, even given the best model, no model can forecast small regions where these economic benefits will occur. Sometimes the benefits are experienced in other countries; for example, if all pipe, fittings, pumps etc. are imported from some other country, the economic benefits occur in the country that exports to Canada unless Canadian exports to that country correspondingly increase. In that context, to assess the potential effect of an oil pipeline through my region, it is important to understand that Nipissing, and other similar areas along the pipeline route, are exposed to all the risk of pipeline failures and yet receive no apparent indemnification from TransCanada against damage. I'm unaware of funds or bonds established or commitments from senior governments that seem adequate to clean up and restore any damage to Provincial environmental standards. The potential damage may be fairly described as locally catastrophic, and the petroleum and pipeline industries do not have especially exemplary records of adequately underwriting liabilities for damage to the environment that result from their operations. It seems fair to note that my region is exposed to all the risk, but little direct benefit will be experienced because the few business suppliers that operate here and the existing labour force skills are not used extensively by such a project. It seems fair to say that the potential Public Interest improvements are likely to be very unevenly distributed from the perspective of my region.

We cannot rely on benefits to hedge our risk. And to hedge our risk, we would require the highest imaginable safety and maintenance standards, which may impossible to deliver considering the potential consequences of a rupture. But those high standards are required for fair and equitable outcomes, because unlike hedge-fund investors, we do not receive a premium for accepting high risk. Few rural people would choose to gamble with their land anyway. The risk argument seems to make a strong case that a credible risk assessment and failure model must be defined. A model is required, because without a failure model there is no basis for concretely assessing the damage done or for fair compensation. There also is no concrete standard for responsible administration and management of the pipeline. It may be interesting to note that the first step in defining a failure model often is to require clients of the model to state the consequences of a failure. Clients then are required to state how frequently a failure is acceptable, and finally to state how much risk of being wrong they are willing to accept. Are we, our municipalities and our Province not the clients of this project. The pipeline does use our

land. It seems essential that all clients should have opportunity to discuss consequences, acceptable frequencies of failure and acceptable risk in open public forums, rather than the usual open houses. Such discussions are only possible if a credible failure model is defined and is available.

I've noted that the advertising for both the economic benefits and the safety aspects of the pipeline proposal might be considered inadequate to support the advertising claims made. At some level, the advertising claims might be held to be grossly deceptive misrepresentations and to be considered as culpable false advertising. In similar cases, I'm aware that various legal approaches may be feasible, but legal actions are seldom desirable except as a last resort. However, I do believe that TransCanada has presented a massive lengthy and well-planned public relations campaign. They have put their story massively before the public over a year ago, and well before any before any public comment could be formally accepted by the NEB. However, TransCanada still has not committed themselves to anything concrete. TransCanada has successfully used their huge corporate resources and federal cabinet backing in attempts to massively influence public perceptions, which ultimately set the parameters for public policy and regulatory board decisions. As far as I know, the public will remain unable to comment formally until a final project submission has been submitted. At present, there are only sessions scheduled for something called 'technology-based information sessions with a Process Advisor to talk about the NEB's role, the hearing process and how to participate, as well as the Participant Funding Program.' It's a teleconferencing system. Details are at:

<http://tinyurl.com/o9q2vdj> I registered for one of the April sessions in English. At present informal discussions with NEB project staff only have been allowed since 4 March 2014 when TransCanada filed a preliminary project description.

In terms of approaches, I'm aware that the present playing field is anything but fair and level due to the on-going PR campaign. If the ad claims are grossly unsupported, under some legal systems, a judge might rule that a fair jury trial would be impossible because pre-trial publicity has given nearly everybody a preconceived opinion of the defendant. In similar legal outcomes, judges have required corporations that have advertised falsely to halt PR campaigns and undertake campaigns corrective advertising. The U.S. Tobacco companies come to mind. Punitive damages were also imposed under class action suits. Various legal approaches may be available but seem undesirable except as a last resort. However, it is possible that regulatory boards could reason similarly and conclude that the present field needs to be more level before a neutral balanced decision in the Public Interest is possible. Those of us opposed to Energy East need as much time as TransCanada has already spend on its PR campaign.

A possibly good alternative might be to seek expert independent opinions of the adequacy of materials used to support the claims TransCanada has made in advertising and public meetings. I imagine that it is in the interests of all persons involved in the Energy East project, pro, con and including the NEB, to ensure that the decision for any proposal that is eventually submitted is firmly based in The Public Interest and is supported by robust and objective material that all participants could recognize as fair

and equitable. In terms of substantive issues, I can say that I've heard stories that indicate direct knowledge of substandard sand bedding in trench construction at various locations on the Canadian Shield. If such deficiencies exist, welded steel pipe may be virtually lying on bedrock. All pipe used in commodity pipelines flex, and flexing is more critical in regions of inadequate bedding or padding. The pipe may be subject to elevated risks of failure from puncture, corrosion thinning, work hardening and metal fatigue. I am unable and unwilling to verify the stories I've heard. They may be just stories. But I do know that trench bedding and padding can erode due to sub-surface water-ways near pipeline trenches or surface drainage that crosses pipeline right of ways. Details are in Transportation Safety Board Incident Reports.

What is important is that steel pipe does eventually reach the limits of its reliable service-life, and pipe reaches it's limits sooner in areas of trench deficiencies. Whatever the cause, what seems important, whether the pipe carries gas or tar-sands oil, is to determine if deficiencies are present. I'm not aware that TransCanada has committed itself to evaluations much more sophisticated than sending robots through the pipeline to search for areas of corrosion, and perhaps undertaking some informal level of manual examinations in areas thought to be high risk. In theory, a well designed cost efficient sampling model could estimate trench and pipe condition model to specifications taken from a failure model. As I mentioned earlier, defining appropriate specifications is impossible in absence of a quantitative failure model.

To illustrate the difficulties of assessing pipeline condition; I do know that the right-of-way on our property contains areas of clay underlay and sub-surface water activity. There also is a sizable surface drainage swale that crosses the right-of way. The drainage runs across the right-of-way and then along the pipeline edge a considerable distance to a creek just beyond our property. The swale was created as a result of blasting to create a desirable grade to the creek. The natural drainage patterns were altered, and the surface drainage now crosses the right-of-way. The drainage is sufficient to maintain a sizable marshy area that is wet enough to support cat-tails and other wet-land plants. I suspect there may be failure issues on our property, especially since the terrain is similar to that described in the 1994 Latchford Pipeline Rupture. <http://tinyurl.com/op6veox> I'm not aware of how much land along the pipeline route is similar to ours, but our land is fairly typical Shield bush.

I believe that non-destructive test equipment which is capable of imaging pipe, trench bedding and padding are available. I have not heard that TransCanada proposes to employ such equipment for measurement in support of a failure model. An independent engineering assessment should be required by the NEB. TransCanada may lack credibility among the general interested public to satisfy a sense that the public interest would be served by allowing the company to proceed independently according to their own devices and intent. TransCanada, after all, is a private profit-maximizing corporation.

I conclude by reflecting on Adam Smith and The Wealth of Nation. In the title quote, Smith was writing about his theory of economic rent. How would we interpret the quote

today?

What is private land ownership? Who or what are the landlords, and who are the tenants? What is the natural produce of the land? Could it be that corporations have become the landlords, and private land ownership has become the ever expanding land encumbrances backed by threat of government enforced expropriation? If so, then perhaps we who own land crossed by the pipeline and encumbered by easements and additionally encumbered by buffer zones of control have become tenants on our own land. If so, what should be considered the natural produce of the land. It is being used for transportation, which may be its current highest and best use. If the pipeline actually enjoys an overwhelming claim to be in the Public Interest, what might be the fair share of the natural produce owed to the tenant/owner? An approved and completed pipeline may carry immense wealth, which would not be possible without use of our land. I myself prefer to have my natural land without pipeline or an equitable share of the economic land rent for any use in transportation or other development.





May 15, 2014

Alex Heath, Associate  
Swerhun Facilitation  
720 Bathurst Street Suite 500B  
Toronto Ontario M5S 2R4

Dear Alex:

**Re: Comments on Proposed Energy East for OEB**

As a member of the group Sustainable North Grenville, I attended the public meeting in Cornwall last month. I received your summary document afterward, and emailed some comments to you April 17<sup>th</sup> (included, below).

Here are some additional comments.

**The Proposed Energy East Pipeline is categorically a bad thing, for the following reasons:**

**1. The risk is too great.**

A. It's not safe

- Oil spills happen regularly; there have been accidents all across the country, many of which do not get reported.
- No airline would stay in business if it claimed to be 99.999% safe.
- The question is not 'if' a spill will occur, but when, where and how badly.
- The Rideau River corridor is a UNESCO World Heritage site, and the consequences of any spill could be disastrous.
- On Oct. 2, 2013, during a TransCanada Pipeline (TCP) Open House in Kemptville, [REDACTED] was asked if the company would guarantee that the pipeline would be safe running through our community.
- His reply: **"I give no assurances. There's no such thing as a pipeline that's 100% safe."** Many citizens witnessed this dismissive and troubling response.
- (I include a photo of [REDACTED] making this statement, below.)

B. We're not prepared to clean up a disaster

- Cleanup continues on every major oil spill. There is no happy ending. There is no 'back to normal'.
- Local responders enjoy receiving professional 'cleanup' training, yet none will be adequately prepared when disaster strikes. And why does the local municipality have to bear this responsibility?



### C. The Aquifer is too precious

- Submission has already been made with regard to the potential impact on the two local aquifers that serve our community. Additional comments were made to you via email April 17.
- OEB 'Background reports' prepared by OEB technical experts make no mention of 'aquifer', 'source water' or 'wells'. People in rural areas get their drinking water, and farmers provide for their crops and livestock via wells. This is evidence of grave negligence on the part of the OEB, and makes a clear statement that they either don't know or don't care about these issues.
- Keystone XL Pipeline has drawn a lot of attention to aquifers in the US. Why is it so obviously overlooked in Canada?

## **2. The rewards are too few**

### A. No long-term jobs will be created

- In Cornwall, participants heard that the construction of the pipeline (where new sections were required) would take no more than 36 months. This is less time than it would take to pay off the purchase of a new truck – hardly long-term or sustainable. Then workers would be unemployed again.
- In our community of North Grenville, the mayor has indicated that there would be no jobs created. Nor would any taxes be paid by TCP in our community.

### B. Short-sighted project seems desperate

- While the construction may take only 36 months, the risk will be around for decades. So will the consequences of a spill.
- According to some industry studies, a pipeline can be used for 40 – 60 years. Some sections of the pipe are already 40 – 50 years old, yet they expect to pump dilbit through them for another 40 years. Then what?
- The whole project just seems to be a rush to get it done, and don't worry about the consequences.
- Money could be better spent: an investment in green energy infrastructure or even retrofit programs have been shown to offer better return on investment than a toxic legacy project such as a pipeline.

### C. Oil going offshore

- For all this effort, the whole thing seems simply nothing more than a way for the oil companies to make a huge profit, at the expense of our future.
- A lot of effort and risk, yet little reward for the communities that bear the risk.



### 3. The process seems unjust

#### A. RVCA's hands are tied

- Rideau Valley Conservation Authority – who have the power to stop the installation of a well or a septic tank – have no power to provide input on a one million BARRELS per day pipeline.
- A letter from TransCanada to a community member claimed that they have “developed a strong working relationship with the Rideau Valley Conservation Authority”, yet when shown the letter, the RVCA replied “The extent of our dealings with TransCanada has...been limited to funding received by the Rideau Valley Conservation Foundation and periodic interactions with TransCanada staff when they undertake maintenance on their pipeline easement through Baxter. For TransCanada to state that they have a “strong working relationship with the RVCA” is therefore an exaggeration in our opinion.”
- (I enclose copies of these letters with this submission.)
- This example of misrepresented relationships calls into question TransCanada's overall integrity in these matters. What else have they misrepresented?

#### B. Flawed NEB process

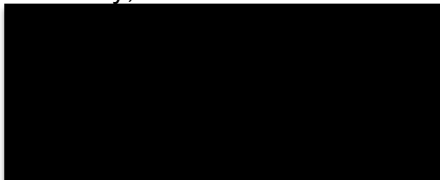
- In February, 2014, in a letter to North Grenville Mayor David Gordon, then Minister of Natural Resources Joe Oliver stated that “The Government has been clear that new pipelines will be approved only if they are safe for Canada's environment.”
- Yet, as of April 14, the NEB stated that it “does not have regulatory authority over upstream or downstream activities associated with the development of oilsands, or the end use of the oil to be transported by the Project.” This effectively ignores issues such as the effect of the tar sands on land and water of First Nation's people in the area, climate change emissions, or the fact that we're all bearing the risk of this pipeline for the sake of oil companies' profits.
- Since the NEB's mandate is to promote “safety and security, environmental protection and efficient energy infrastructure and markets in the Canadian public interest within the mandate set by Parliament in the regulation of pipelines, energy development and trade,” I would argue that the NEB is not doing its job.

The proposed Energy East pipeline carries many risks for the residents of our area, but few benefits. I urge the OEB and the Ontario government to say no to this project.

I've attached copies of the letters and correspondence I refer to above.

If you have any questions, please contact me at the number below.

Sincerely,



cc: Steve Clark, MPP

Encl.

**Subject: Re: For Your Review - Draft Cornwall Community Discussion**

**Date:** Thursday, 15 May, 2014 10:48 PM

**Category:** Work

**From:** [REDACTED]

**Date:** Thu, 17 Apr 2014 17:26:36 -0400

**To:** Alex Heath <aheath@swerhun.com>

**Conversation:** For Your Review - Draft Cornwall Community Discussion

**Subject:** Re: For Your Review - Draft Cornwall Community Discussion

Hi. It's likely a new point. Although we discussed 'aquifers' at the meeting, AND the background reports were mentioned by the folks from the OEB, it's a separate issue that these technical reports make no mention of aquifers. They also do not mention 'source water' or even 'wells'.

It begs the question: are they not concerned about source water protection? Do the reports even look at long-term operation? Is someone else going to look out for our aquifer?

When these seemingly obvious questions are not even raised in a report on the environmental impact of a pipeline, it could make a cynical person say, 'well obviously they don't care, and they're just going ahead anyway'.

But I'm sure the Ontario government would rather avoid creating that impression deliberately.

Thanks for however you can get the point in.

[REDACTED]

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[REDACTED]

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**From:** Alex Heath <aheath@swerhun.com>

**Date:** Thu, 17 Apr 2014 20:27:39 +0000

**To:** [REDACTED]

**Subject:** RE: For Your Review - Draft Cornwall Community Discussion

Hi [REDACTED]

Thanks for the clarification on the Nepean and Oxford aquifers – I'll make sure that's corrected in the summary.

As for your additional point, I can add it in if it reflects a point you or another participant raised at the meeting (we try to keep the points in the community discussion summaries limited to things raised at the meeting). If it's a new point, I'll make sure that it's incorporated into the Part One Consultation Summary. This report will summarize all feedback received during part one of the OEB's Energy East Consultation, including feedback from the community discussions, completed discussion guides and comments emailed in.

I'd be happy to talk about the summary process further, by email or phone.

Cheers,

Alex

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**SWERHUN | Facilitation**

720 Bathurst Street Suite 500B Toronto Ontario M5S 2R4  
t. 416 572 4365 e. aheath@swerhun.com  
www.swerhun.com <<http://www.swerhun.com/>>

**From:** [REDACTED]  
**Sent:** Thursday, April 17, 2014 10:53 AM  
**To:** Alex Heath  
**Subject:** Re: For Your Review - Draft Cornwall Community Discussion

Thanks. In case I don't get back to it...the two aquifers are reversed: Nepean is the deeper one (municipal wells); Oxford is the shallow one (rural wells).

If there's a way to note my additional concern about aquifers, please do:

Namely, that neither expert 'report' commissioned by the OEB (on the OEB website) even contains the word 'aquifer'. They do mention water quality and water quantity, but usually only in regards to the constriction phase of the project. This is shockingly unacceptable.

I am NOT a water expert. I do (like 10,000 of my neighbours) drink water pumped DIRECTLY

FROM THE GROUND (I know it may sound strange to someone from Toronto...!). The risks of operating a pipeline containing known carcinogens (look up dilbit ingredients) in the vicinity of a 'Highly Vulnerable Aquifer' are way too high compared to the consequences for the local population.

Here's one interesting article that illustrates the point:

<http://mostlyharmlesscience.com/2013/12/28/mom-i-think-i-spilled-some-oil/>

Hope that helps.

[REDACTED]

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[REDACTED]

January 24, 2014

Dear [REDACTED],

Thank you for your interest in the Energy East Pipeline Project. I am writing to follow up on questions you posed at one of our recent open houses regarding the proposed Energy East Pipeline.

**Protecting Ontario's Environment (seismic activity, drinking water and conservation areas)**

Safety is always TransCanada's top priority. Pipelines are the safest way to transport oil and TransCanada has an industry-leading safety record with more than sixty years of experience building and operating safe, reliable pipelines across North America. Our pipeline incident rate is lower than the average in Canada, the United States and Europe.

TransCanada takes substantial preventative measures to ensure that our pipelines operate safely. We use only the highest quality materials and best practice techniques in the construction of our pipelines and implement meticulous maintenance programs throughout the life of the pipe. In 2012 we invested over \$1.0 billion dollars in pipeline integrity, proactive inspection and maintenance programs to ensure the safety of our pipelines and facilities. TransCanada is investing even more in future years to ensure that our pipelines, including the Energy East Pipeline, will continue to safely and reliably transport Canadian resources.

The Energy East Pipeline team is currently conducting extensive field and environmental studies to ensure that all environmental risks are considered and mitigated. Seismic activity and fault lines are carefully analyzed during this process and the pipeline will be designed to withstand potential seismic activity along the route.

Watercourses will be crossed using standard pipeline industry techniques and will comply with all provincial and federal regulatory permitting requirements. When crossing environmentally sensitive areas, such as bodies of water, the Energy East team will take special preventative measures to ensure that the site is not compromised. This may include using pipe with an increased wall thickness, the installation of shut-off valves on both sides of the crossing and the use of Horizontal Directional Drilling techniques where the pipe is installed well below the bottom of the waterway.

Having operated in the Ottawa area for almost half a century, we have developed a strong working relationship with the Rideau Valley Conservation Authority, which is responsible for protecting wetlands and drinking water. Our community investment contributions to the Authority have reached \$100,000 over the past few years, including a contribution in 2007 to help purchase additional land for the Baxter Conservation Area, which you correctly identify as an important recharge area for the watershed.

No one has a stronger interest than TransCanada in making sure that our pipelines are designed, constructed and operated safely and reliably. We employ state-of-the-art leak detection systems which can isolate any section of pipe by immediately remotely closing the applicable valve. These systems and the highly trained staff that monitor them 24 hours a day ensure that the pipeline will be

shut down at the first sign of a potential problem. This ensures that, in the unlikely event of a leak, the impact to the environment would be minimized.

Our sensors on the pipeline send data every five seconds that can automatically detect the pressure in the pipe. If there are any issues that are detected, the pipeline will be immediately shut down. This shut down process begins in minutes from the time an error is sensed. Before the pipeline can begin operation again, the area must be visually inspected by a TransCanada employee to ensure that everything is in proper working order. Safety valves are placed strategically along the pipeline to ensure that the smallest amount of fluid would leak in the unlikely event of something going wrong.

### **National, Provincial and Local Benefits**

According to a study done by Deloitte, the Energy East Pipeline Project will have significant benefits for Canada. The six-year development and construction phase of the project will generate an estimated 10,000 direct full-time equivalent (FTE) jobs across the country, 2,300 during the development period (2013-2015) and 7,700 during the construction period (2016-2018). The 40-year operations phase is expected to sustain 1,000 full-time jobs across Canada directly related to the pipeline's operation. Thousands of indirect and induced jobs are also expected to be generated by the project in all provinces along the route. Energy East will generate an estimated \$10 billion in additional GDP for the Canadian economy during the six-year development and construction phase (2013-2018) and \$25.3 billion during the 40-year operations phase (although regular maintenance is expected to extend the life of the pipeline beyond 40 years). The development and construction phase is expected to generate an additional \$3 billion in tax revenues. The operations phase will result in \$7.2 billion in added tax revenues.

In Ontario, the Energy East Pipeline Project will generate over \$13 billion in GDP for the Ontario economy, create an additional \$3.5 billion in government tax revenues for the province and support more than 2,200 direct, full-time jobs in the first six years alone.

If our recent community partnerships are of any indication, we will continue to be strong local partners in the greater Ottawa area throughout the construction period and beyond. Over the past decade or so, we have provided valuable community investment funds to the Children's Hospital of Eastern Ontario, the 2012 Summer Solstice Aboriginal Arts Festival, Farm-Aid Ottawa 2012, Sisters Achieving Excellence (a young woman's literacy project focusing on Aboriginal youth), the Ottawa and Stittsville food banks, and school outreach through Ducks Limited and the Canadian Peregrine Foundation. We are committed to creating healthier, more livable communities where TransCanada works and operates

### **Climate Change (International Panel on Climate Change)**

TransCanada is an energy delivery company and does not engage in oil exploration and production activities. TransCanada instead focuses on the responsible development and reliable and safe operation of North American energy infrastructure. You may access information on oil sands impacts through the federal Ministry of Environment, the Ministry of Natural Resources and the Government of Alberta ([www.oilsands.alberta.ca](http://www.oilsands.alberta.ca)). For more information about oil extraction, production or refining processes I would encourage you to visit the Canadian Association of

Petroleum Producers website ([www.capp.ca](http://www.capp.ca)). There, you will find information on both the upstream and downstream impacts of energy production.

Thank You again for your questions and participation. For more information and regular updates on the Energy East Pipeline Project please visit the website at [www.EnergyEastPipeline.com](http://www.EnergyEastPipeline.com). If you have any additional questions regarding the project please do not hesitate to contact us by email at [EnergyEast@TransCanada.com](mailto:EnergyEast@TransCanada.com) or telephone 1.855.895.8750 (toll free). We're otherwise looking forward to seeing you at our next round of community open houses in 2014.

Sincerely,  
Energy East Stakeholder Relations

**Subject:** FW: explaining the unexplainable?

**Date:** Thursday, 15 May, 2014 11:14 PM

**From:** [REDACTED]

**Date:** Thu, 13 Mar 2014 12:19:02 -0400

**To:** [REDACTED]

**Subject:** RE: explaining the unexplainable?

Good morning [REDACTED],

Thanks very much for sharing TransCanada's letter with me. I can appreciate the optics it created, and while the Rideau Valley Conservation Foundation has received funding from TransCanada, their letter did not present an entirely accurate picture. I hope the information below will provide greater clarity.

In the 1980s, the Rideau Valley Conservation Authority received lease and damage payments from TransCanada to compensate for the pipeline going through Baxter Conservation Area. These payments amounted to approximately \$20,000 and would have been equivalent to what other property owners received along the pipeline.

Since 1997, the Rideau Valley Conservation Foundation has also been successful in obtaining a total of \$61,325 in funding from TransCanada. This is funding the Foundation pursued (not unsolicited donations) in order to fund special environmental projects and programming. This total includes \$25,000 that was received in 2007 to help acquire seven additional acres of property at Baxter Conservation Area that preserved a stretch of natural shoreline while creating a property buffer around the pipeline.

The Rideau Valley Conservation Foundation has its own mandate and Board of Directors separate from the Conservation Authority. The Foundation pursues money from a variety of funding sources including corporations like TransCanada that have community funding available (other examples include Shell FuellingChange, TD Friends of the Environment, Aviva Insurance Community Fund and RBC Blue Water Project). Often the same funding application is sent to multiple funders for their consideration. Gratitude for funding to the Foundation does not, and will never, include influence over the RVCA's staff or Board of Directors which is made up of appointees from 18 municipalities including many elected officials.



The extent of our dealings with TransCanada has therefore been limited to funding received by the Rideau Valley Conservation Foundation and periodic interactions with TransCanada staff when they undertake maintenance on their pipeline easement through Baxter. For TransCanada to state that they have a “strong working relationship with the RVCA” is therefore an exaggeration in our opinion.

Since the fall, the RVCA has been engaging with TransCanada, the National Energy Board and the Ontario Energy Board with respect to TransCanada’s Energy East Pipeline proposal. We are involved – as we would with any large-scale development proposal – to apply our regulatory responsibilities consistently and effectively to help protect and preserve local wetlands, flood plains and water resources. In this role, we anticipate the need to provide technical watershed information and guidance to all parties involved to ensure the applicant and regulator make informed decisions in our local watershed. We will also administer any local regulatory requirements that are applicable.

[REDACTED]

[REDACTED]

---

Rideau Valley Conservation Authority  
Box 599, 3889 Rideau Valley Drive  
Manotick ON, K4M 1A5

[REDACTED]

[www.rvca.ca](http://www.rvca.ca) <<http://www.rvca.ca>>

*This message may contain information that is privileged or confidential and is intended to be for the use of the individual(s) or entity named above. This material may contain confidential or personal information which may be subject to the provisions of the Municipal Freedom of Information & Protection of Privacy Act. If you are not the intended recipient of this e-mail, any use, review, revision, retransmission, distribution, dissemination, copying, printing or otherwise use of, or taking of any action in reliance upon this e-mail, is strictly prohibited. If you have received this e-mail in error, please contact the sender and delete the original and any copy of the e-mail and any printout thereof, immediately. Your cooperation is appreciated.*

Minister  
of Natural Resources



Ministre  
des Ressources naturelles

Ottawa, Canada K1A 0E4

FEB 26 2014

His Worship David Gordon  
Mayor of the Municipality of North Grenville  
285 County Road #44  
P.O. Box 130  
Kemptonville, Ontario K0G 1J0

Dear Mr. Mayor:

Thank you for your correspondence of December 10, 2013, enclosing a copy of a resolution of the Council for the Corporation of the Municipality of North Grenville, regarding TransCanada's proposed Energy East oil pipeline.

In Canada, the construction and operation of interprovincial and international pipelines are under the regulatory oversight of the National Energy Board (NEB), an independent federal agency established in 1959 by the *National Energy Board Act*. The NEB's mandate is to promote safety and security, environmental protection and economic efficiency in the Canadian public interest.

TransCanada has not yet submitted a formal application to the NEB for its Energy East project; therefore, the NEB has not started its review process. However, the NEB is aware that such an application is forthcoming and has recently set up a page on its Web site dedicated to this review, which you may view at [www.neb.gc.ca](http://www.neb.gc.ca) by selecting the "Major Applications and Projects" tab.

Once the NEB receives an application for a new major pipeline, it initiates a regulatory review and conducts an environmental assessment in accordance with the requirements of the *Canadian Environmental Assessment Act*. The NEB holds a public hearing that allows the project proponent and directly affected persons, as well as other persons with relevant information or expertise, an opportunity to provide evidence for the public record. Following the NEB's review, the Government of Canada will review the NEB's recommendations and proposed mitigation measures before making a final decision. The Government has been clear that new pipelines will be approved only if they are safe for Canada's environment.

DECE 11

FEB 27 2014

Canada

Currently, 99.999% of the crude oil and petroleum products shipped by federally regulated pipelines arrive safely. Canada has a robust pipeline safety regime in place. While Canada's pipeline safety record is strong, the Government is working to improve it. The Government announced several steps during the past two years to further enhance the safety of Canada's pipeline system, including:

- In 2012, in its plan for Responsible Resource Development, the Government provided \$13.5 million over two years to the NEB to increase the number of oil and gas pipeline inspections by 50% annually, and to double, from three to six, the number of annual comprehensive audits to identify potential issues and prevent incidents from occurring;
- In April 2013, the Government updated the NEB's *Onshore Pipeline Regulations* to reinforce the need for pipeline companies to have a culture of safety focused on protecting the public, workers, and the environment;
- In June 2013, the Government announced that companies operating major crude oil pipelines will need to have a minimum of \$1 billion in financial capacity to respond to leaks, spills and ruptures, that companies remain responsible for their abandoned pipelines, and that the "polluter pays" principle will be enshrined explicitly in law; and
- In July 2013, new regulations that enable the NEB to issue administrative monetary penalties for violations of the *National Energy Board Act* came into force.

For further information on federally regulated pipelines, please visit our "Frequently Asked Questions" posted on Natural Resources Canada's Web site at: [www.nrcan.gc.ca/energy/infrastructure/5893](http://www.nrcan.gc.ca/energy/infrastructure/5893).

Again, thank you for writing.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Joe Oliver". The signature is stylized with loops and a long tail.

The Honourable Joe Oliver, P.C., M.P.





“I give no assurances. There’s no such thing as a pipeline that’s 100% safe.”

TransCanada Pipeline, Senior Spokesperson for Energy East, during Open House in Kemptonville, Oct. 2, 2013

*Facilitator's Note: The above image is clip art and is not an image of a TransCanada employee.*

I request that the Ontario Government conduct a full environmental assessment for the Energy East project. I believe that it is our government's responsibility to all Ontarians to assess the environmental, social and economic impacts of this project for all Ontarians. I have attached a letter from TransCanada that addressed four questions of the many we have submitted.

### **3. Thickness and age of the pipe around Trout Lake**

The wall thickness under the creeks that are near Trout Lake range from 12.7 mm to 16.0 mm and additionally the pipe is coated with concrete, which further protects the pipeline from external damage. The pipeline east of North Bay and around Trout Lake was built in the 1990s.

The pipe along the North Shore of Trout Lake is 10.6 mm thick. We have used thicker walled pipe for water crossings, for example at the Mattawa River Narrows Crossing, the wall thickness is 16mm. In addition, this crossing has been treated with a 196mm concrete coating to further protect it.

This does not address the thickness of the pipe in the Trout Lake Watersheds or in other places within Ontario. A break, spill, or rupture anywhere in Ontario will have an impact to someone's livelihood and the economy of Ontario. We are rich with natural resources that already provide economic benefit and job in Ontario. TransCanada's answer to our question does not address the many private wells that are located along its route.

What are the costs and responsibilities of private Ontario landowners and the Government of Ontario when the pipe reaches the end of its life? Will it be abandoned? Who bears the legal responsibility for monitoring water quality with abandon pipes still in ground? If they take out the pipe, where does this hazardous material go for disposal? What will be the effects of frost heaving on a pipe coated with residual product when there is no longer heated product going through?

We need to ensure that we are not creating a TOXIC LEGACY for generations to come similar to the LOVE CANAL and SYDNEY TAR SANDS.

### **4. Example of MSDS for oil**

As we discussed during our meeting, the Energy East Pipeline will ship a variety of crude oils and not just one product. Diluted bitumen is one of the products which also varies in exact MSDS makeup. Any one of the crude oils we are transporting will be in the pipe at various times. We are unable to provide the MSDS to individuals along the route, as each product is unique. However, we will work with local emergency responders and make sure that they have precise information of what is passing through the pipeline at the time if a spill were to occur. They can then communicate the appropriate response to landowners and those affected. A great resource where you can go to look up various types of crude oil and find information similar to what you would find in an MSDS is available at [www.crudemonitor.ca](http://www.crudemonitor.ca)

How do we ensure that TransCanada has the legal right to ship product through this current pipe when they cannot say what they are shipping? Do they have signed legal contracts that allows them to ship anything, yet to be determined across provincial borders and through Ontario?

How does the Government of Ontario ensure that all provincial regulations are being met, and the future of Ontario is being protected when TransCanada states that it cannot what it is transporting?

I would ask the government of Ontario to conduct a full, public environmental assessment.

Our provincial, district and municipal representatives require additional expertise, resources and finances to be able to properly study this project and its impacts on Ontario and those communities being asked to play an unwilling host.

These only address two of my many concerns. I would like to participate as a stakeholder in any and all actions, studies or communications regarding the Energy East Project.



Please confirm you have received these comments.

<Mail Attachment.eml>

Hi, [REDACTED]:

Not sure if my previous email reached you with the answers to the four questions following our meeting with the Rural Widdifield Ratepayers.

Please share with [REDACTED] and others at the Association.

[REDACTED]  
Authorized Agent for TransCanada Energy East Project

<EE4721-TCPL-PR-LT-0366 ON OH Followup to [REDACTED]  
2014-05-08.pdf>

May 8, 2014

██████████  
Rural Widdifield Ratepayers' Association  
North Bay, ON  
██████████

450 – 1st Street S.W.  
Calgary, AB  
Canada T2P 5H1

Tel.: 1.855.895.8750  
Fax: 1.855.895.8751  
Email: EnergyEast@TransCanada.com

Dear Ms. Cain,

**Re: Follow-up from March 2014 Meeting**

Thank you for taking the time to sit down with members of the Energy East Pipeline project team in March to discuss the project. I'm sorry we missed each other during our most recent Open House on April 1, 2014 where our engineering team could have had more in-depth conversations with members of the association. During our conversation, you posed four questions, answers to which you'll find below. These answers are in addition to the information on the Keystone project that my colleague ██████████ sent to you via e-mail on March 25, 2014.

**1. Temperature and pressure of oil in the pipe including comparison with gas pressure**

Oil that will flow through the Energy East Pipeline will not be heated. The flowing temperature can differ across the pipeline based on location, time of year, and flow rate. The average flowing temperature in winter is about 10-15 degrees Celsius and in the summer 22-30 degrees Celsius. The pipeline will operate at the same pressure that is currently used in natural gas service (6895 kPa | 1000 psi).

**2. NEB specifications for pipes with comparison to specification for gas**

The design of an oil pipeline is largely similar to the design of a gas pipeline. However, a key difference is that the pipeline wall thickness requirements for gas pipelines are more demanding than oil. Accordingly, in a number of locations along the conversion, the pipe is thicker than what would be installed for a new liquid line.

**3. Thickness and age of the pipe around Trout Lake**

The wall thickness under the creeks that are near Trout Lake range from 12.7 mm to 16.0 mm and additionally the pipe is coated with concrete, which further protects the pipeline from external damage. The pipeline east of North Bay and around Trout Lake was built in the 1990s.

The pipe along the North Shore of Trout Lake is 10.6 mm thick. We have used thicker walled pipe for water crossings, for example at the Mattawa River Narrows Crossing, the wall thickness is 16mm. In addition, this crossing has been treated with a 196mm concrete coating to further protect it.



#### 4. Example of MSDS for oil

As we discussed during our meeting, the Energy East Pipeline will ship a variety of crude oils and not just one product. Diluted bitumen is one of the products which also varies in exact MSDS makeup. Any one of the crude oils we are transporting will be in the pipe at various times. We are unable to provide the MSDS to individuals along the route, as each product is unique. However, we will work with local emergency responders and make sure that they have precise information of what is passing through the pipeline at the time if a spill were to occur. They can then communicate the appropriate response to landowners and those affected. A great resource where you can go to look up various types of crude oil and find information similar to what you would find in an MSDS is available at [www.crudemonitor.ca](http://www.crudemonitor.ca)

Thank you again for your continuing engagement on the Project. Please don't hesitate to contact my colleague [REDACTED] on the community relations team with any further questions

Sincerely,

[REDACTED]

[REDACTED]  
Community Relations Lead - Ontario  
Energy East Pipeline

Cc: [REDACTED] – Community Relations, Energy East Pipeline  
[REDACTED] – Environmental Planning and Permitting, Energy East Pipeline  
[REDACTED] – Rural Widdifield Ratepayers' Association [REDACTED]

Just a short note to thank you for having this meeting but I was disappointed to see so few landowners present while it appeared there were more special interest groups, representatives from government agencies, and pipeline people. I must say that I realize the economic advantages associated with this project and I've heard all the horror stories that oil spills have caused because in both cases I read the newspapers and watch the news every night. So I hope you understand that your meeting was disappointing and of little use to me.

