Appendix E – Organization Submissions

This appendix contains written submissions received from groups and organizations up to May 15th, 2014. These submissions were sent by various methods, including: Discussion Guides, Conversation Toolkits, email, and through the OEB Energy East Consultation website comment form (**ontarioenergyboard.ca/oebenergyeast**).

The groups and organizations that provided written submissions included:

1. Building and Construction Trades Council
2. Canadian Association of Energy and Pipeline Landowner Association (CAEPLA)
3. Canadian Energy Pipeline Association
4. Canadian Environmental Law Association/Low Income Energy Network
5. Canadian Standards Association
6. Council of Canadians
7. Council of Canadians, York University Chapter
8. Environment North
9. Environmental Defence
10. Federation of Northern Ontario Municipalities
11. Federation of Sisters of St. Joseph of Canada
12. Lake of the Woods District Property Owners Association (LOWDPOA)
13. Lake Ontario Waterkeeper
14. North Bay, City of
15. Northwatch
16. Ontario Environmental Health Association
17. Ontario Nature
18. Ontario Rivers Alliance (ORA)
19. Ottawa Riverkeeper
20. Ottawa Wind Concerns
21. Richmond Village Association (RVA)
22. Rideau Environmental Action League (REAL)
23. School Energy Coalition
24. Sustainable North Grenville
25. Temiskaming Mayors Action Group
26. Temiskaming Environmental Action Committee
27. United Association, Local 71

We assume that TransCanada have performed their risk management and due diligence assessments with their insurers and re-insurers ,who together would support a combined TC/Insurer response in the unlikely possibility of an as yet undefined emergency.During our visits to the TransCanada open houses(like the October 2013 Stittsville event) we learned from TransCanada that they are 100% responsible for all costs in the event of an emergency situation .TC backed up this statement with a public disclosure that with over $50 billion dollars in assets they have access to the necessary financial resources to cover the costs of any theoretical emergency .

We are concerned that the" Climate Change Clock""inferred to in this paragraph [referring to Draft Stittsville Community Discussion Summary] is suggested to have started on April 7th,2014 . WE THINK IT IS APPROPRIATE TO NOTE that both the construction industry & the oil and gas industries have been operating in a responsible and environmentally conscious way for over 60 years as regards resources based issues. This was well in advance of the Brian Mulroney/Canadian government launching the global conversation on climate change /global warming talks in Toronto on June 30th ,1988.We also note that this was one year after the Montreal Protocol was signed.

We are approaching the 26th anniversary of the Toronto Conference and your words suggest that this one pipeline discussed on April 7th [referring to Stittsville Community Discussion] will accelerate global warming, which I believe borders on fear mongering.What elicits this latter comment is that at the open TC sessions we learned that Energy East would not facilitate increased oil sands production.That production is and will be happening irregardless of whether or not the EE pipeline proceeds. Oil from Western Canada is already moving to Eastern Canada by rail(see April 17th National Post article on increasing rail transport costs and how that will impact each and everyone one of us).Rail transport produces significantly more Green House Gases(GHG) emissions than a pipeline ,which uses pumps driven by electric motors to move the various oil based products west to east .

There was a speaker or two on April 7th who noted an estimated $7 million dollars of economic benefit of the existing pipeline to Stittsville alone.We would argue the economic multiplier effect of between $900.000 million to $1.1 billion dollars of salary dollars in circulation in Eastern Ontario would generate a huge economic benefit to Eastern Ontario.Someone returned a second time to speak on this issue on April 7th and confirmed that there were in fact taxes collected from right of ways and even more from pumping stations of increasing economic benefit to the community ratepayers. Since the TC open house last October in Stittsville we have learned that the Deloitte study shows that the Energy East Pipeline Project will generate $13 billion in Gross Domestic Product(GDP) for the Ontario

economy.This means an additional $3.5 billion in government tax revenues for the province and supporting more that 2200 direct jobs.Let me repeat that the figures as at April 21st are 2200 direct jobs, full -time jobs for the development and construction of the project; and almost 200 full-time jobs for operations and maintenance of the pipeline and pump stations facilities.There is also the ancillary economic benefits created by good paying jobs such as new houses built for pipeline workers, more appliances manufactured and sold, autos built and sold,indirect jobs like mechanics, retail, suppliers etc. created and generated by pipeline investment and salary dollars in circulation.

Collectively our Building Trades Affiliates operate 95 highly rated professionally staffed training centres , financed by our Building Trades Members and Contractors in Ontario , developed at an investment cost in excess of $250 million dollars..Our annual operating costs for retraining, training and skills upgrading is in excess of $45 million dollars a year in Ontario and over $350 million for our total 350 Training Centres across Canada. Our annual Canada wide training budgets and our $650 million in bricks and mortar investments in Training, positions us as the largest private sector trainers in Canada. We are also confident that as residents in this area, our Members will use every qualified and certified skill earned and learned,including both practical and theory based knowledge, to build the safest and most reliable pipeline possible using todays" technology, materials, inspection devices, pipe x-ray techniques and best trained labour.

In our open house conversations with TC, they made it very clear that we will not be short- changing our neighbours through conversion or new pipe construction.In fact we would be contributing to their collective energy security...Fact to note, we understand that the conversion of a pipeline to gas service will not affect TransCanada's ability to meet its firm natural gas transportation contractual obligations and WILL NOT increase the cost of transporting natural gas on the TransCanada System according to their open house reassurances.

We have faith in the regulatory bodies and in the OEB .

We would argue that TransCanada is both transparent and accountable.We think it is dishonest to raise negative human resource issues when the company is neither able nor available through legal representation to defend their reputation at such OEB consultations. I attended an Ottawa breakfast meeting last week where the Honourable Minister of Energy MPP Robert Chiarelli made a presentation to the Ottawa Chamber of Commerce. He elaborated on Ontario's investment and partnerships to attain an independent energy supply.Minister Chiarelli noted that an energy surplus is both good business, good planning for the economy if we are to influence any decrease in future unit costs of energy. Minister Chiarelli also noted that surplus energy is a socially responsible strategy for Ontario. We cannot

make economic progress by discriminating against jobs and corporations. Finally, I met with the Federal Government Procurement Ombudsman Frank Brunetta briefly last week and of the approximately 400 complaints received by his office yearly, my understanding is that none were energy related.

Respectfully

Richard

Richard Hayter
Director
Community Relations
Building and Construction Trades Council

[Referring to Cornwall Community Discussion] We are not certain how or why the human resource issue was introduced again but it may be fair if the company had a legal representative present to describe the circumstances and outcomes or conversely it may not be fair if only 0.01% of the story is told and it reflects negatively on 99.99% of the company.We are sensitive to any discriminatory creep(as in language or permissiveness)(Alex not meant to reflect on any individual but moreso as simply another societal form of verbal bullying.There might need to be a more careful examination of some of the codes of ethics out there in use by the Broadbent institute, Infrastructure Health and Safety etc to make sure discrimination ,unwittingly conveyed by any OEB consultation audience member ,of any kind is avoided.Careless words become a tarnish on a reputation that no amount of training, education and goodwill an industry (either oil and gas or construction) can or will remove..Our Members know how they are treated by the general public when they are in their coveralls and hardhats....and how they are treated (once in their middle class street clothes) by the public when they are away from their jobsites.We are hard tech and sensitive but defensive of our employers and contractors.

I know this is all theoretical as far as any unspecified emergencies but I believe that TC are on record as being financially, ethically and socially 100% responsible.

We may not all support the positions of our American counterparts on the issue of fracking but we do support the Energy East Pipeline and were quite verbal in that regard...We would encourage cross -training so that everyone of our Members involved in Pipeline work would become qualified first responders in the event of any unforeseen incident that could be arrested by early intervention and detection to strengthen our determination and commitment that this would be the safest and best constructed project possible..Perhaps, there is the opportunity to use the Canada Jobs Grant program to create a newly trained ,oil and gas first responder team, creating a team of world leaders from start to finish.And the Pipeline is not creating any new oil extraction, simply managing risks ,minimizing incidents and maximizing benefits for all Canadians.

Thank you for the opportunity to respond.

Regards
Richard

Hi Alex,

See an email below with a link to a video of a meeting I attended in Quebec on the Energy East Project and the Enbridge Line 9 Reversal Project. I think it may clearly explain landowner concerns.

Ontario needs to be very leery of NEB goals and make sure that Ontario property rights and law are respected.

This Federal Regulator "thinks" it has the power to compromise landowner and provincial "values" as proven in the Alberta Nova jurisdictional change and the attempt of the same in Sarnia Ontario with the Spectra (Union Gas) river crossing a few years ago.

I just received this email and the link to this YouTube video, from the Quebec landowners who produced it, this week.

Hello [redacted]

Here is the link to the video. It's good for French or English audiences as you will see.

http://www.youtube.com/watch?v=1N2ND1-c3f0

This is our tool for going out into landowner groups in Quebec and I have lots of people waiting for this.

The diffusion starts now! Please don't hesitate to use it if you wish.

Sincerely,
Landowners Want In!
Dave Core
CEO & Director of Federally Regulated Projects
CAEPLA (Canadian Association of Energy and Pipeline Landowner Associations)
"Promoting the responsible use of our lands and resources"
CAEPLA Administrative Office

#257-918 Albert Street
Regina, SK S4R 2P7
[redacted]
www.landownersassociation.ca
www.pipelineobserver.ca

canadian energy pipeline association | association canadienne de pipelines d'énergie

Suite 200, 505 – 3rd St. SW
Calgary, Alberta T2P 3E6
PHONE 403.221.8777
FAX 403.221.8760

May 15, 2014

Aleck Dadson
Executive Advisor
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street
Toronto, Ontario M4P 1E4

Dear Mr. Dadson,

Re: Ontario Energy Board Energy East Consultation

Thank you for the opportunity to provide comments on the Ontario Energy Board Energy East Consultation. I am writing to you today on behalf of the Canadian Energy Pipeline Association (CEPA). Our members transport 97% of Canada's daily natural gas and onshore crude oil production from producing regions to markets throughout Canada and the United States. Our members construct and operate both federally (NEB) and provincially (OEB) regulated pipelines.

All aspects of the life cycle of a pipeline – from design and construction to operation and abandonment – are subject to strict oversight from regulatory agencies and government departments. Extensive federal and provincial regulation assures that the safe and responsible operation of pipelines is in the Canadian public interest.

Pipeline safety is a priority to CEPA and its members. This is why we launched CEPA Integrity First®. In addition, stakeholder engagement is also important to our industry. Through active engagement with the Government of Ontario and local stakeholder groups such as municipalities, CEPA understands the importance of positive stakeholder relations. As an industry we strive to go above and beyond expectations from the regulator.

Ontario's Minister of Energy has asked that the OEB consider the implications of four areas of potential impact of the proposed Energy East Pipeline:

1. The impacts on Ontario natural gas consumers in terms of prices, reliability and access to supply, especially for those consumers living in eastern and northern Ontario
2. The impacts on pipeline safety and the natural environment in Ontario
3. The impacts on Aboriginal communities in Ontario, in particular how treaty and Aboriginal rights may be affected
4. The short and long term economic impacts of the project in Ontario

CEPA and its member companies strive to meet the needs of all stakeholders affected by transmission pipeline projects. **We believe that our industry leading practices appropriately address the four areas of potential impact indicate above. This is done through the following actions and initiatives:**

1. The CEPA integrity First Program and other industry initiative promote a high industry standard for environmental and human safety

Transmission pipeline operators are committed to transporting oil and gas products safely. CEPA member companies recognize their critical duty to safety and protection of the environment. In day-to-day operations, nothing matters more. In fact, for Canadian pipeline companies, there are no financial incentives to hold back on safety. All pipeline integrity and maintenance costs flow through the tolls charged to producers, meaning that there is no competitive advantage to cutting corners on safety. In fact, more than $1.6 billion is spent annually on pipeline integrity measures. Including rigorous safety management, technologically advanced internal inspections and state of the art upgrades.

This money is also spent on important initiatives such as the CEPA *Stress Corrosion Cracking Recommended Practices*, developed in 1997 to provide guidance to the industry on development of a SCC — stress corrosion cracking — management system. This industry leading practice, developed with CEPA members, is recognized around the world, and the second edition published in 2007 is cited in the major Canadian Standard for Pipelines, CSA-Z662, the oil and gas pipeline systems' code.

Crack detection and characterization with in-line inspections is challenging, but great advancements in the technology have been made in the last decade. CEPA member companies continue to drive improvement in this area, and in-line inspection of cracking is now common. In rare cases where inspection is impractical, periodic pressure retesting is considered.

CEPA members have also worked to develop guidelines and recommended practices regarding watercourses, with the objective of protecting the safety of the public and the environment. Our watercourse crossing manual, now in its third edition, sets standards for the directional drilling used to install pipe at water crossings. This manual provides guidance on the best methods for construction of pipelines at water crossings and how best to minimize the impact on the environment. CEPA members have also developed recommended practices for pipeline watercourse management, encouraging the safe and consistent management of hydrotechnical hazards along operating pipelines in Canada. These recommended practices have been developed by CEPA's Pipeline Integrity Working Group and provides guidelines and recommendations on the identification, assessment and monitoring methodologies for watercourses. It will continue to evolve as new advances and opportunities for improvement are recognized, and from periodic reviews.

In addition to the measures taken by pipeline companies themselves, the CEPA Integrity First® Program has been developed by the industry as a management system approach that enables CEPA members to strengthen the pipeline industry's performance, communication and engagement by jointly developing and individually applying best practices and reporting on our performance record.

In 2014, the focus is on pipeline integrity and emergency response. Pipeline integrity involves practices and processes that pipeline operators undertake to ensure that crude oil and natural gas are transported safely and within the intended operating parameters. Emergency response involves the ability for a pipeline operator to respond to an emergency situation using a comprehensive and systematic emergency response plan. In addition, CEPA is developing industry guidance on control room management.

As part of CEPA Integrity First®, our member companies have made the following commitments:

Pipeline Integrity

1. We strive for zero incidents by applying strict standards and systems in designing, constructing, operating and maintaining our pipelines.
2. We maintain and use detailed information and records to make informed decisions that support our pipeline integrity program.
3. We identify, evaluate and manage risks and hazards to protect the public, the environment, and the integrity of our pipelines.
4. As CEPA member companies, we are committed to continual improvement and we share lessons learned to support the ongoing safe operations of our pipelines.

Emergency Management

1. We regularly assess pipelines and rights-of-way and apply risk-management practices to minimize adverse impacts to people, property or the environment in an emergency situation.
2. We strive to meet or exceed all new and existing regulations applicable to our operations and to monitor our compliance.
3. We educate and work closely with local emergency response agencies and community members to address their needs and concerns in the event of an emergency.
4. We have emergency response plans in place that follow an internationally recognized emergency response system (ICS).
5. We have the equipment, resources and highly trained emergency response personnel necessary to respond effectively in any emergency.
6. We regularly review our emergency response plans, conduct drills and share lessons learned with our peers to continually improve our response capabilities.

2. CEPA's member companies engage with Aboriginal communities through the full life cycle of a project

Pipeline operators are forming partnerships with Aboriginal communities to minimize the social and environmental impacts of pipeline operations, and to help deliver economic prosperity while preserving traditional culture. By working with local communities, pipeline designers and operators are learning about local traditional knowledge of the land, forest, water and wildlife, and are improving planning, construction and operation of their pipeline projects.

CEPA member companies engage the public and Aboriginal groups in the planning and design of a project prior to submitting an application to the NEB. This allows for direct engagement from interested Canadians which take into consideration local interests. The participation of Aboriginal peoples is an important part of each phase in the lifecycle of a project (i.e. project design, construction, operation and maintenance, and retirement). The impact of this participation should not be overlooked. In 2012, CEPA member companies provided $150 million of local procurement to Aboriginal communities and groups all across Canada, with $40 million occurring in the province of Ontario.

However, for our projects to be successful, and for the benefits to be realized, the Crown must carry out its own responsibility to consult. Without the Crown fulfilling these obligations, pipeline projects, and ultimately Canadian public interest, is put at risk. It is important that federal government provides leadership and takes accountability for Crown consultation in order to ensure the certainty of process regarding major federally regulated pipeline project feasibility and timelines. Although the federal government has made improvements in this area, more work is still needed. CEPA has and will continue to encourage the federal government to improve upon the current consultation process. Only by the government moving to action, will project proponents be able to confidently proceed through the regulatory process and take firm commercial decisions regarding major infrastructure developments.

3. Transmission pipelines provide lasting economic benefits to all Canadians

Pipelines carry more than just crude oil and natural gas. They deliver economic benefits to all Canadians, enabling more than one quarter of the value of Canada's goods-producing economy and generating thousands of jobs. In Ontario, our member companies operate over 15,000 kilometres of transmission pipelines, directly employ 700 people and provide total employment for an estimated 5,400 people. In 2012, our members spent $88 million dollars on local goods and services and paid over $200 million in corporate and property taxes in Ontario.

For those working directly in the energy sector, salaries and benefits support thousands of families, local businesses and many regional economies from coast to coast to coast. The thousands of local suppliers across Canada, such as welding, steel manufacturing, construction, information technology, and even local hotels and restaurants, are all impacted by the pipeline industry. For those working

outside the energy sector, the strength of our natural resources has generated a reliable stream of tax revenue that supports our quality of life.

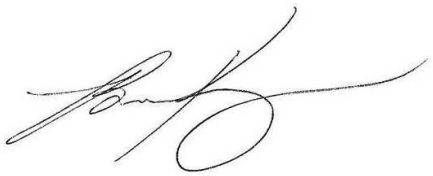
CEPA members are operators of major critical infrastructure that crosses provincial boundaries to deliver energy from producing to consuming areas of Canada. It is our job to be safe and reliable. We provide an essential service that allows our communities and our economy to strive.

Conclusion

CEPA is supportive of the consultation that the OEB is undertaking and believes that the areas they are addressing are appropriately addressed by CEPA and our member companies through the various initiatives and actions outlined above.

As an active partner with the Government of Ontario and local Ontario stakeholder groups we look forward to the continued dialogue to demonstrate our industry's commitment to pipeline safety through initiatives such as Integrity First® and our commitment to positive stakeholder relations. CEPA appreciates the opportunity to comment on the Ontario Energy Board Energy East Consultation. We look forward to the results of your consultation process.

Sincerely,



Brenda Kenny

President & CEO

Canadian Environmental Law Association
EQUITY. JUSTICE. HEALTH.

Ontario Energy Board
c/o Alex Heath
Swerhun Facilitation
720 Bathurst Street, Suite 500B
Toronto, ON M5S 2R4
By email: aheath@swerhun.com

Re Ontario Energy Board Energy East Consultation

TransCanada has filed its project description as of March 2014. Our submission on today's date provides some preliminary comments in respect of this proposed project with respect to two of the issues included in the OEB's consultation:

- **The impacts on pipeline safety and the natural environment in Ontario**
- **The impacts on natural gas consumers in terms of rates, reliability and access to supply, especially those consumers in eastern and northern Ontario**

We provide these comments on behalf of the Canadian Environmental Law Association and on behalf of the Low Income Energy Network of which we are a founding and steering committee member.

A. Impacts on pipeline safety and the natural environment in Ontario.

Our primary concern in terms of pipeline safety relates to the proposed conversion of natural gas pipeline to oil pipeline. Corrosion, breakage, metal failure and other issues with the integrity of the pipe are of paramount concern. Even with newly constructed pipeline, there is precedent for oil pipeline failure and associated ecosystem impact. However, the pipeline in question was not constructed for crude oil, but for natural gas, and is not new. There is a question about whether pipeline inspections in this existing line have been sufficient to detect all areas of concern in terms of degradation and potential failure. Pipeline failures in the gas lines of the TransCanada mainline have been an unfortunate, recurring event over the past decade. The most recent was this past December in southern Manitoba. Upon reviewing the Transportation Safety Board reports for several of the recent failures, it is clear that the current maintenance and inspection practices are not capable of preventing all such failures.

A related issue is that of the impact of the new fuel on the integrity of the pipe, and on internal corrosion processes. There will be an entirely different internal pipe environment in terms of fluid flow, pressure, physical and chemical dynamics, and the

properties of the oil are entirely different as well. This results in the necessity of very extensive and thorough analysis and third party expert review of the potential for failure and whether mitigation is available to reduce these risks.

Arising from the concerns regarding pipeline integrity and the potential for failure is the issue of emergency planning and readiness. While TransCanada states that it has on-call staff available all across the length of the line, the fact is that the line crosses thousands of kilometers and the on-call staff will not always be able to be stationed in close proximity to every reach of the line. In addition, in the Ontario context in particular, much of the line is located in muskeg and bog and is difficult to access at many times of the year in the best of circumstances. It is evident that in the event of a line break there may be extensive timelines with oil being deposited into the natural environment before it can be contained and clean up attempted. Even if shut-off valve locations are provided at relatively frequent intervals, the possibility of significant amounts of oil discharging to the environment until the pressure is reduced enough to reduce the flow of oil remains. This also stresses the requirement for procedures and training that will ensure shut down of the line if there is any question whatsoever about its integrity. As demonstrated in some of the prior Canadian and U.S. accidents in both oil and gas contexts, there have sometimes been unfortunate circumstances where operators were not sure why there were seeing anomolous indications for example on line pressure gauges and did not take immediate action to isolate the line. In those instances, doing so would have alleviated extensive resulting damage. It is also essential to have necessary equipment ready to move quickly to all areas, and furthermore that it be practical at all times of the year to get such emergency response equipment and clean up equipment and materials into place. As earlier indicated, in Ontario, this will often be practically very challenging both as to distance and as to physical accessibility.

B. The impacts on natural gas consumers in terms of rates, reliability and access to supply, especially those consumers in eastern and northern Ontario

Natural gas is a very important component of Ontario's overall energy utilization. It is a preferred method of thermal energy in many contexts, especially in preference to electricity for that use. It is also important for alleviating peak electricity needs and for planning a flexible response to changes in Ontario's generation system going forward. In our Power for the Future report written a decade ago, we called for natural gas to play the role of transitional fuel as we move in Ontario to a fully renewable electricity system. In addition, we have often advocated for consideration of fuel switching for low income consumers for heating purposes so as to reduce some of the unaffordable burden of heating with electricity that some of those consumers face. As a policy matter we urge the OEB to consider the issues of whether there will be undue constraints on opportunities for future flexibility in Ontario's overall energy system if one of the

natural gas lines is permanently taken out of service. Similarly, we urge the OEB to undertake a thorough analysis of potential long term impacts on both electricity and natural gas prices as a result of this proposed removal of one of the mainlines from natural gas service. Furthermore, availability of natural gas is an important element of the infrastructure of northern Ontario and northeastern Ontario communities and all care must be taken to ensure that both residential and business users, who are the main employers in these communities, will not be adversely impacted by the conversion of the line.

We thank you for the opportunity to participate in the Energy East consultation and we will continue to follow its developments and the continued provision of materials by the proponent, as well as further engagement of the advisory group.

Sincerely,
Canadian Environmental Law Association

Per
Theresa A. McClenaghan
Executive Director and Counsel

CSA Group
Corporate Head Office
178 Rexdale Blvd.,
Toronto, ON Canada
M9W 1R3
T: 416.747.4000
W: www.csagroup.org

Ontario Energy Board
P.O. Box 2319
2300 Yonge Street
Toronto, Ontario M4P 1E4

Delivered via: energyeast@swerhun.com

Re: Ontario Energy Board Energy East Consultation

As a world leader in the development of standards and testing, Canadian Standards Association (CSA Group) welcomes the opportunity to provide comment into the Ontario Energy Board Energy East Consultation process. For background information on CSA Group, please see Appendix.

The OEB has been directed by Ontario's Minister of Energy to consider the implications of potential impact of the proposed Energy East Pipeline. The Minister has directed that pipeline safety be part of the OEB's considerations regarding this project.

Pipeline safety and integrity are critical for ensuring the granting of continued social license towards the expansion of pipelines across the nation. It is also an important area of focus for CSA Group, with our involvement in the development of related standards, and as we continue to invest and broaden our expertise and the scope of relevant test, validation and compliance inspection service offerings.

CSA Group has and continues to play an integral role in the development of pipeline fabrication and construction standards which include the determination of the depth at which pipeline is to be laid in the ground, the thickness and coating of pipe walls, and the integrity of the welding process utilized in connecting pipe. Given the centrality of pipeline design to the questions being posed by the Minister of Energy to the OEB regarding safety and impact on the natural environment, CSA Group believes that pipeline standards such as those outlined below should be considered when evaluating the project.

CSA's Petroleum and Natural Gas Industry Systems Program

CSA Group has developed an internationally-recognized portfolio of standards-based solutions that have served the needs of the petroleum and natural gas sector for over 45 years. The standards developed through the CSA Petroleum & Natural Gas Program represent the technical requirements for compliance with regulation, a testament to the strength of CSA's renowned standards development process.

The CSA *Z662 Oil and Gas Pipeline Systems Standard* forms the cornerstone of the CSA Petroleum & Natural Gas Program which provides a structure and forum for developing standards that protect the lives of Canadians, enhance business opportunities, and position Canada as one of the top standards development countries in the world.

The current edition of CSA *Z662 Standard* was published June 2011 in English, January 2012 in French and was granted National Standard of Canada Status in September 2012.

The *Z662 Standard* serves as a benchmark for the design, construction, operation and maintenance of oil and gas industry pipeline systems that transport the following:

- Liquid hydrocarbons, including crude oil, multiphase fluids, condensate, and liquid petroleum products;
- Natural gas liquids, and liquefied petroleum gas;
- Oilfield water/steam;
- Carbon dioxide used in oilfield enhanced recovery schemes; and
- Gas.

In Canada, the CSA *Z662 Standard* is referenced at both the provincial and federal levels, thereby giving it the force of law and requiring compliance by Pipeline Operators. It is up to each individual Regulator to determine whether or not they want to reference the standard, and if so, to reference it in part or in whole, or with deviations. Currently, the *Z662 Standard* is referenced by Regulators with responsibility for oil and gas pipelines and facilities, such as the National Energy Board (for federally regulated pipelines), and Provincial Regulatory Bodies including the Technical Standards and Safety Authority (TSSA).

CSA works with a variety of multi-stakeholder committees made up of industry, government, and general interest groups, to develop and maintain the *Z662 Standard*. As input to the development of the *Z662 Standard*, international practices (such as related ISO and U.S. standards) are benchmarked, and the requirements of the CSA standard are aligned with these international practices where applicable. Approximately 250 expert volunteers serve on over 30 committees to develop and maintain this important consensus-based National Standard of Canada.

In addition to developing and publishing the *Z662 Standard*, CSA Group offers training on it ranging from a one-day overview course, to comprehensive three-day offerings on specific sections of the standard.

In addition to the suite of expertise and knowledge that CSA has in oil and gas standards development, CSA has standards areas related to carbon capture and storage, and protective equipment for workers. All of these varied subject areas, when combined together, make our standards development process valuable and unique to the industry and Canadians.

Conclusion

As an active partner with the Government of Ontario, we look forward to the continued dialogue to demonstrate our industry's commitment to standards affecting the pipeline industry. Given our commitment to safety, CSA looks forward to having the opportunity to be at the discussion table to provide further context around how standards are developed and applied to the pipeline industry.

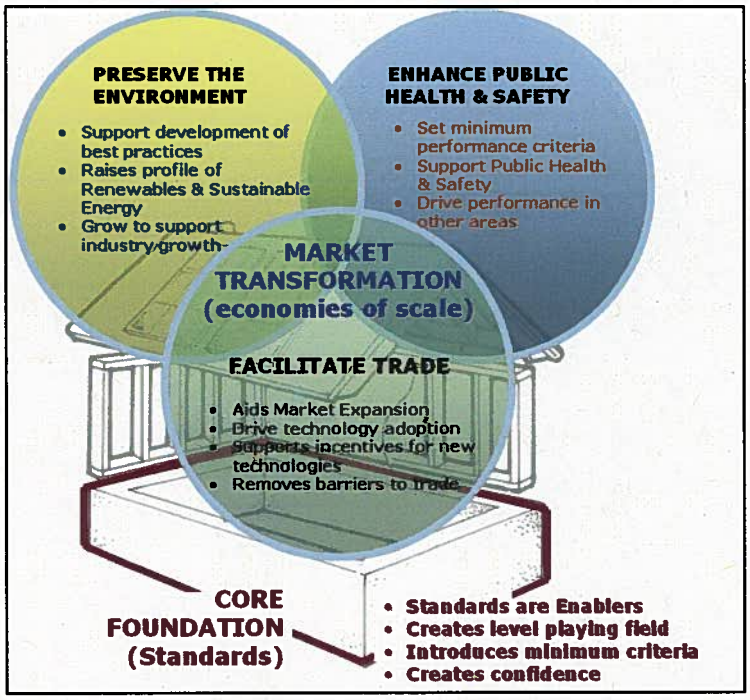
We look forward to the results of your consultation process.

Contact:
RJ Falconi, B.Sc., LL.B. (J.D.), ICD.D
Executive Vice President, Government Relations & Corporate Secretary
CSA Group
178 Rexdale Boulevard, Toronto, ON M9W 1R3
[redacted]
W: www.csagroup.org

APPENDIX

About CSA Group

CSA Group is an independent, not-for-profit member-based association dedicated to advancing safety, sustainability and social good. We are an internationally-accredited standards development and testing & certification organization. We also provide consumer product evaluation and education & training services. Our broad range of knowledge and expertise includes: industrial equipment, plumbing & construction, electro-medical & healthcare, appliances & gas, alternative energy, lighting and sustainability. For more information about CSA Group please visit www.csagroup.org



As a solutions-oriented organization, CSA Group works in Canada and around the world to develop standards that address real needs, such as enhancing public safety and health, advancing the quality of life, helping to preserve the environment and facilitating trade. The over-riding purpose of CSA Group is to make standards work for people and business. A world-leading developer of standards and codes, over the last 96 years CSA Group has published over 3000 standards for the safety, design and performance of a wide range of products and services. These include standards in areas such as environmental management systems, occupational health and safety, health care, energy, business, electronics, gas equipment, telecommunications and construction products.

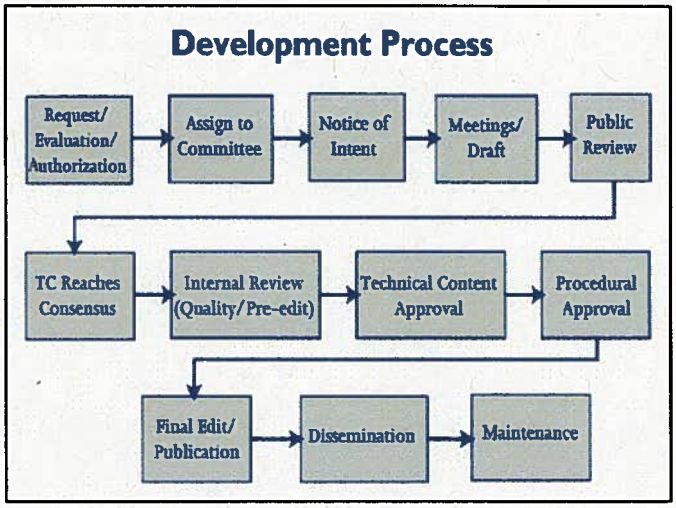
CSA Group functions as a neutral third party, providing a structure and forum for developing standards. Serving both the public good and their respective industries, CSA Group's 9000+ members contribute their time and expertise to standards development. They provide the broad range of technical knowledge, experience and expertise required to develop standards, and in some cases funding in support of standards development.

Understanding CSA Standards

CSA Group standards are used by a broad base of stakeholders. When implemented by industries or regulators, our standards help contribute to a wide range of safety and sustainability goals. We are accredited in Canada by the Standards Council of Canada (SCC) and in the U.S. by the American National Standards Institute (ANSI). We also work with international SDOs to develop harmonized global standards to facilitate trade and international sustainability goals. CSA Group provides flexible standards solutions and all documents are developed in a fair, responsive and efficient manner.

The development of standards within CSA Group follows an inclusive consensus building process involving a broad cross section of stakeholders. These stakeholders represent diverse interests including Consumers, the regulatory community, but also the Utility industry and Manufacturers.

Technical Committee members are selected to represent interest groups most likely to be affected by a standard. CSA functions as a neutral third party, providing a structure and a forum for developing standards, but it is the Technical Committee members who write and update those standards.



CSA standards are voluntary documents and only once a standard is referenced by government or a regulatory authority does compliance become mandatory. Once published, standards are living documents, continually revised and refreshed to address changing requirements and emerging technologies.

Certification and Testing

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Ontario Energy Board Energy East Consultation

Council of Canadians Written Submission, Part One of OEB Energy East Consultations

May 15, 2014

700-170 Av. Laurier Ave West/Ouest, Ottawa, Ontario K1P 5V5
Tel: (613) 233-2773, Fax/Téléc: (613) 233-6776
www.canadians.org inquiries@canadians.org

THE COUNCIL OF CANADIANS | LE CONSEIL DES CANADIENS

ACTING FOR SOCIAL JUSTICE | AGIR POUR LA JUSTICE SOCIALE

The Council of Canadians welcomes the opportunity presented by the Ontario Energy Board's (OEB) consultation to share our views on TransCanada's proposed Energy East pipeline. We firmly believe the Energy East pipeline presents many risks and little reward for Ontario, and the Ontario government should publicly oppose the proposal and instead focus on safer, more sustainable energy sources.

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Energy East – an export pipeline

Greater energy independence in Eastern Canada and strengthening the region's refinery sector has been suggested as important benefits of the Energy East pipeline project.[i] But Energy East is not about meeting Ontario's oil needs. It is also not about supplying Eastern Canada's oil needs. The pipeline will be used first and foremost to export oil – unrefined – from two new ports in Quebec and New Brunswick.

The recently released report *TransCanada's Energy East: An Export Pipeline, not for Domestic Gain*[ii] states that up to 1 million of the 1.1 million barrels of oil per day shipped through the Energy East pipeline would likely be exported unrefined. Existing supplies from Atlantic offshore oil and imports of cheap U.S. light crude, along with the crude that would flow through Enbridge's recently approved Line 9B Reversal, would fulfill almost all of the needs of the three refineries along Energy East's path. Recent public statements by representatives of Valero, one of the two Quebec refineries along the route, and Enbridge affirm that whatever is shipped through Energy East would have to move to markets beyond Quebec. [iii]

Meanwhile, Ontario and other provinces along Energy East's route are being asked to take on significant risks.

The unacceptable risk of a diluted bitumen spill in Ontario waterways

Diluted bitumen, or "dilbit," is created by diluting the thick bitumen extracted from the tar sands with various toxic and explosive chemicals to make it thin enough to transport through a pipeline.

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This was the first major spill of dilbit into a waterway. Much of the limited information we have about how dilbit reacts in waterways comes from the Kalamazoo spill.

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There is a significant lack of independent scientific data on the consequences of dilbit spills in water.[vi] A recent Canadian federal report did confirm that dilbit, when mixed with sediment in salt water, forms "tar balls" and sinks.[vii]

In Ontario, the Energy East pipeline route crosses two primary watersheds: the Nelson River and the Great Lakes/St. Lawrence watershed. According to TransCanada's pre-application for Energy East filed with the National Energy Board (NEB), there are 41 "named" river crossings in the province.[viii] A pipeline spill could pollute many important waterways and drinking water sources such as Trout Lake, Lake Nipissing, the Nipigon river system (which could contaminate Lake Superior) and the Rideau River. The remoteness of much of the pipeline's path in Northern Ontario will make detecting and cleaning up a spill much more difficult.

More needs to be understood about the location of the pipeline on top of aquifers and the potential for contamination. For example, just outside of Ottawa, the pipeline crosses the Oxford aquifer, which supplies drinking water for more than 10,000 people in North Grenville.[ix] This aquifer has been labelled as highly vulnerable to contamination by the Ontario government because the soil above it is mostly very thin and not able to absorb much. The rock under the soil has many holes and fractures that liquids – like an oil spill – could travel down to this drinking water source.

A dilbit spill in one of Ontario's waterways could contaminate drinking water sources, pollute fishing waters, and put an end to recreational activities – all of which would have related negative economic impacts.

Despite the evidence of the unique consequences of a dilbit spill, related outstanding questions, and the difficulties with dilbit spill cleanup, the NEB does not have separate and specific regulations for transporting dilbit.

Astoundingly, TransCanada denies that dilbit sinks in water, referring to this statement as a "myth" in promotional material.[x] This strongly suggests that the unique and environmentally devastating challenges of a dilbit spill are not being factored into the emergency response plans TransCanada is coordinating in preparation of filing its full application for the Energy East pipeline with the NEB.

Pipeline safety?

There is also the question of the extent to which shipping dilbit could increase the chance of a pipeline rupture. According to pipeline expert Richard Kuprewicz, converting a pipeline to carry a substance that it wasn't originally built to carry, particularly dilbit, comes with risks:

> Changing crude slates, especially running dilbit, can significantly increase pressure cycles that can accelerate crack growth. The various and changing compositions of dilbit, both the bitumen and/or the diluent, can significantly impact pressure cycles on a pipeline where crack risk is a bona fide threat. Accufacts believes that the movement of dilbit in pipelines at risk to cracking threats presents a higher potential to cause pipeline ruptures if not adequately managed.[xi]

A study prepared by the National Petroleum Council for the U.S. Department of Energy also states "pipelines operating outside of their design parameters, such as those carrying commodities for which they were not initially designed, or high flow pipelines, are at the greatest risk of integrity issues in the future due to the nature of their operation."[xii]

The pipeline to be converted for the Energy East project is part of TransCanada's Mainline system, which has seen a number of serious ruptures in recent years. Between 1991 and 2013 there were eight incidents in this series of pipelines including ruptures, explosions and fires. These incidents, which were largely the result of stress corrosion cracking, external corrosion, coating and welding failures, raise concerns about the safety of aging pipeline infrastructure.[xiii] The 100-4 pipeline, which is slated for conversion, ruptured because of external stress corrosion cracking near Rapid City Manitoba in July 1995. The delayed response in shutting down the pipeline led to a second fire on a nearby pipeline – Line 100-3.[xiv] In most of these ruptures, it was the general public or TransCanada personnel that alerted TransCanada that the incident had occurred, not leak detection systems.

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Climate implications of Energy East must be recognized

The Ontario government has shown leadership by taking responsibility for reducing climate change pollution. The province's recent phase-out of coal has been recognized as the most effective climate policy in the country.[xv] With the *Green Energy Act*, the province has shown leadership in supporting sustainable energy expansion. Particularly important has been the support shown for public and community-owned renewable energy projects and measures to support green manufacturing in Ontario.

The Energy East pipeline threatens to undo this progress. Preliminary analysis from Pembina Institute indicates the crude production needed to fill the Energy East pipeline would generate an additional 30 to 32 million tonnes of carbon emissions each year.[xvi] This is the equivalent of adding more than seven million cars to Canada's roads. It is enough pollution to wipe out the emission reductions from Ontario's phase-out of coal.[xvii]

Filling the Energy East pipeline would help spur 650,000 to 750,000 barrels per day of additional production from the tar sands. The tar sands, which are two to four times more carbon intensive to produce compared to conventional oil, are already Canada's fastest growing source of greenhouse gas emissions. The Athabasca Chipewyan First Nation and Beaver Lake Cree Nation, located downstream from the tar sands, have experienced negative health, environmental and social impacts and have called for an end to further expansion based on their unique Treaty rights.

For all these reasons the Council of Canadians requests that the climate implications of the Energy East pipeline be added to the four areas of potential impact being focused on by the OEB Energy East consultation. We also strongly recommend that a clear message be sent to the federal government that climate change emissions are part of the equation when evaluating pipeline infrastructure.

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This decision laid the groundwork for the proposal to convert part of TransCanada's Mainline natural gas pipeline system to carry crude oil. Since announced, a number of questions have been raised in the media about how the proposed conversion will impact Ontarians' natural gas supply and the cost of natural gas. The OEB is right to examine these questions as part of its Energy East consultation.

The Ziff Energy background report commissioned by the OEB recognizes the Energy East conversion will contribute to Ontario's growing dependence on fracked gas imports. The Council of Canadians has previously brought forward expert testimony to the OEB regarding the consequences of increased reliance on fracked gas imports.[xviii]

This includes geoscientist David Hughes' evidence that fracked gas in the Marcellus shale is unlikely to be as abundant and inexpensive as commonly assumed.[xix] It includes environmental consultant Lisa Sumi's summary of the myriad of regulations in play to address the significant environmental footprint of producing fracked gas in the Marcellus shale. These regulations will have consequences for both the cost and availability of the gas.[xx] We also highlighted Anthony R. Ingraffea's research indicating that the "footprint for shale gas is greater than that for conventional gas or oil and for coal used for electricity generation when viewed on any time horizon, but particularly so over 20 years." Ingraffea is a professor of engineering at Cornell University.[xxi]

We strongly encourage the OEB to direct Ziff Energy to also consider these implications in its final report.

Provincial leadership required

There is a lack of federal leadership when it comes to addressing climate change, protecting water and ensuring Canadians have access to needed energy.

Canada does not have a national strategy to address urgent water issues or an effective climate policy. There is no federal leadership to conserve and protect our water or a plan to ensure Canadians have access to the energy we need, while reducing our fossil fuel dependency. During a time of global water and climate crises, the federal water policy is 27 years old and badly outdated. There is yet to be any federal regulation of emissions of the oil and gas sector.

Meanwhile, the 2012 federal omnibudget bills gutted the *Fisheries Act*, removed protections from 99 per cent of lakes and rivers under the former *Navigable Waters Protection Act* and amended the *Canadian Environmental Assessment Act* to cancel 3,000 environmental assessments. At the request of industry, the changes to the *Navigable Waters Protection Act* specifically exempt pipelines from review under the act.

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These changes also significantly restrict people's ability to share their views with the NEB on infrastructure projects like Energy East. This is what makes the Ontario Energy Board's consultation particularly needed, and welcomed.

There are a number of lawsuits underway challenging the new rules restricting participation in the NEB[xxiii] as well as the NEB's recommendations regarding Enbridge's proposed Northern Gateway pipeline.[xxiv]

The NEB has also failed to consider a key implication of pipeline projects like Energy East in recent pipeline reviews – specifically, how this infrastructure contributes to climate change.[xxv] In the case of Enbridge's Northern Gateway Pipeline Project, the NEB excluded the upstream impacts of production to fill the pipeline, implications for tar sands expansion, and the downstream impacts of burning the crude. The NEB's recent filing of the List of Issues to be considered for Energy East Pipeline Project [xxvi] indicates climate change will again be ignored in the review.

It is in this context that provincial leadership is needed, now more than ever. Leadership that rejects projects like Energy East, which will send Canada further down the path of risking important waterways, fostering further expansion in the tar sands, and more climate emissions.

We commend the Energy Minister's commitment to represent Ontario's interests before the NEB, as well as the comprehensive consultation being undertaken by the OEB. Ultimately, we feel the scale of imminent threat presented by the Energy East pipeline, and the abdication of the Harper government of its duties, justifies Ontario's intervention based on these unacceptable risks. In order to represent Ontarians' interests, the Premier should speak publicly against the Energy East pipeline.

[i] TransCanada Corporation. "The Benefits of the Energy East Pipeline." <http://www.energyeastpipeline.com/benefits/the-benefits/>
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[xi] Accufacts Inc. *Report on Pipeline Safety for Enbridge's Line 9B Application to NEB*. 5 Aug. 2013)
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[xiii] Transportation Safety Board of Canada. *Pipeline Investigation Reports*. <http://www.tsb.gc.ca/eng/rapports-reports/pipeline/index.asp>
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[xvii] Ibid.
[xviii] Ontario Energy Board Proceedings. "EB-2012-0451: Enbridge Gas Distribution Inc." and "EB-2012-0433 and EB-2013-0074: Union Gas Limited."
[xix] Hughes, J. David. *Shale Gas Supply to the Greater Toronto Area.* <http://www.canadians.org/sites/default/files/publications/OEB%20Hughes.pdf>
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ENERGY EAST COMMENT/QUESTION (via online form)
Comments: Respectable members of Ontario Energy Board,

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With the help of our national campaigner Andrea Harden, the research below strongly suggests opposing the Energy East pipeline:

Energy East - an export pipeline

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I hope that OEB responds to these facts and takes leadership in stopping pipelines and the production of tarsands oil.

In solidarity,

Amit Praharaj

Council of Canadians, York University Chapter

Box 10307
Thunder Bay, ON P7B 6T8
environmentnorth.ca

ENVIRONMENT **north**

May 12, 2014

Swerhun Facilitation
720 Bathurst Street, Suite 500B
Toronto, ON M5S 2R4

Re: Ontario Energy Board Consultation on the Energy East Pipeline

Thank you to the Ontario Energy Board for engaging the public in a discussion of the Energy East pipeline project.

Environment North is a regional non-governmental charitable organisation based in Thunder Bay and has a multi-year history on providing comments to governments on a number of environmental issues concerning northwestern Ontario. We have been involved with environmental education, community sustainability and community advocacy since 1972.

Our three main reasons for concern in regards to the construction of an Energy East pipeline are as follows:

1. The construction of a pipeline facilitates expansion of Canada's oil production and invests in new fossil fuel infrastructure. These are both incompatible with Canada's responsibility to reduce greenhouse gas emissions
2. The risk of a spill in the Great Lakes watershed.
3. The benefits do not outweigh the consequences, especially for Ontario.

We have reviewed the *Environmental Guidelines for the Location, Construction and Operation Of Hydrocarbon Pipelines And Facilities in Ontario 6th Edition, 2011* and we will elaborate on our concerns in the context "cumulative effects and alternatives" discussed in the guidelines.

1. Expansion of Oil Production (primarily for Alberta Bituminous Sands)

Greenhouse gas emissions (GHG) would result from the construction of the pipeline itself. However, a far greater contribution of GHG emissions would occur from the years of increased oil production that the project would facilitate.

The 2014 Intergovernmental Panel on Climate Change (IPCC) report confirms that the next few decades are critical in avoiding more dangerous climate change. Mitigation of greenhouse gas production is essential.

A 2012 report from the International Institute of Sustainable Development based in Winnipeg states "the oil and gas sector looks unlikely to be able to achieve [GHG] reductions at levels consistent with Canada's 2020 target of 17 per cent below 2005 levels. The expected growth of the sector to 2020 dominates any improvements in emissions intensity as a result of policy."

A recent Pembina Institute report suggests the increase in greenhouse gas emissions that would occur in the oil industry with construction of the Energy East Pipeline would negate the gains achieved in Ontario by closing the coal-fired power plants.

Cumulative effects of a project are typically defined within a particular area and time frame. However, with greenhouse gas emissions the effects are distributed globally and occur for a number of decades. It is inconceivable not to consider the increased greenhouse gas emissions that would result from the Energy East pipeline given the current global climate crisis.

Environment North recognises that most municipalities and most provinces, certainly Ontario, understand the seriousness of climate change and are working hard to mitigate greenhouse gas emissions. Yet the federal government promotes a major expansion of the fossil fuel industry without demonstrating how our national GHG targets (insufficient as they are) can be met.

An alternative plan would ensure that the oil industry has strict greenhouse gas emission standards. Canada would be able to meet current targets as well as incrementally increase GHG emission reduction targets as soon as possible so that they are line with those advised by scientific research.

2. Risk of a Spill in the Great Lakes Watershed

The immediate and long term damage from a significant oil spill in the Great Lakes Watershed would be devastating. One only need consider the recent Kalamazoo spill or the lingering effects of the Exxon-Valdez spill. Given pipeline history it is a question of when and not if.

A new oil pipeline in the Great Lakes watershed, which is already environmentally stressed, increases the risk of contamination of drinking water resources and natural ecosystems and economies such as tourism and fishing.

Many communities are supporting the Energy East because they are rightly concerned about the risks associated with rail transport of oil though communities. However, there is no certainty that construction of the pipeline will significantly decrease rail traffic.

3. A Question of Benefits for Whom

Our third concern is that the main benefits of this project are for the oil production and refining industry. Communities and ecosystems all along the route and in the downstream watersheds are exposed to the risk of a spill. The contribution to greenhouse gas emissions by expansion of the oil production industry is detrimental to the global climate system.

Alternatively, investments could be made into innovative and clean energy technologies as well as into infrastructure involving the building, industry, transportation and electricity sectors. This would provide benefits for a number of different industries across the country. Clean energy technologies provide greater economic diversification and employment that will benefit current generations and those to come.

“Fifteen Years Left”

There is broad agreement that it is critical to seriously tackle GHG emissions and related climate change issues now, and not defer to future generations to grapple with, when costs may be exponentially higher. The New York Times featured a recent Op-Ed on the need to reduce emissions:

> "*...Avoiding that fate will require a reduction of between 40 percent and 70 percent in greenhouse gases by mid-century, which means embarking on a revolution in the way we produce and consume energy. That’s daunting enough, but here’s the key finding: The world has only about 15 years left in which to begin to bend the emissions curve downward. Otherwise, the costs of last-minute fixes will be overwhelming. “We cannot afford to lose another decade,” says Ottmar Edenhofer, a German economist and co-chairman of the committee that wrote the report. “If we lose another decade, it becomes extremely costly to achieve climate stabilization...*”

All provinces need to work now towards a rational energy policy that reduces greenhouse gas emissions, accounts for the costs of carbon, supports clean energy development and energy conservation and protects water resources. Energy East is unhelpful for these important goals.

Thank you for this opportunity to comment.

Graham Saunders
President - Environment North

environmental defence
INSPIRING CHANGE

Thursday, May 15, 2014

OEB Energy East Consultation

We are writing to express our serious concern over TransCanada's Energy East proposal.

While we intend to provide a more detailed submission and presentation through our participation in the OEB's province-wide stakeholder group, we are submitting a summary of our primary concerns here in written form to be included in the Part One Consultation Summary.

Climate Impacts

In an era of unprecedented global climate warming, continuing to develop major infrastructure as if it were business-as-usual, is no longer a responsible option. The International Energy Agency has stated that we have limited time to stop building fossil-fuel infrastructure that locks us into rising greenhouse gas emission for decades to come, if we hope to avoid the most dangerous impacts of a warming climate.[i]

Building Energy East would enable a substantial increase in Canada's greenhouse gas emissions, right at a time when Canada must be quickly reducing its absolute emissions.

A detailed analysis from the Pembina institute projects that Energy East would facilitate an increase in Canada's annual GHG emissions by approximately 32 million tonnes of CO2 equivalent. This is the same amount of emissions that would be generated each year by adding seven million new cars to the road.[ii]

This massive climate impact raises the question of interprovincial fairness when it comes to responsibility for reducing emissions. Ontario has set an ambitious target to reduce its greenhouse gas emissions, and has made considerable progress towards that goal, largely through its leadership in phasing out coal-fired electricity generation.[iii]

Ontario's mandated climate change targets are as follows:

- 6% below 1990 levels by 2014,
- 15% below 1990 levels by 2020, and
- 80% below 1990 levels by 2050.[iv]

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The Ontario Energy Board should note that the projected greenhouse gas emissions increase resulting from Energy East would be roughly equivalent to all of the reductions from Ontario's important efforts to quit coal over the past decade, estimated to be roughly 30 million tonnes of C02 equivalent. Ontario regulators, policy makers and elected officials should not be complacent in allowing the province to participate in new projects that jeopardize our goals in mitigating climate change. Furthermore, Ontario should not be expected to carry federal or provincial carbon reduction efforts entirely on its shoulders.

Spill risks

The Energy East proposal is the largest single oil pipeline proposal in North America. A high-pressure pipeline with a capacity of 1.1 million barrels per day, and a length of nearly 4600km, Energy East would bring an unprecedented risk of a catastrophic pipeline rupture to hundreds of communities across the country. Ontario would be host to the longest section of this pipeline, creating a significant risk of heavy tar sands oil spill - polluting crucial waterways with major ecological, cultural and economic value to the province. Major examples of threatened waterways include: Lake of the Woods, Lake Superior, Mattagami, Missinaibi, and Moose rivers, Ottawa River, Lake Temiskaming, Lake Temagami, Trout Lake, Rideau Canal, and the St. Lawrence River. A significant spill into any one of these waterways would have a permanent and negative impact on these aquatic ecosystems and the communities that depend on them.

Pipeline oil spills are a statistical certainty from this project. In 2011, federally regulated pipelines in Canada spilled an average of two times per year for every 1000km of pipeline in operation. For Energy East, that would mean an incident rate of 9.2 spills per year, not including incidents at holding tanks, pumping stations, tanker terminals or tanker accidents. Canada's pipeline safety incident rate doubled over the past decade on pipelines regulated by the National Energy Board. [v] The TransCanada natural gas mainline slated for conversion as part of this project has had numerous safety incidents over the years.[vi]

Risks of tar sands diluted bitumen

With the consistency of peanut butter, tar sands bitumen in its raw form is too thick to flow through pipelines. Before transportation, it must be diluted with highly toxic condensate chemicals – creating diluted bitumen or 'dilbit'. Dilbit presents greater risks than conventional oil when transported through pipelines. When spilled, the condensate chemicals can separate from the bitumen, evaporating into a toxic cloud containing benzene, toluene and other carcinogenic compounds. This creates an acute health risk for communities

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and first-responders in the area[vii]. The remaining heavy bitumen, unlike conventional crude oil, has been shown in practice and in simulations to sink in sedimented water, coating river and lake bottoms.[viii] Previous spills of dilbit have shown both acute health impacts from benzene exposure, as well as sinking bitumen vastly complicating cleanup efforts.[ix]

In most aquatic oil spill scenarios, only some fraction of the oil released can be effectively recovered through cleanup efforts. The remaining oil remains in the environment, harming the ecosystem and presenting a potential chronic chemical exposure threat to humans and wildlife. Heavier grades of oil have been demonstrated to be more persistent in the environment, and can be more difficult and expensive to cleanup than conventional crude.[x]

The 2010 pipeline spill into the Kalamazoo River demonstrated the devastating impact of a diluted bitumen pipeline spill. Submerged heavy oil sunk to the river bottom, necessitating extensive dredging of the entire 40km stretch of impacted river bottom and wetlands. This has not only contributed to the $1 billion cleanup cost and the lengthy four years of cleanup required to date, but also has permanently damaged the river ecosystem.[xi]

TransCanada's safety record

TransCanada has inaccurately predicted the rate of pipeline failures on newly proposed pipelines in proposals to regulators in the past. When its first phase Keystone pipeline was proposed, TransCanada's hired consultants submitted a report as part of an environmental assessment predicting a spill rate of an average of 1.4 incidents per decade every. In reality, the pipeline spilled 14 times in 2010, its first year of commercial operation alone. This was a new pipeline, and therefore hard to compare directly to a project like Energy East, which involves the conversion of an 40 year-old natural gas pipeline with a long history of major incidents. Given the configuration of Energy East, we feel the pipeline could exceed the average spill rates experienced on a new pipeline.[xii]

A National Energy Board safety audit of TransCanada pipelines released in February 2014 found the company non-compliant in four of nine areas reviewed.[xiii] That audit was the result of allegations brought to the NEB's attention by TransCanada pipeline engineer Evan Vokes, who raised concerns about TransCanada's integrity management practices.[xiv]

Regulatory Imbalance

The National Energy Board regulatory process faces a number of critical deficiencies, which OEB recommendations to the province should reflect. New

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changes included in the Federal bill C-38 omnibus bill in 2012 intended to 'streamline' the approvals process have significantly undermined democratic participation, consultation, and due diligence. Major energy infrastructure projects have been exempted from independent federal environmental assessments, depriving hearings of high-quality independent analysis of potential risks from projects. The lack of a federal EA also undermines public participation, removing public comment from the public and stakeholders on evidence gathered.

The new NEB rules severely limit public participation in hearings, requiring the public to fill out a complicated application for intervener or participant status. By arbitrarily rejecting some applicants from participating, the NEB process discourages public participation, reducing the legitimacy of decisions made by the board.

The NEB process also is not balanced in terms of the issues it is allowed to consider as part of the hearing process. Hearings have been permitted to examine evidence of upstream economic benefits from proposed projects, such as job creation or capital spending on oil production, but are not permitted to consider upstream impacts such as social, air, water or climate impacts from increased oil production. Given that economic impact assessments provided by pipeline proponents include economic benefits from the oil extraction facilitated by pipeline infrastructure, a balanced hearing must allow an examination of environmental and socioeconomic impacts of upstream oil extraction resulting from the project as well. Ontario should insist on a detailed examination of those impacts, in particular the significant greenhouse gas pollution this project would facilitate upstream.

Natural Gas Concerns

There has been documented concern from other stakeholders that the conversion of the 100-4 TransCanada Canadian mainline could cause a shortage of natural gas for customers in eastern Ontario at peak times of year, threatening price spikes and other supply issues for communities like Kingston or Cornwall.

On May 8th 2014, TransCanada submitted a separate project description to the NEB for a new pipeline project that would help alleviate the potential natural gas shortages caused by the Energy East conversion.[xv]
It appears that TransCanada may be proposing to 'double dip' from Ontario natural gas ratepayers.

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It is possible that the costs of both Energy East and this new gas project would be passed directly to gas ratepayers in eastern Ontario through new rate increases. If allowed, TransCanada would receive additional revenue from the conversion of their gas mainline from the west to an oil pipeline as part of the Energy East proposal, and then make additional revenue again on their new gas pipeline from the northeastern U.S. [xvi]

Gas users in Ontario could end up paying indirectly for an oil industry's pipeline which does not serve them.

Benefits to Ontario

Energy East is primarily an export pipeline. In collaboration with partner groups, we released an analysis of the potential for Energy East to supply Canadian refineries in March of 2014. We found that by the planned Energy East operation date of 2018, Eastern refineries would already be largely supplied with other sources of western crude from sources such as a reversed Enbridge Line 9 pipeline, off-shore oil production on the east coast, and from rail transportation from the U.S. That would mean only the Irving refinery in Saint John would likely take any substantial quantity of oil from Energy East, leaving up to 90% of the overall pipeline capacity to be exported via tanker terminals in Cacouna, QC and Saint John, NB. [xvii]

The Energy East proposal will not supply any energy to Ontario. The proposal would not deliver oil to any Ontario refineries, and would therefore not increase our energy security or reduce our energy prices. On balance, the project would create a significant new risk to Ontario communities, ecosystems and associated economic activities, without providing substantial benefits in return.

A substantial percentage of any benefits TransCanada has argued could flow to the Ontario economy from Energy East would result from increases in upstream oil production. However, as stated earlier in our submission, the inclusion of potential upstream economic benefits in any analysis would also necessitate inclusion of upstream environmental and social impacts such as impacts on climate change.

Conclusion

Given that the proposed Energy East project would create significant risks to human health, ecosystems, our economy and our climate, with few tangible benefits in return, it is our strong recommendation that the OEB recommend that the province reject this proposal in the interest of protecting the best interests of Ontario residents.

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We want to hear from you

What are the impacts (positive and negative) that you see in connection with TransCanada's proposed Energy East Pipeline: In your community? Province-wide?

TransCanada's proposed Energy East Pipeline would impact communities across the northeast region of Ontario through economic and social benefits.

• The proposed project would provide both direct and indirect jobs during the construction phase as well as the maintenance and operations phase.

• Local economies would benefit as goods and services would be purchased through local businesses by both TransCanada as well as by employees.

• Investment into our communities would provide social benefits through contributions, both financial and in-kind donations to communities.

What are the impacts that you think the Ontario Energy Board should focus on most closely in its report to Ontario's Minister of Energy?

The Ontario Energy Board should focus on the following areas in its report to the Ontario Minister of Energy

• Regional impacts that the project would have, both directly and indirectly as the impacts may be different on northern communities in comparison to communities in other parts of the province.

• Undertake further research into the impacts of converting a gas pipeline into an oil pipeline in terms of safety reliability as well as its effects on natural gas supply. It is important to understand any potential effects it may generate that could be transferred in the form of additional costs to northern businesses and consumers.

Please send us your completed Discussion Guide by April 30th

Send your completed Discussion Guide to the third-party facilitator by:

Email energyeast@swerhun.com **Mail** 720 Bathurst St. Suite 500B, Toronto, ON, M5S 2R4 **Fax** 416-572-3736

TransCanada Energy East Pipeline

Ontario Energy Board Hearings

Submission from the Office for Systemic Justice

Canadian Federation of Sisters of St. Joseph

May 12, 2014

1. Introduction

We thank the Ontario government for holding these hearings through the Ontario Energy Board. Governmental efforts to consult are a critical part of the democratic process.

The Sisters of St. Joseph work for social and ecological justice. We seek a society that operates from a new imagination with regard to ecological, social and economic relationships; one that works toward the flourishing of each and every person along with all earth's bioregions.

This submission identifies five key concerns regarding the Energy East Pipeline. Together these concerns highlight the priority of protecting people, land and water from oil spills as well as curbing greenhouse gas emissions. Our recommendations are identified at the end of the submission.

2. Concerns

2.1 The Risk in Converting Old Gas Pipelines to Oil Pipelines:

TransCanada Corporation wants to convert its natural gas pipeline, which was built in the 1970s and is currently operating at half capacity, into an oil pipeline that could carry 1.1 million barrels of crude oil per day (including oil sands and conventional crude production). This raises concerns because a pipeline in Mayflower, Arkansas (the Exxon Pegasus pipeline), which spilled an estimated I million litres of diluted bitumen (dilbit) from the oil sands, was similar in that it was initially built to carry thinner oil at lower pressure. As the National Petroleum Council for the U.S. Department of Energy noted, pipelines operating outside of their design parameters are at greater risk of integrity issues. Such a pipeline creates greater risk for the rivers and lakes along its route.[i]

2.2 Dilbit Pipeline Spills Create Extensive Environmental Damages

Bitumen from the oil sands is heavy and requires toxic chemicals to dilute it. In 2010, a pipeline carrying bitumen ruptured, flooding the Kalamazoo River in Michigan with 3.8 million litres of diluted bitumen. Conventional clean-up methods have not worked and, despite almost $1billion in clean-up costs, the river is still polluted.

At the same time, there is evidence to suggest that it is not sufficient to leave environmental care in the hands of the National Energy Board (NEB). Prior to the NEB's approval of Enbridge's Line 9b reversal, CTV's W5 program found that the NEB only knew of seven spills along this pipeline, while Enbridge admitted to 13. In fact, W5 discovered that the pipeline had a total of 35 spills, five times as much as the NEB indicated and more than three times as much as Enbridge admitted.

In areas such as the Trout Lake watershed, these threats to source water contamination are unacceptable. Trout Lake provides North Bay's sole source of drinking water. It must be protected.

Furthermore, if we weigh the need to protect watersheds such as Trout Lake against the reality that the bitumen that would flow through the Energy East Pipeline would most likely be shipped, unrefined, to places like India, Europe or possibly the United States, it becomes clear that that this pipeline is not about needs in Canada but profit. The value of protecting sole sources of drinking water far outweighs the value of profit-making.

2.3 First Nations Have the Right to Say "No"

Under the United Nations Declaration on the Rights of Indigenous Peoples, Indigenous peoples have the right to free, prior and informed consent (FPIC). This pipeline conversion project cuts through the land of 180 aboriginal communities along the whole path of the project (from western to eastern Canada) that have the right to free, prior and informed consent, including the right to say "no." FPIC requires sufficient time and resources for First Nations leaders to consult their memberships, many of whom are not living in the reserve or local community, regarding their environmental concerns and other related possible impacts of a pipeline conversion.

2.4 Ontario Needs Long-term, Green Jobs

Since the majority of the Energy East pipeline is already built, construction jobs will be quite limited in number and most will likely be only temporary jobs to create new infrastructure. Ontario needs to focus on creating longer-term, green jobs. Indeed, studies suggest that the job potential of energy efficiency and renewable energy generation outpaces jobs in oil and gas.[ii]

2.5 Climate Change Must Be Addressed

The most recent report from the UN's Intergovernmental Panel on Climate Change (IPCC) indicates that climate change is happening already and its signs are everywhere from melting glaciers and sea ice to species extinctions, more frequent wild fires, extreme weather and damaged crops. The report warns of increasingly dangerous impacts unless all countries move rapidly to curb carbon emissions Given these concerns, it is incumbent upon Canadians to heed the warning that two-thirds of all fossil fuels need to stay in the ground to avoid the worst of climate change.[iii]

Although pipeline infrastructure (e.g., pump stations) produces greenhouse gases, by far the majority of the emissions connected to oil pipelines come from the upstream and downstream emissions. In our view, it would be unconscionable to ignore, at a minimum, the upstream impacts of the pipeline on greenhouse gas emissions.

In particular, we note that since oil sands products will make up a significant part of the pipeline's contents, this pipeline would contribute to the expansion of oil sands production, which producers plan to nearly triple between 2012 and 2030. This is problematic since oil sands production is Canada's fastest-growing source of the greenhouse gas pollution that causes climate change. According to Environment Canada, greenhouse gas emissions from the oil sands are expected to nearly triple between 2005 and 2020, cancelling out the emissions reductions that other parts of Canada's economy are projected to make over the same period.

3. Recommendations

We recommend that the Ontario Energy Board's intervention at the National Energy Board:

- Reject the Energy East pipeline proposal as (a) an unnecessary risk for the people, land and water of Ontario (b) an insufficient response to the right of indigenous peoples to free, prior and informed consent and (c) detrimental to the focus on renewable energies that is necessary in order to address climate change.
- Urge the federal government to create a national energy strategy that focuses on transitioning away from fossil fuels. This should include the adoption of stringent regulations to reduce oil and gas sector greenhouse gas emissions and stringent monitoring protocols. Such regulations and monitoring protocols are urgently needed to protect people and the environment, curb Canada's fastest growing source of greenhouse gas emissions, and to help Canada meet its 2020 greenhouse gas target.

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[i] 2011, p. 49, http://www.documentcloud.org/documents/676105-1-7-crude-oil-infrastructure-papernpc.html.

[ii] A 2012 study by BlueGreen Canada, *More Bang for Our Buck*, found that for every two jobs created in oil and gas, fifteen jobs could be created in clean energy. An earlier study (2010) also by BlueGreen Canada, *Falling Behind: Canada's Lost Clean Energy Jobs*, concluded that if Canada had matched, on a per person basis, the spending on renewable energy arising out of the 2009 American Recovery and Reinvestment Act, 66,000 (well paying) jobs could have been created in this country.

[iii] http://math.350.org.

Submission by:

Sue Wilson, CSJ
Office for Systemic Justice,
Canadian Federation of the Sisters of St. Joseph
485 Windermere Rd., London ON N6A 4X3
[redacted]

ENERGY EAST COMMENT/QUESTION (via online form)
Comments: I am writing to you as the representative of the Lake of the Woods District Property Owners Association, a membership driven organization made up of close to 4000 property owners and concerned citizens within the Lake of the Woods watershed.

A large part of LOWDPOA's mandate is the focus on environmental sustainability in the watershed, including overall water quality throughout the region.

With that focus in mind there are numerous questions related to the proposed Energy East Pipeline conversion that we feel must be answered before a decision can be made on its future.

These questions include:

How can we make an ined risk analysis without in-depth research on the effects of diluted bitumen on freshwater eco-systems?

Will the Ontario Energy Board be requesting an environmental assessment be completed prior to National Energy Board approval?

How will TransCanada ensure the existing pipe for conversion is in good condition and suitable to transport diluted bitumen instead of natural gas for which it was originally designed?

What ongoing monitoring and maintenance processes will be in place to locate and respond to a leak?

What kind of response time can we anticipate should a spill occur, especially in the most remote and inaccessible sections of the pipeline?

Should a leak be detected, where will the pipe shut-off be controlled?

What is the distance between shut-off valves?

Will shut-off valves be installed on both sides of significant water crossings and further, what constitutes a significant crossing?

Where in Northwestern Ontario will spill cleanup equipment and personnel be located and who will employ them?

Who will be responsible for the cleanup costs related to a spill?

What are the anticipated short and long term economic benefits for the municipalities in the Lake of the Woods Watershed?

Why did TransCanada not detect in advance the deterioration in the gas pipeline before recorded incidents, for example the explosions in southern Manitoba and near Beardmore?

Until all the questions above are answered to the satisfaction of our organization, we don't believe a reasonable decision can be made on whether this conversion project should proceed or not.

Thank you for your interest in our

May 15, 2014

Ontario Energy Board
P.O. Box 2319
2300 Yonge Street
Toronto, ON M4P 1E4

Re: TransCanada Pipelines Inc.
Energy East Pipeline Project
Comments for the Current OEB Consultation Process

Background

This past November, the Ministry of Energy requested that the Ontario Energy Board (OEB) conduct province-wide consultations concerning a proposed TransCanada Energy East Pipeline ("the Pipeline").

The Pipeline will span from Alberta to New Brunswick. Approximately 95% of the pipeline running through Ontario will be repurposed, converting the already existing natural gas pipeline to carry bitumen. The remaining 5% of the pipeline in Ontario will be newly constructed.

Pursuant to the Minister of Energy's letter of direction to the OEB, the Board has commissioned a series of expert reports on the proposed pipeline. These reports are meant to assess the project's engineering, its potential impacts on the environment, and impacts on provincial energy supply and markets.

The OEB will also conduct a series of public consultations in communities throughout the province. A combination of the expert reports and the feedback received during the public consultations will ultimately inform whether the Ministry of Energy takes a position on the pipeline.

The National Energy Board (NEB) will be the final decision-maker responsible for determining whether or not to approve TransCanada's Energy East Pipeline application. The current OEB consultation period will help the Ontario Ministry of Energy decide whether to intervene before the NEB in this matter.

Action Taken to Date

In conducting the current public consultation, The Minister of Energy directed the OEB to address four broad areas of concern:

1. Impacts on Ontario's natural gas consumers,
2. Impacts in Ontario on the natural environment,
3. Impacts in Ontario on local communities and Aboriginal communities, and
4. The short and long term economic impacts of the project in Ontario.

So far, three expert reports have been prepared by third parties describing; potential issues with the engineering of the proposed pipeline; potential environmental impacts of the proposed pipeline; and potential impacts of the pipeline on Ontario's natural gas markets. These reports are broad, and based largely on TransCanada's brief project description.

In addition to the preparation of these initial expert reports, a series of public consultations have already taken place throughout various cities and communities in Ontario. To date, there have been 7 public consultation events.

The completion of the initial expert reports and these 7 consultation events marks the end of Part 1 of the OEB's public consultation.

Once TransCanada files a more detailed project application with the NEB, these same experts will produce more detailed and specific reports. In these follow-up reports, the experts will assess how well TransCanada's pipeline proposal addresses the risks they identified in their initial reports. There will also be a second series of community consultation events, once TransCanada files its application. This second round of expert reports and public consultations will constitute Part 2 of the OEB's consultation.

Lake Ontario Waterkeeper's Concerns and Recommendations

Lake Ontario Waterkeeper ("Waterkeeper") is a non-political registered charity dedicated to working in the public interest by advocating for and protecting people's right to safely swim, drink, and fish in the Lake Ontario watershed. As a grassroots environmental organization, we empower people in order to stop pollution, protect human health, and

restore habitat. We work in an interdisciplinary way, using legal and scientific expertise, as well as the arts and digital media to achieve our goals. We also provide several research and education tools and resources to others working for swimmable, drinkable, fishable water.

Since we were founded in 2001, we have contributed to over 100 formal decision-making processes before provincial and federal boards and tribunals as well as all levels of court including the Supreme Court of Canada. We have had extensive experience facilitating expert research, providing recommendations on terms and conditions of project approvals, and evaluating the risks of various projects (including pipelines) to watersheds and community values.

Waterkeeper is a member of the OEB's Stakeholder Advisory Committee for the current consultation process. These comments have been drafted to provide feedback that may be useful to the OEB upon the completion of Part 1 of their public consultation. These comments may also help inform Part 2 of the OEB consultation process.

We are concerned about the proposed Energy East Pipeline for three reasons:

1. If approved, this project would significantly impact the energy balance and nature of energy regulation in Ontario.
2. Any potential leaks or spills of bitumen from pipelines can have devastating consequences on waterbodies and wetlands.
3. Because of recent changes to the *National Energy Board Act*, it may be harder for Ontarians to become involved, and have their unique concerns addressed, in the final NEB decision-making process.

We respectfully submit the OEB should consider each of these issues as it continues to consult the public and prepare its reports for the Ministry of Energy. Further, we strongly encourage the Ministry of Energy to intervene in the NEB approval process, and we hope the following discussion of our concerns will help inform a future Ministry intervention.

1. Natural Gas Displacement

Waterkeeper is concerned about the implications of TransCanada's Energy East Pipeline proposal on Ontario's energy mix, and by extension, the character of its energy regulation. Much of Ontario depends on energy generated by natural gas. Waterkeeper is concerned that the TransCanada pipeline will threaten this energy source, and severely weaken the provincial public utilities regulatory regime it has helped develop.

Though it is not without its faults, there can be several advantages to using Alberta's natural gas as a fuel source in Ontario. The imported gas is primarily derived as a byproduct of oil extraction, rather than from hydraulic fracturing practices. Thus, its

extraction is less environmentally damaging than the extraction of bitumen or unconventional (ie. hydraulically fractured) natural gas.

Natural gas is also easily transported and stored, making it a source of energy that is especially flexible and amenable to energy conservation. Unlike many forms of electricity, natural gas is easy to turn on when you need it and turn off (and conserve) when it's not in use. Ontario currently relies of natural gas storage in old salt mines along the Great Lakes to cover energy needs during winter peak periods. No other energy source can be saved and conserved in this way.

The flexibility of natural gas also allows it to complement and support increased development of green energy. In this way, it is an easier 'stepping stone' towards a more sustainable energy mix than nuclear energy would be.

In addition to these potential advantages of natural gas as an energy source, natural gas has also largely been responsible for the current character of energy regulation in the province. Over the past 50 years, Ontario has enjoyed very strong public utilities regulation of natural gas. This regulatory system has developed thanks to generations of informed and active gas consumers.

Because of the involvement of the public in natural gas regulation, the regulatory regime has developed to reflect the public good in addition to providing corporate benefits. For this reason, natural gas has long been considered a "golden mean", fairly balancing industry and consumer interests. For example, natural gas regulation involves a system of economic incentives to ensure it is in the economic interest of gas companies to maintain their pipelines and avoid leaks.

Also, procedurally demanding rate hearings for natural gas help ensure the price for the product is fair and set in the public interest. As Ontario's current sources of natural gas are fairly inexpensive to generate and import, long-term forecasts expect prices to remain low.

Perhaps in response to concerns over what the Energy East Pipeline may mean for natural gas users in Ontario, TransCanada has recently proposed a new natural gas mainline in Southeastern Ontario from the US. This project is meant to ensure that Ontario will have a source of natural gas to cover the province's winter peak periods. Ziff Energy's report for this OEB consultation process asserts unconventional gas from the US is cost-effective and involves simpler infrastructure than the current TransCanada natural gas pipeline[1].

[1] Ziff Energy, "Ontario Natural Gas Background Report", Prepared for the Ontario Energy Board, March 2014, online: <http://ontarioenergyboard.ca>.

However, this position does not take into account the fact that the necessary infrastructure is not yet in place to import the required quantities of natural gas from the US. It also fails to note the growing number of US States instituting moratoriums on hydraulic fracturing, rendering the US natural gas supply unreliable. And these moratoriums are well-founded, as hydraulic fracturing processes can be devastating to surrounding water reserves. Further, because this natural gas would be imported internationally, the same regulatory oversight currently applicable to domestic natural gas from Alberta would not govern gas imported from the US.

As such, Waterkeeper cautions the OEB against accepting that Ontario's natural gas needs can merely be replaced by US supplies.

To conclude, Ontario's imported gas from Alberta is an important energy source for Ontario: it's flexible, easily conserved, more environmentally responsible than many energy alternatives, and responsible for fair energy regulation. Repurposing the TransCanada pipeline to carry bitumen instead of natural gas will weaken energy regulation in the province and constitute a move away from more environmentally conscientious energy consumption.

2. Past and Future Spills

If the NEB ultimately approves the Energy East Pipeline, this approval should be accompanied by strict conditions to ensure its impact on the environment is as minimal as possible.

The most serious impacts a pipeline can have on surrounding ecosystems are often in the event of a leak or spill. The expert report prepared by Tera Environmental Consultants for the OEB noted pipeline spills could result in a "reduction in water quality of wetlands, watercourses or waterbodies which may include drinking water sources or recreational waterways", effects on fish and fish habitat, and effects on human health[2].

More specifically, spilled diluted bitumen can have particularly devastating environmental consequences on many different species and their habitats. It can be absorbed by fibrous plants, resulting in its toxins entering into the food chain. Spills can also destroy grassland or wetland habitat, including important nesting sites. Terrestrial and aquatic species' external contact with or ingestion of diluted bitumen can result in mutagenic effects, tumours, and death[3].

[2] Tera Environmental Consultants, "Background Report on Potential Environmental and Socio-Economic Considerations Associated with the Proposed TransCanada Pipelines Limited Energy East Pipeline Project in Ontario", Prepared for the Ontario Energy Board, March 2014, online: <http://ontarioenergyboard.ca>, at 8.
[3] Office of Response and Restoration, "How Oil Harms Animals and Plants in Marine Environments", online: National Oceanic and Atmospheric Administration <http://www.response.restoration.noaa.gov>

Also, because bitumen sinks if spilled into a waterbody, it is especially difficult, if not impossible, to clean or remediate. Impacts of such a spill can last decades, with impacted ecosystems never regaining their full health.

Because of the potentially devastating consequences of a bitumen spill from the Energy East Pipeline, the following should be conditions for any future approval of the pipeline:

- double insulation of pipes running through ecologically sensitive areas,
- automatic shutoff valves at both sides of all water crossings,
- best available technologies for leak detection, such as fiber-optic cables,
- source water protection plans specific to all source water protection areas through which the pipe crosses,
- specific mechanisms to ensure TransCanada has sufficient funds for full clean-up and remediation of affected areas in case of a leak or spill,
- community/ecosystem-specific emergency preparedness procedures and regular communications with local authorities and first responders, and
- unique and specific watercourse management plans for all waterbodies or wetland areas traversed by the pipeline.

These risks and recommendations are especially important, considering the results of a recent NEB audit of TransCanada's pipeline safety record. In its audit report, the NEB found TransCanada was not in compliance with regulatory requirements in areas including: hazard identification, risk assessment and control, inspection, and monitoring[4].

It is important that the OEB considers the impacts and likelihood of future spills along the proposed Energy East Pipeline in their reports, as well as ways to help prevent any spills from occurring.

3. Meaningful Public Consultation

It is crucial that public consultation continue after TransCanada's full project application is submitted to the NEB. Public consultation is more meaningful when the public is provided with specific facts about a proposed project.

Information should be provided to the public containing: detailed maps of the pipeline route including the locations of all water crossings, wetlands, source water protection areas, groundwater reserves, and ecologically significant areas. This will allow people to understand how the swimmability, drinkability, and fishability of their local waterbodies may be threatened by the proposed pipeline.

[4] National Energy Board, "TransCanada Pipelines Limited - Audit Report OF-Surv-OpAud-T211-2012-2013 1", online: <http://www.neb-one@gc.ca>.

The public should also be notified of the unique impacts bitumen spills can have on local ecosystems, as well as the particular challenges to remediation efforts that bitumen spills present.

It is especially important that Ontarians are aware of the local impacts and risks of the proposed pipeline for two reasons.

First, each community's local knowledge of their area can inform the OEB about community-specific concerns and potential environmental issues. This specific knowledge could help ensure that, were the Ontario Ministry of Energy to intervene before the NEB, their intervention would be informed by specific concerns of many Ontarians.

Second, with specific information concerning the location and potential impacts of the proposed pipeline, Ontarians may be able to determine whether they could be directly affected by TransCanada's proposal. With this information, members of the public could better determine whether they are eligible to participate in the NEB decision-making process.

After the 2012 changes to the *National Energy Board Act*, only those who are "directly affected" by a proposal may have standing to appear before the NEB in its hearings. Before 2012, "interested parties" (a broader test) had had the opportunity to intervene in NEB hearings. This change significantly limits the numbers and types of people who may participate in NEB processes. However, if members of the public are made aware of the specific impacts the projects could have in their communities, they will be better able to determine whether they could be eligible to appear before the NEB.

The shortcomings in the NEB's process makes the current OEB consultation all the more necessary. They also make it more important for the Ministry of Energy to intervene and help ensure the interests of Ontarians are represented in the NEB process.

Conclusion

Waterkeeper respectfully submits the OEB would benefit from considering the concerns we raise in our comments. Our comments were drafted to provide feedback that may be useful to the OEB upon the completion of Part 1 of their public consultation. Our feedback may also help inform the second part of the OEB's consultation.

To summarize, our three concerns involve: the proposed Energy East pipeline's impacts on Ontario's consumption of Alberta's natural gas and the province's public utilities regulation; the environmental impacts of potential bitumen leaks from the repurposed section of the Energy East pipeline; and the minimal opportunity Ontarians may have to

express their unique concerns with the NEB in the ultimate approval process for TransCanada's proposal.

We hope our discussion of these three issues will also help to persuade the Ministry of Energy to intervene before the NEB in this matter.

File: General Correspondence 2014

The Corporation of the
City of North Bay
200 McIntyre St. East
P.O. Box 360
North Bay, Ontario
Canada P1B 8H8
Tel: 705 474-0400

CC MAA
TA
PD
AF
DK

OFFICE OF THE CITY CLERK
CORPORATE SERVICES DIVISION
Direct Line: (705) 474-0626, ext. 2510
Fax Line: (705) 495-4353
E-mail: cathy.conrad@cityofnorthbay.ca

04 March 2014

10/3/14

National Energy Board
444 7 Avenue S W
Calgary, AB T2P 0X8

Attn: Ms. Sherri Young

Dear Madam:

This is Resolution No. 2014-125 which was passed unanimously by Council at its Regular Meeting held Monday, March 3, 2014.

Resolution No. 2014-125:

Whereas under the *Safe Drinking Water Act 2002*, section 19, Municipal Councillors may personally be held liable in the event of a failure to protect source drinking water;

And Whereas at the same time, they have no say in the acceptance or refusal of any proposed pipeline disruption remediation plans in the event of a catastrophic pipeline failure and/or leak;

And Whereas such a failure of the pipeline in or near the headwaters of Delaney Bay – the drinking water source for the City of North Bay, could harm the source water drinking supply for the City of North Bay.

Therefore Be It Resolved That the Council of the City of North Bay supports Mayor Al McDonald to seek intervener status on the City's behalf at the National Energy Board hearings relating to the Energy East Project to share these concerns;

And Be It Further Resolved That a copy of this resolution be forwarded to Prime Minister Stephen Harper; Thomas Mulcair, Leader of the Federal NDP; Justin Trudeau, Leader of the Federal Liberals: Jay Aspin MP; Premier Kathleen Wynne; Andrea Horwath, Leader of the Provincial NDP; Tim Hudak, Leader of the Provincial Conservatives; Vic Fedeli, MPP; TransCanada Pipeline; and to the Ontario Energy Board.

...../2

Yours truly,

Conrad

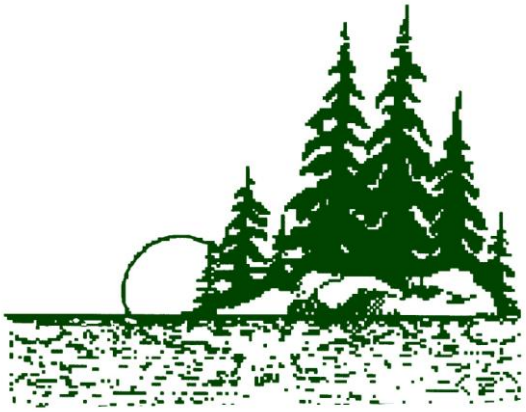
Catherine Conrad
City Clerk

CC/ck

cc: Hon. Prime Minister Stephen Harper
Thomas Mulcair, Leader of the Federal NDP
Justin Trudeau, Leader of the Federal Liberals
Jay Aspin, MP
Premier Kathleen Wynne
Andrea Horwath, Leader of the Provincial NDP
Tim Hudak, Leader of the Provincial Conservatives
Vic Fedeli, MPP
TransCanada
Ontario Energy Board
North Bay-Mattawa Conservation Authority
Mayor McDonald

SIRE/E00/NATIONALENERGYINTERVENER

NORTHWATCH



May 15, 2014

Ms. Rosemarie LeClair
Chair and Chief Executive Officer
Ontario Energy Board
2700 Yonge Street, 27th Floor
Toronto ON M4P 1E4

Dear Ms. Leclair:

Re. **Implications for Northern Ontario of TransCanada's Energy East Project**

We are writing to provide additional input to the OEB Energy East Consultation process. During Part One in which the OEB has asked to hear about the Impacts Important to Ontarians associated with the Energy East Project we have participated in one provincial stakeholders group meeting and attended and presented at one community session. WE have appreciated these opportunities, but felt it important to take the opportunity to also briefly set out in writing those issues which we have identified as being of key importance in northern Ontario.

Northwatch is a public interest organization and a coalition of environmental and social justice /social development organizations in northeastern Ontario. Northwatch focuses on northeastern Ontario, specifically the six federal districts of Nipissing, Timiskaming, Cochrane, Sudbury, Manitoulin and Algoma, but works with colleagues in northwestern Ontario on some select energy projects, including *electricity planning*, *transmission corridors*, *energy pipelines and nuclear concerns*. *We also work on natural resource* management and conservation and environmental protection in northeastern Ontario, primarily through public education and awareness raising and through project and policy review related to mineral development and forestry.

Northwatch has a strong interest in how the residents and regions of northeastern Ontario will or may be affected by TransCanada's Energy East Project. Specifically, Northwatch is concerned about the level of environmental risk associated with the project within the region, and with the broader climate implications of the tar sands development in western Canada which the project would facilitate. In addition, Northwatch has an objective in electricity planning to move towards a system of regionally-based demand supply planning and distribution. In such an approach, electricity demand and supply would be balanced, on local, sub-regional and regional scales. As outlined below, we have a concern that the Energy East project may adversely affect this interest.

While a detailed analysis of the Energy East project will only be possible after TransCanada has provided project details – as is anticipated with the filing of their application with the National Energy Board (NEB) – we have reviewed the Project Description filed with the NEB, attended

TransCanada information sessions and discussed the project with TransCanada personnel, reviewed many of the documents posted on the Ontario Energy Board web site, in additional to reviewing other available materials. In addition, some of our members are landowners whose property is traversed by the TransCanada Mainline, or are otherwise informed about and/or affected by TransCanada's current operations and previous development activities.

Consistent with the Ontario Energy Board's outline of their consultation approach with respect to the Energy East project, this Part One submission is not intended to provide a detailed accounting of our concerns and analysis, but rather to identify the impacts that are important to the residents of northern Ontario, including our members. These impacts have been grouped into four broad categories, and include but are not limited to those that are listed below. The order of appearance does not necessarily indicate level of importance.

Landowner Concerns

- Landowner consent; TransCanada has conveyed to Northwatch in April 2013 that they had no need to seek additional or renewed landowner agreement as the property easements in place allowed the transfer of "hydrocarbons" through the lines crossing the landowners' properties, and both natural gas and crude oil are "hydrocarbons"; this is a significant issue, given the very different risk set associated with diluted bitumen versus natural gas
- Landowner liability / access to compensation, particularly in instances of pipeline rupture or failure
- TransCanada liability for damages / cleanup to an acceptable (to the landowner) environmental standard
- Pipeline abandonment on private or crown land, including in the absence of full decommissioning on the oil/bitumen contaminated pipe

Pipeline Failure or Rupture

- TransCanada liability for damages / cleanup
- Cost estimates for cleanup
- Cleanup standards
- TCPL's very limited identification of water bodies are deemed to be "significant"

- Potential impacts on all water bodies, including wetlands, ephemerals, constructed
- Potential impacts on groundwater, recharge areas, aquifers
- Pipeline abandonment on private or crown land
- Spacing of shut-off valves (TCPL has estimated at 30 km or at "significant" water crossings)
- Lag time between rupture / pipeline failure and identification of rupture /failure
- Lag time between identification of rupture and full shut off

Land Uses

- Site specific concerns around new pumping stations, including:
    - access,
    - right-of-way,
    - infrastructure,
    - energy demands
    - Related loss of other land uses, habitat, etc.
- Environmental impacts of potential additional / replacement pipeline (e.g. to replace capacity lost due to conversion of two lines to bitumen/crude oil carriage)

Energy Supply in Northern Ontario

- Potential for pipeline "repurposing" to drive need for additional / replacement line
- Environmental impacts of potential additional / replacement line
- Economic impacts of potential additional / replacement line, including transfer of cost to consumer
- Potential for negative impacts on supply – and expansion of supply – to northern residents

- Potential for negative impacts on supply to eleven co-generation plants in northeastern Ontario, including seven along the TCPL Mainline and whose operations are to some degree dependent on the TCPL pumping stations

Larger Project Implications

- Project facilitates further expansion on the Alberta tar sands
- Climate implications of continued tar sands development
- Climate footprint of the Energy East project

Process Concerns

- National Energy Board may be more restrictive than an Ontario process, such as with the Ontario Energy Board or under the Environmental Assessment Process, and so residents of Ontario will not be provided equivalent process or procedural fairness as would be the case with an Ontario process
- National Energy Board has released an "issues list" prior to the TCPL application have been received and without an opportunity to comment provided to potential or future intervenors
- National Energy Board "issues list" excludes issues which Northwatch views as being key to the project reviewing, including "upstream" and "downstream" impacts of the Project

We look forward to reviewing the submissions of others and to "Part Two" of the Ontario Energy Board process.

Sincerely,

Brennain Lloyd
Northwatch Project Coordinator

Subject: please listen to consultations and stop the Eastern pipeline and the expansion of the tar sands

These pipelines will encourage the unsustainable expansion of the tar sands, cause massive environmental damage along their routes, and increase tanker traffic and the risk of oil spills in ecologically-sensitive coastal waters.

Louise Lettstrom-Hannant
Certified Personal Trainer/Fitness Specialist
Director Environmental Health Association
Ontario EHA-O

The Honourable Bob Chiarelli
Minister of Energy
4th Floor, Hearst Block
900 Bay Street
Toronto, Ontario M7A 2E1

February 14, 2014

Dear Minister Chiarelli,

We were recently informed that the Ontario Energy Board (OEB) is seeking input on the appropriate approach for public consultation on TransCanada Pipeline's Energy East proposal. We are writing, collectively, to express our desires in this regard. First, we thank you for showing strong leadership, in your commitment both to the democratic process and to careful consideration of what this pipeline proposal could mean for the people of Ontario. We strongly support the public commitment you made to consider implications of the Energy East pipeline in terms of impacts on Ontario:

> "*natural gas consumers, particularly those in Eastern and northern Ontario in terms of rates, reliability and access to supply; on the natural environment and pipeline safety; on local communities and Aboriginal communities, and the short and long-term economic impacts of the project in Ontario*" (November 13, 2013).

As citizens of northern Ontario, with the proposed pipeline transformations/expansion to occur in our backyard, we are writing to ensure the OEB public consultation applies an approach that will provide you with feedback on the proposal that truly represents people from across Ontario and reflects the full scope of this proposal. We believe that, fundamentally, there are three elements that the consultation must acknowledge: 1) clean water and air is the foundation of strong economies and communities; 2) respect for Aboriginal and treaty rights; and 3) pipeline development can only be fully considered in the context of upstream impacts (e.g., increased greenhouse gas emissions as a result of increased crude production) and climate change. The following are our suggestions on how consultation can best meet our needs.

First, in terms of scoping, we believe it is vitally important that the consultations are framed within the current long-term energy strategy put forward by your government. We believe the consultation should bring forward information to answer, at a minimum, the following questions:

1. What are the consequences in terms of CO_2 emission reductions achieved through the Green Energy Act if the pipeline supports further development of Alberta's Oil Sands?
2. What are the tradeoffs involved in focusing resources on oil development and infrastructure instead of renewable energy sources?
3. Are we foreclosing future energy opportunities?
4. How many potentially sensitive areas (with special focus on waterways) does the pipeline cross?
5. How long will the pipeline be operational?
6. What are the economic assumptions of this project, and what are their uncertainties?
7. Who will bear the most costs and receive the most benefits of the project?
8. Where have previous spills happened, and how were they handled?
9. Particularly in northern Ontario, will the province invest in the emergency equipment and personnel required to respond to potential spills in remote areas - and will the tariffs collected from the proponent lead to full cost recovery for creating and maintaining this capacity?

Second, in terms of consultation approach, we would appreciate the opportunity to present to a panel of representatives from the OEB in person rather than simply responding to an information session (e.g., the format used by TransCanada Pipeline Corp. in Thunder Bay last fall). Also, given the remote nature of many northern communities, we request that the OEB undertake radio announcements, in addition to newsprint ads, of opportunities for engagement, and ensure that at least one public consultation session is available through web-based technologies.

We look forward to participating in the OEB's consultation,

Sincerely,

Julee Boan
Ontario Nature - Thunder Bay

Raph Shay
Energy Analyst

Ruth Cook
Thunder Bay Chapter of the Council of Canadians

Graham Saunders
Environment North

Dr. Paul Berger
Citizens United for a Sustainable Planet (CUSP)

Dr. Peggy Smith
Northern Ontario Sustainable Communities Co-op

Deanna Ford
Thunder Bay's Environmental Film Network

cc:
Mayor Keith Hobbs, Mayor of Thunder Bay, khobbs@thunderbay.ca
Chief Georjann Morriseau, Chief of Fort William First Nation, georjannmorriseau@fwfn.com
Hon. Michael Gravelle, Minister of Northern Development and Mines
mgravelle.mpp@liberal.ola.org
Mr. Bill Mauro, MPP – Thunder Bay – Atikokan, bmauro.mpp.co@liberal.ola.org
Mr. Tim Hudak, Leader, PC, tim.hudakco@pc.ola.org
Ms. Andrea Horvath, Leader, NDP, ahorwath-co@ndp.on.ca
Mr. Mike Schreiner, Leader, Green Party, leader@gpo.ca
Mr. Bruce Hyer, Deputy Leader, Green Party (Federal), bruce@brucehyer.ca
Mr. John Rafferty, NDP (Federal), john.rafferty@parl.gc.ca
Alex Heath, SWERHUN Facilitation, aheath@swerhun.com

The Honourable Bob Chiarelli
Minister of Energy
4th Floor, Hearst Block
900 Bay Street
Toronto, Ontario M7A 2E1
Attn: Alex Heath, SWERHUN Facilitation
aheath@swerhun.com

April 29, 2014

Dear Minister Chiarelli,

We are writing to provide additional comments subsequent to the Ontario Energy Board's (OEB) community meeting in Thunder Bay. We appreciate the opportunity to hear the opinions of other people in our community, however, we believe there are many unanswered questions. As a result, we have serious concerns and strongly question whether the Energy East proposal is safe or environmentally responsible.

The Energy East proposal is worrying to us on many fronts, but there are three main concerns/questions we would like to have considered in Ontario's review of this project.

First, despite TransCanada's assurances about its pipelines' safety, the company has experienced numerous problems in recent years. In 2009, the same natural-gas pipeline the company intends to convert ruptured near Englehart, in northern Ontario, and its contents exploded. Another explosion occurred near Beardmore, near Lake Nipigon, in 2011. Then, in 2012, a materials engineer and an employee of TransCanada testified before the U.S. State Department that the company was using substandard practices in pipeline construction and poorly trained safety inspectors—a claim confirmed by a subsequent NEB investigation. We request that the OEB report on all spill/leak incidences associated with TransCanada as part of the formal public report. We believe that the lakes and rivers in northern Ontario are at risk from spills associated with this pipeline, and we believe the public has a right to know the full track record.

Second, we don't believe the proposed pipeline is consistent with the great efforts that have been made by your government to position Ontario as a leader in the reduction of carbon pollution across Canada. Just this past month, we saw the closing of the coal plant in our community. We support the closure of the plant, and are encouraged by the great strides that have been made in Ontario to promote the conservation of energy and shift our energy system towards more renewable sources. Yet, in contrast, the increased oil production that will feed the Energy East pipeline is expected to generate up to 32 million tonnes of carbon emissions each year—the equivalent to the annual emissions of ALL vehicles in Ontario. Further, the Provincial Policy Statement (PPS) recently released by the Ontario Ministry of Municipal Affairs and Housing puts new emphasis on mitigating and adapting to climate change when making planning decisions. The PPS commits planning authorities to:

> "*support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and climate change adaptation through land use and development patterns". It further states that "planning authorities shall support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and climate change adaptation through land use and development patterns".*

In addition, Ontario's Northern Growth Plan (2011) recognizes:

> "*the need for climate change mitigation and adaptation, which is of particular importance in the North. Average temperatures are rising more quickly in the North than in the rest of Ontario. This will alter the profile of the boreal forest and the sensitive ecology of waterways, lakes and wetlands. It threatens the region's biodiversity, increases the risk of storms and forest fires, and shortens the transportation season for remote communities that rely on temporary ice roads to import essential supplies*". The Plan also requires that "*the Province will work with the federal government, municipalities and others to incorporate climate change mitigation and adaptation considerations, where appropriate, into planning and decision-making."*

We don't believe converting this pipeline to support increased fossil fuel extraction and production is consistent with the mitigation of climate change impacts. We would like to see a summary in the final public report that illustrates where the Energy East proposal is supported by or in conflict with current climate change policy in Ontario.

Third, there is some debate in northern Ontario as to whether or not the pipeline should be supported because it will divert diluted bitumen from being transported by rail. For the most part, this dialogue is being undertaken with very little factual information. Is rail a viable economic alternative? Will rail be used in addition anyway? It has been speculated that the rail lines can't ship the volumes a pipeline can… so is rail even being considered? What rights do we have or should we have as local citizens as to the volatility of products shipped through our communities? These are important questions and we would like to have additional research on the economic viability of rail versus pipeline presented in Ontario's report on the Energy East proposal.

Thank-you again for the opportunity to participate in OEB's consultation,

Sincerely,

Julee Boan
Ontario Nature - Thunder Bay

cc:
Mayor Keith Hobbs, Mayor of Thunder Bay, khobbs@thunderbay.ca
Chief Georjann Morriseau, Chief of Fort William First Nation, georjannmorriseau@fwfn.com
Hon. Michael Gravelle, Minister of Northern Development and Mines mgravelle.mpp@liberal.ola.org

ONTARIO RIVERS ALLIANCE

379 Ronka Road
Worthington, ON P0M3H0
[redacted]
OntarioRiversAlliance.ca

28 April 2014

Swerhun Inc.
720 Bathurst St., Suite 500B
Toronto, ON
M5S 2R4
By email: EnergyEast@swerhun.com
EnergyEast@ontarioenergyboard.ca

Dear Sirs:

Re: Energy East Pipeline – Discussion Guide Submission

Ontario Rivers Alliance (ORA) is a Not-for-Profit grassroots organization acting as a voice for the French River Delta Association, CPAWS-Ottawa Valley, Kiishik Community Association, Food & Water First, Whitewater Ontario, Vermilion River Stewardship, Friends of Grassy River, Mississippi Riverwatchers, French River Stewardship, as well as many other stewardships, associations, and private and First Nations citizens who have come together to protect, conserve and restore healthy river ecosystems all across Ontario.

TransCanada is proposing to build the Energy East Pipeline which would carry tar sands oil in the form of DilBit or crude oil, from Alberta to New Brunswick. This would entail converting 3,000 kilometres (km) of existing natural gas pipeline in Saskatchewan, Manitoba and Ontario, and building over 1,500 km of new pipeline through Quebec and New Brunswick.

I am writing on behalf of ORA in response to my attendance at the Ontario Energy Board (OEB) public consultation meeting, held on 2 April 2014, in North Bay.

ORA offers the following comments for your consideration.

ORA's Position and Concerns:

ORA is opposed to the Energy East Pipeline for the following reasons:

1. **Risk vs Benefit:**
   This pipeline would carry up to "*1.1 million barrels of tar sands oil per day*"[1] across numerous lakes, rivers, streams, wetlands, aquifers and watersheds to reach the East coast, where TransCanada has secured "*20-year commitments for 900,000 barrels per day of firm service from prospective shippers." "TransCanada said the pipeline could eventually open new export markets for Alberta's heavy oil along the U.S. Eastern*

[1] Volume 1, Energy East Project Description, P-1-1

seaboard, the Gulf Coast, in Europe and potentially as far as India's west coast, home to Reliance Industries Ltd.'s 1.24-million bpd Jamnagar plant."[2] Therefore, most of the 1.1 million barrels per day is destined for foreign markets and would do little to quench our local oil requirements. This pipeline could drive up domestic oil prices, and would carry minimal benefits, but could inflict high environmental, socioeconomic, and public health and safety risks to thousands of Canadians. It would however provide major financial gains for TransCanada. The imbalance of risks to benefits is unacceptable.

2. **An Aging Pipeline would carry Corrosive DilBit:**
The current aging pipeline was designed to carry natural gas, not the high-pressured flow of corrosive and diluted bitumen or "DilBit".[3] This poses a special risk as noted in a study that showed that "pipelines operating in the range of 130°F to 159°F were nearly 24 times more likely to leak due to external corrosion and six times more likely to leak from any cause than pipelines operating under 70°F".[4] This would reduce the integrity of the pipeline and increase the risk of disastrous spills and accidents. TransCanada provides no details in the Project Description regarding operating temperature, or what would be mixed with the tar sand oil in order to transport it through the pipeline.

3. **Leaks and Spills:**
Pipelines can fail for reasons ranging from a backhoe inadvertently striking one, to the slow but steady weakening from corrosion. It's not a matter of if, but when. Any amount of spilled DilBit could devastate the natural environment, fisheries, habitat, public health, livelihoods, quality of life, endangered species, aquatic ecosystems, and would have the potential to remove a sole or primary drinking water source and means of making a living from thousands of people along its route.

   In 2009 this same natural gas pipeline ruptured and exploded near Englehart,[5] and the worst spill ever was in 2011, when the new first phase of TransCanada's Keystone pipeline spilled 14 times in its first year of operation, spilling 21,000 gallons of tar sands oil and toxic chemicals in North Dakota.[6] These spills included an incident where a leak under pressure created a 60 foot high crude oil geyser.[7] In fact, a close look at pipeline incident data from states in the northern Midwest U.S., which have seen the greatest volumes of tar sands diluted bitumen over the longest time period, is quite alarming. Pipelines in North Dakota, Minnesota, Wisconsin and Michigan have spilled 3.6 times as much crude per mile than the national average between 2010 and 2012.[8]

   Once tar sands bitumen, which is diluted with a mixture of very light petrochemicals for ease of transport, is spilled into a water body, the light petrochemicals - including toxins such as benzene and toluene - gas off, leaving the heavy bitumen to sink to the bottom. This is described in a report regarding the Enbridge tar sands spill in Kalamazoo, Michigan, where significant heavy crude sank below the water's surface and traveled along the river bed, making clean-up especially challenging.[9]

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[2] Financial Post, August 1, 2013 – TransCanada to proceed with 'nation-building Energy East pipelines between Alberta, New Brunswick
[3] Scientific American, Does Tar Sand Oil Increase the Risk of Pipeline Spills?
[4] California State Fire Marshalls, Pipeline Risk Assessment, 1993. Pg. 68
[5] TransCanada, Pipeline Investigation Report P09H0074
[6] Bold Nebraska, TransCanada Pipeline – Map of leaks and spills
[7] WDAY News, Crews clean up spilled oil in southeastern North Dakota
[8] Pipeline and Hazardous Safety Materials Administration (PHMSA), Data and Statistics, Crude pipelines 2010-2012
[9] Inside Climate News, Cleanup of 2010 Mich. Dilbit Spill Aims to Stop Spread of Submerged Oil

If any of the above spill scenarios were to happen in Northern Ontario, or anywhere within the Canadian Shield, it would be particularly disastrous as dredging for clean-up would be extremely difficult, if not impossible.

4. **Leak Detection:**
The potential for disaster could be complicated even further by the fact that the Energy East line would be buried underground, where "pin hole" leaks could go undetected for days. Keystone XL would have to be spilling more than 12,000 barrels a day -- or 1.5 percent of its 830,000 barrel capacity - before its currently planned internal spill-detection systems would trigger an alarm.[10] Ontario winters and ice covered rivers would make detection and clean-up of leaks most likely impossible.

5. **A Lack of Confidence:**
In 2012, Evan Vokes, a professional materials engineer and employee of TransCanada reported on the poor quality of pipeline construction and testified to the US State Department that TransCanada was using substandard welding practices. His concerns triggered a National Energy Board (NEB) investigation which confirmed Vokes' testimony. In concluding its investigation, the NEB stated it was "*concerned by TransCanada's non-compliance with NEB regulations, as well as its own internal management systems and procedures*."[11] This lack of attention to detail and irresponsible behavior undermines all confidence in TransCanada's promises.

6. **Gutting of Federal Environmental Protection:**
The federal government has gutted most of Canada's effective environmental protection laws, which has shattered our confidence in any promises or decisions being made by it, and has effectively limited the ability of Ontarians to have any meaningful say or protect their interests.

7. **Gutting of Provincial Environmental Protection:**
The Ontario government has already demonstrated that energy and jobs come first through its streamlining and gutting of environmental protection, monitoring and compliance regulations and staffing. Poor government oversight means higher risks to the environment and public health and safety.

8. **Will Not Take No For An Answer:**
The fact that Prime Minister Harper has already announced to the world that he "*will not take no for an answer*" on the Keystone XL pipeline, demonstrates that his government will stop at nothing to ensure the pipelines are approved. This is an empty and unfair process that breaches our constitutional and democratic rights.

9. **Global Warming:**
The energy east pipeline if approved would triple the size of the Alberta tar sands within the next few decades, and they already make a huge contribution to global warming and pollution. This is unacceptable.

10. **Lack of Details:**
ORA is extremely concerned about the lack of specific detail regarding this proposed project.

[10] Bloomberg, Keystone XL Pipe Shuns Sensors to Detect Leaks
[11] National Energy Board, TransCanada Pipelines Ltd. (TransCanada or the Company) Compliance with Technical Standards

Priority Impacts and Considerations:

Our list of priorities are:

1. The protection of public health and safety.

2. Extreme care and precautionary measures are exercised wherever any freshwater systems, drinking water sources, parks or protected areas are crossed by the pipeline.

3. The urgent need to reduce greenhouse gas emissions and slow global warming by reducing tar sands development.

4. The Ontario Ministry of the Environment (MOE) must also be required to provide a report to the Ministry of Energy, and have meaningful input into all environmental considerations and decisions. It is unacceptable that MOE was not even included in this review process, when it should have been the primary Ministry conducting the review.

5. Full technical and environmental details of what the project would entail.

6. A risk/cost benefit analysis be undertaken to determine the environmental, economic and social costs that could be incurred by entire communities that rely on potentially impacted freshwater systems for their drinking water source, as well as the damage to ecosystem services, habit and food sources, should a catastrophic spill occur.

7. Leading edge leak detection technology, including infrared sensors and fiber-optic cables, and acoustic sensors that can identify the sound of oil seeping from a pinhole-sized opening.

8. Full disclosure, transparency and accountability must be one of this government's highest priorities.

9. Independent third party review must be mandatory throughout every phase of the process.

10. TransCanada must be required, in the application phase, to indicate specifically how it would carry out emergency response and decommissioning, and make emergency response provisions similar to that required under the Ontario Mining Act Closure Plan.

11. TransCanada's application and commitments must specifically demonstrate its ability and willingness to assume responsibility for any and all damage it incurs to private and public property, and must immediately provide clean and healthy drinking water to all those impacted until the source water and any environmental damage is restored to 100% of its original state.

ORA is also opposed to crude oil being transported by rail or any other means, especially in light of the tanker train that derailed and exploded in the middle of the small town of Lac-Megantic, Quebec, causing 47 deaths and hundreds of millions of dollars in damages in what was the continent's deadliest rail disaster in two decades. TSB Chief Investigator, Donald Ross,

reported "*the lower flashpoint of the crude oil explains in part why it ignited so quickly*."[12] The volatile nature of transporting this volatile "crude oil" to market by any means places an unacceptable risk to human life.

Environmental resources have huge value both in and of their own right, and because of the broad range of benefits that we and future generations would receive from the ecosystem services. When the full value of the environment is considered, rather than just the part that can easily be measured in monetary terms, responsible governments tend to approve very different types of development projects.

This rush to export dirty tar sands oil may not make good economic sense for Canadians when we consider the risks of environmental degradation and loss of crucial fresh water resources that provide so many ecosystem services to communities across the Country. If a spill should occur, the average citizens of this country would not be any richer; but instead would be left with impossible cleanups and reclamation work, as well as the vital loss of clean drinking water that many communities rely on.

ORA requests that the proposed Energy East Pipeline project be evaluated by the provincial and federal governments using the United Nations Ecosystem Services Economics[13] approach to explicitly incorporate the valuation of ecosystem services and the multiplicity of their services as a pivotal component of their decision making process.

Thank you for this opportunity to comment.

Respectfully,

Linda Heron
Chair, Ontario Rivers Alliance

Cc: National Energy Board - info@neb-one.gc.ca
[redacted]TransCanada – [redacted]
[redacted], TransCanada - [redacted]

[12] Reuters Canada – Fuel on train in Quebec disaster more explosive than labeled
[13] United Nations – Ecosystem Services Economics - Approach

OEB Energy East Consultation

Meeting: Mon. April 7, 2014
Stittsville, Ontario

Presentation by: Stephanie Bolt
Ottawa Riverkeeper
301-1960 Scott St., Ottawa, ON, K1Z 8L8
Tel.: 613-321-1120
Email: sbolt@ottawariverkeeper.ca

Main points I intend to cover in my presentation:

1) I will provide the participants with some background information on the Ottawa Riverkeeper and the work that we do as an organization;

2) I will show the participants the map of the Ottawa River watershed and explain that our organization is concerned with the potential impact of the proposed pipeline on the entire Ottawa River watershed area;
    a. The pipeline could have an impact on the watershed from North Bay all the way to Montreal, where the river flows into the St. Lawrence River;
    b. The mainline pipeline that currently exists crosses many tributaries to the Ottawa River, including the Montreal River, the Madawaska River, Mississippi River, Rideau River, and South Nation River;
    c. The Project Description mentions that new crossings of the Madawaska and Rideau Rivers will be installed, so there will be construction on these crossings;
    d. The newly constructed portion of the pipeline will cross the Ottawa River itself, just east of Hawkesbury, upstream from Montreal;
    e. The Ottawa River watershed provides drinking water for the relatively large municipalities of North Bay, Ottawa, Gatineau & Montreal, as well as many smaller ones, including Stittsville;
    f. In addition to surface water for drinking water, there are important aquifers in the watershed that provide drinking water for many communities;
    g. The Ottawa River is home to great biodiversity, including more than 300 species of birds and 96 species of fish;
    h. The Ottawa River is a recreation destination, as evidenced by the fact that hundreds of thousands of people swim, fish, paddle, sail, and powerboat in the river.

3) I will discuss with the participants the impacts we see in connection with the proposed pipeline in the Ottawa River watershed. My comments here are obviously restricted to a very high level due to time constraints. These are primarily:

a. Environmental considerations
    i. Leaks and spills of crude oil or, worse, dilbit, due to a pipeline failure:
        1. Could be caused by many things, such as damage to the pipeline by third parties, internal corrosion, weld seam failures, or natural disaster, which may result in:
            a. Reduction in water quality of wetlands, watercourses, and/or waterbodies in the Ottawa River watershed;
            b. Serious harm to fish and wildlife, and fish and wildlife habitat in the Ottawa River watershed

    ii. Climate change

4) I will discuss with the participants that, as a result of our concerns about the risk of oil or dilbit leaks and spills, we think the OEB should seriously assess in its report to Ontario's Minister of Energy the impacts on pipeline safety and the natural environment in Ontario, in particular:
    a. **Pipeline integrity**:
        i. What is the risk to Ontarians of a rupture in the pipeline, in particular in the converted section? We know this pipeline is 55 years old and was not originally designed to carry crude oil/diluted bitumen ("dilbit"), or operate at the pressure required to move the oil/dilbit through the pipeline. We know that pipeline conversions such as this one are a fairly new practice and one big rupture on a converted pipeline has occurred and been much publicized, in Mayflower, Arkansas in March 2013, which endangered local water bodies. And we know that industry and its regulators have concerns about the integrity of these pipelines.

    b. **Leak detection**:
        i. What is the risk to Ontarians of leaks along the pipeline that go undetected for any period of time? We know that with the Enbridge rupture in Kalamazoo, Michigan, many hours (approx. 18) passed before the company learned of the spill, and that was because a municipal utility worker reported the spill, even though alarms had gone off in company headquarters. We know that Energy East will have a leak detection system for the pipeline. But will it provide sufficient assurance against harm to the waters in the Ottawa River watershed?

    c. **Emergency Management**:
        i. The Ottawa River is an interprovincial river, and thus subject to regulation and oversight by the federal government as well as the provinces of Ontario and Quebec. Municipalities would also, of course, be involved in any cleanup of a spill. Has the Ontario government been given enough assurance by Trans Canada that a spill or rupture could be contained by a well-coordinated response before unacceptable damage is done to the waters, wetlands, and

habitat of the Ottawa River watershed? Also, are Trans Canada's emergency management plans tailored to the different needs and players involved in the different regions through which the pipeline passes?

ii. What amount of money is Trans Canada willing to devote to a cleanup in the event of a spill? Obviously it can be very expensive to clean up such a spill. We know Enbridge has already spent more than $1 billion to clean up the dilbit that spilled into the creek that was a tributary of the Kalamazoo River in July 2010 and, due to largely to the properties of bitumen, that cleanup is still not considered complete. Are Ontario's municipalities going to be on the hook for the cost of the cleanup operations? We can imagine they don't have the money or other resources to manage this, and is it their responsibility to bear the burden for this risk?

d. **Quality Management:** (ie. design, manufacture, and construction):[for new build]

i. Are adequate safety measures being taken to protect the newly constructed section of pipeline from spills, particularly where it crosses bodies of water? Are shut off valves being installed in the pipe before and after crossings? Are double pipes being used for water crossings? Should these and other precautions be required to make the risks inherent in this project acceptable to Ontario?

e. **Climate Change:**

We think the Ontario government should give consideration in its report to the implications of this 40 year project to Canada's contribution to global greenhouse gases. The Pembina Institute has published an overview of the climate considerations of this pipeline project and they have shown that the oil required to fill this pipeline would significantly increase Canada's greenhouse gas emissions. This is at a time when we are past needing to show serious action to reduce these emissions, as the most recently released IPCC report has made very clear. This is a separate concern of ours, from the ones related to pipeline spills, but an important one, as an environmental organization working to protect and preserve the ecological health of the Ottawa River watershed. We think it is an issue that must be addressed in the context of the approval of this pipeline.

5) Conclusion: There is serious potential for a damaging oil spill, or certainly more than one, in Ontario, into the Ottawa River watershed during the estimated 40 year life of this project. Furthermore, if this project is approved it will take Canada even further away from meeting its climate objectives than it already is. We want to urge the Ontario government to take these risks seriously in coming up with its position on the project, and in its report to the NEB.

May 7, 2014

Ontario Energy Board Energy East Consultation

Via email to aheath@swerhun.com, energyeast@swerhun.com

Re: Safety concern Energy East pipeline near Ottawa

To whom it may concern:

We are grateful for the opportunity to provide comment on the Energy East pipeline project, specifically the segment of the project near North Gower-Richmond, Ontario, which is part of the City of Ottawa.

In specific, we wish to make a comment related to **the impact on pipeline safety**, as per your *Community Consultation Backgrounder* document

Since 2008, there has been a proposal for a large-scale (20 megawatt) wind power generation project, the "Marlborough", proposed by Prowind Canada (based in Germany). The proposed project would be located on the same land as the existing pipeline.

Because the Ontario government has not yet re-opened its application process for large-scale wind power projects, we do not know the current specifications for the wind power proposal, but in its last incarnation, it was for an initial eight, 2.5 megawatt turbines. Because this area is a poor wind resource, the proponent proposed to build the turbines to a height exceeding 150 meters.

Our concerns relate to the safety and integrity of the pipeline, and public health, due to the potential for adverse events that are not uncommon with wind power projects. They are:

§ The potential for seismic vibration from the turbines to interfere with the integrity of the pipeline and other buried infrastructure
§ The potential for catastrophic mast and/or blade failure
§ The potential for fire in the nacelle of the power generation equipment, which contains hundreds of liters of flammable petrochemicals.

We have compiled a very brief list of academic papers that confirm the existence of these risks.

The papers are:

Vibration assessment of connections to pipeline systems and the relationship between vibration and process conditions, by Miles, Andrews and Wastling, available at

http://www.igu.org/html/wgc2003/WGC_pdffiles/10128_1045843389_15366_1.pdf

And

Ensuring an adequate separation distance between wind turbines and buried energy infrastructure, by Jackson, Baldwin and Andrews, available at

http://www.ukopa.co.uk/wp-content/uploads/2013/02/UKOPA-13-012.pdf

We refer to the Jackson et al. paper in which the authors write:

Although relatively rare, a number of wind turbine failures have occurred over the past 30 years. The extent of these failures can vary from gearbox fires through to blade failures and catastrophic failures of the wind turbine mast. These larger scale wind turbine failures could have a significant impact on buried pipelines in the vicinity of the wind turbine. These buried pipelines include high pressure gas, gasoline and oil pipelines. The failure of these pipelines would lead to the release of flammable material with potential hazards to individuals and/or property in the vicinity of the pipeline.

We also have an article from an industry publication which shows that perhaps industrial-scale turbine fires are not as "rare" as Jackson et al think; author Scott Starr writing in *North America Clean Energy* said, "It's when, not if…" when it comes to turbine fires. "Aside from the imminent hazards of a burning turbine there is also the risk of sparks, embers, or debris falling to the ground and setting off a wildfire.

"…Wind farm fires do happen, and many in the industry suspect they occur far more frequently than statistics suggest." (Starr, Scott, Taming Turbine Fires Before They Start, nacleanenergy.com, May/June 2011)

It is well known that when fires occur in the wind turbine equipment, because of the height of the structures, emergency responders can do little but wait out the fire, and hope to control the spread of burning debris. This represents a threat to public safety, and is a risk that ought not to be taken, given the limits on mediation and action.

One of the characteristics that distinguishes this particular wind power project is the proximity to homes: more than 1,000 homes are within 3.2 km of this proposed wind power project.

Our purpose in writing is to:

-confirm that the OEB is aware of the co-location of this industrial wind power generation project with the pipeline

-ask whether there would be a full and public assessment of the wind turbine locations done with regard to safety concerns for the pipeline, and

-to ask what reassurance, if any, you can give the people of this community that every aspect of safety has been reviewed with respect to the co-location and adequate precautions taken for this specific situation .

Thank you.

Sincerely,

Jane Wilson , RN

Chair, Ottawa Wind Concerns

[redacted]

PO Box 3 North Gower, ON K0A 2T0

ottawawindconcerns@gmail.com

Copy to: Scott Moffatt, Councillor Ward 21, Rideau-Goulbourn

Lisa MacLeod, MPP Nepean-Carleton

Hon. Pierre Poilievre, MP Nepean-Carleton

RVA Statement to the Ontario Energy Board

April 7, 2014

Good evening. My name is John Shearer. I am a resident of Richmond and a representative of the Richmond Village Association Inc., a ratepayers association which counts as its members the approximately 4700 residents of the Village of Richmond. We applaud the initiative of the Ontario Energy Board in holding an early public consultation.

Richmond lies a short 10 minute drive south east of our current meeting location in Stittsville along the path of the current gas pipeline. The gas pipeline itself runs along the western edge of the Village of Richmond and crosses the Jock River at the Richmond Golf Course.

We understand the Board is considering four areas of potential impact of the proposed pipeline project:

1. the impacts on Ontario natural gas consumption in terms of prices, reliability and access to supply;
2. the impacts of pipeline safety and the natural environment;
3. the impacts on Aboriginal communities in Ontario and how treaty rights may be affected;
4. and the short and long term economic impacts of the project in Ontario

While many residents share a concern over the impact a "halving" of gas transportation capacity in this pipeline could have on natural gas prices we have no meaningful insights to provide on that complex topic. Neither can we provide any meaningful comment on the impacts on Aboriginal communities or short and long term impacts of the project for Ontario.

Our major concerns lie with the impacts of pipeline safety and the natural environment. The pipeline runs underground through the aquifer that supplies the individual wells of the approximately 4700 residents of the village. Major residential development proposals currently before the city and nearing final approval propose adding several thousand more homes, right next to the pipeline, boosting the population to approximately 15,000. It is proposed that these new homes be serviced by communal wells. Richmond is not connected to the City of Ottawa water supply.

Few issues are more important to residents of Richmond than protecting drinking water. The planned conversion of the existing natural gas pipeline to a pipeline that will carry 1,100,000 barrels of crude oil

…/2

a day through the aquifer supplying our wells threatens the safety and security of our water supply. A burst gas line is one thing (at least it dissipates into the atmosphere) but it is hard to imagine the damage that could result from an oil line rupture.

Notwithstanding all the assurances of safety provide by the proponents of the Energy East project the Richmond Village Association Inc. recognizes that accidents and indeed catastrophic failures do happen. Spills such as a rupture experienced in 2010 by the Enbridge Pipeline in Kalamazoo Michigan which spilled 3 million liters of diluted bitumen ($billion dollar cleanup) and one six weeks later spilling a million liters in Romeoville, Ill and yet another in June 2013 in Alberta releasing 200,000 liters have been widely reported.

The Richmond Village Association Inc. calls on the Minister of Energy and the Province of Ontario, as a result of these consultations, to use all available means to insist with approval authorities that:

1. Where sources of ground water are placed at risk by the pipeline all available means be taken to mitigate those risks including but not limited to: rerouting the pipeline to safer routes; double walling/ reinforcing the pipeline; ensuring the use of state-of-the art risk management and monitoring tools; providing multiple emergency automated shutdown mechanisms; robust emergency preparedness procedures and infrastructure etc., and,
2. That neighboring residents and landowners be indemnified from the impacts of leaks and contamination of well water by the company and the Government of Canada, and
3. That the burden of “proof” in any allegation of contamination of a well water source rest with the pipeline authority to prove they were not the source of contamination.

Thank you for the opportunity to speak this evening.

RIDEAU
ENVIRONMENTAL
ACTION LEAGUE

Rideau Environmental Action League P.O. Box 1061, Smiths Falls, ON K7A 5A5 REALaction.ca

May 14, 2014

Ms Rosemarie Leclair
Chair and Chief Executive Officer
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms Leclair;

Re: Energy East Pipeline Proposal

The Rideau Environmental Action League (REAL) submits the following to Phase I of the OEB's Consultation on Implications for Ontario of TransCanada PipeLines Limited Energy East Project.

REAL is a 25-year-old non-profit environmental organization based in the town of Smiths Falls and serving the broader community of Lanark, and Leeds and Grenville counties.

REAL has a long and credible history of delivering programs in partnership with municipalities, businesses and individuals that help municipalities and our residents take practical actions to protect our local environment.

For a small organization based in a small town and rural area, it has many accomplishments. It operates the now regionally famous REAL Deal Reuse Store that diverts 35 tonnes a year of good waste from landfill. It was one of the first of a handful of organizations in Canada to pioneer the EnerGuide for Houses in the late 90s, and has continuously delivered home energy audits since.

More specifically, REAL was a creator of what would become the very successful, long running, and highly respected Ontario-wide Well Aware program, addressing our common groundwater, rural wells and septic systems. REAL has delivered many other water protection programs, and, for the past three years, has delivered an

extensive private well monitoring program for six solar farm sites developed by one of the large solar companies, Recurrent Energy, and for the Township of Drummond / North Elmsley.

It is from this long and credible history of taking action to protect the environment of our region that REAL submits its concerns. REAL also recommends that the OEB expand its scope to address specific concerns in Eastern Ontario that arise from the effects of climate change on the region, and from the shipping of crude oil by rail.

IMPACTS ON PIPELINE SAFETY AND THE NATURAL ENVIRONMENT IN ONTARIO

WATER

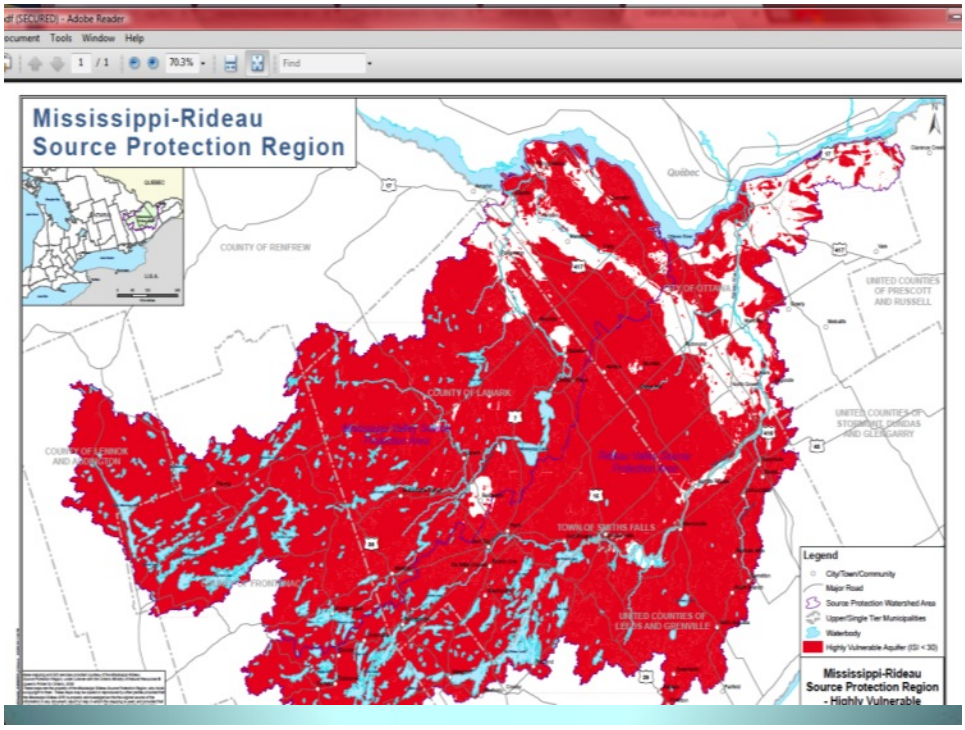
Eastern Ontario is one of the few regions left in North America with a healthy and balanced water system. Groundwater studies for Lanark, and Leeds and Grenville counties show that 90% of the region is *Highly Vulnerable* for groundwater contamination because of the shallow overburden and fractured bedrock of the area.

We know what this means, as this area is home to the largest trichloroethylene plume in Canada. Trichloroethylene, a carcinogen, is heavier than water, so goes to the bottom of aquifers. We now know that diluted bitumen sinks in water, it does not float. The experience with the trichloroethylene plume is that it is 11 km x 3 km, it is impossible to remove or clean up, and this plume affected some 250 homes, an elementary school and a municipal building. They must use special filters permanently, and even then the carcinogenic effects are not fully mitigated as the water is used for non-potable purposes.

Based on the history of pipeline spills, the likelihood of a spill from the Energy East pipeline is absolute – it will happen at some point. The history of spills from rail shipments is worse. The region of Eastern Ontario that both the pipeline and the rail line pass through cannot accept these risks to our water.

In Ontario, under Reg. 903 of the Clean Water Act, rural dwellers, who make up approximately half the population of rural Eastern Ontario, are 100% responsible for their own water supply, for their wells and the safety of those wells. A dilbit spill would forever contaminate groundwaters and make those rural properties unviable.

This map shows, in red, the *High Vulnerability* of our whole region to groundwater contamination from the surface, making both the shipping of dilbit by pipeline through the eastern side of the region, and shipping of crude oil and diluents by rail through Perth, Smiths Falls, Merrickville and Kemptville, unacceptable risks to the residents, the water and the environment of our region.



As well, REAL is equally concerned about the effects on surface waters from a spill of dilbit either from the pipeline or the train cars. The proposed pipeline would cross both the Mississippi and Rideau rivers in our region, both of which provide drinking water, and both of which are of economic, historic and cultural importance to the region. The unique Rideau Canal is a UNESCO World Heritage Site and is the only canal dating from the great North American canal-building era of the early 19th century that remains operational along its original line with most of its original structures intact.

TRAINS

Smiths Falls is a railroad hub, and has a large railroad yard in its centre, bigger than that of Lac Megantic. As well, the main rail line runs through the towns of Perth, Smiths Falls, Merrickville and Kemptville and the rural and farming areas in between.

REAL has two concerns related to the rail:

1.) Residents have noticed a huge increase in rail tanker cars on the lines and in the yard. As identified by the code 1267 on the rail car sides, these cars contain Petroleum Crude Oil (assume to be either tar sands oil, or Bakkan Shale oil). This increased traffic poses safety and environmental threats. Smiths Falls has recently requested it be put on the new federal registry from CANUTEC, the Canadian Transport Emergency Centre, but REAL is concerned that even with this listing, the First Responders and the municipal governments in the area will only know of the contents of the tanker cars after the fact. Our municipalities, and our First Responders, will be the ones initially tasked with dealing with any spill or explosion. Past experience does not bode

well. There have been two derailments in the yard in Smiths Falls in the past few years that the municipal government was not informed of.

The normal process for municipal governments to engage upper levels of government in Emergency Planning requirements and changes is through the annual review of those plans. REAL recommends to the OEB that it engages municipalities about those plans in advance of its deadline for submission to the NEB.
While rails fall under the jurisdiction of the federal government, REAL recommends that Ontario ensure that mechanisms are in place to inform municipal governments of shipments of tar sands crude and/or Bakkan oil through their jurisdictions at the time of, and that First Responders are appropriately trained, equipped, funded and serviced.

2.) After the dilbit is delivered to the refineries in Quebec and on the East Coast, REAL understands that the plan is to remove the toxic and flammable diluents, and return them, by train, to Alberta for reuse. This will add yet more safety and environmental hazards to this region that so far don't seem to be addressed. The same concerns raised above apply to this plan.

As there is no intention to stop or diminish shipment by rail of crude oil should a pipeline be in place, these threats from rail shipment to this region's water supplies would continue.

CLIMATE CHANGE

Oilsands production is Canada's fastest-growing source of the GHG pollution that causes climate change. As stated in the Pembina Institute's February 2014 report, *Climate Implications of the Proposed Energy East Pipeline*: **"**According to Environment Canada, oilsands GHG emissions are projected to nearly triple between 2005 and 2020, an increase large enough to cancel out all emission reductions that other parts of Canada's economy are projected to make over the same period". Increasing production of bitumen will only increase greenhouse gases and the rate of climate change. This is not acceptable, neither locally nor globally.

The citizens of Eastern Ontario are already observing the effects of increased GHGs and climate change. And they have experienced the effects of "climate disruption" in the Ice Storm of 1998, at the time the most costly weather-related disaster in Canada.

Two recent presentations by two of Canada's leading climate scientists serve to highlight the effects that Eastern Ontario residents will experience from further climate disruption as a consequence of the GHGs that have already been emitted.

Dr. Gordon McBean, Aug. 6, 2013:

By 2050, in contrast to the period 1961-1990

- Southern Canadian temps will warm by 3.5 degrees
- There will be 4-6 times the number of hot days, going from for e.g. 10 to 60
- There will be a 50% increase in the number of freezing rain events of more than 4 hours, and an increase of just about 80% in those of more than 6 hours, in Eastern Ontario
- There will be about twice as many heavy summer storms (with resulting flooding and winds)

Dr. Jim Bruce, Apr. 12, 2014

- Temps will increase from averages of 4 to 5 degrees C in the winter and 2.5 to 4 degrees C in the summer.
- Freezing rain events will increase by 2/3 by 2050 in Eastern Ontario
- Expect more heavy rains when it rains - an increase of 50% heavy rains in Eastern Ontario
- 2/3 of water borne disease outbreaks occur right after a heavy rain
- With heavier rains, and heavier runoff, more nutrients flooding lakes, more blue green algae blooms. Sharbot Lake has already experienced a bloom.

THE IMPACTS ON ONTARIO NATURAL GAS CONSUMERS

Much of the current supply of natural gas into Eastern Canada, and most of the estimated future medium-term supply, is and will come from fracked gas wells in the eastern United States. REAL is concerned because fracking can contaminate groundwater supplies, making them unusable. In due course, our region could come under pressure to give up or sell some of its valuable water to regions where groundwater supplies have become unusable.

Yours sincerely,

The Board of Directors of the Rideau Environmental Action League
Barb Hicks, President
Shawn Merriman, Vice-President
Karen Schecter, Secretary-Treasurer
Donna McKenna
and
Susan Brandum, Manager

Jay Shepherd
Professional Corporation
2300 Yonge Street
Suite 806, Box 2305
Toronto, ON M4P 1E4

BY EMAIL

May 15, 2014

Ontario Energy Board
2300 Yonge Street
27th Floor
Toronto, Ontario
M4P 1E4

Attn: Kirsten Walli, Board Secretary

Dear Ms. Walli:

Re: OEB Energy East Consultation – Phase I Comments

We are counsel to the School Energy Coalition ("SEC"). SEC thanks the Board for an opportunity to provide these brief comments on its view of some of the high-level considerations and impacts of TransCanada's ("TCPL") Energy East project proposal that are of an importance to it.

As the Board is aware, Energy East will convert certain TCPL Mainline assets which currently transport natural gas to the transportation of bitumen. While much of the converted pipeline is currently underutilized, it is not the case with respect to certain proposed converted assets within the Eastern Ontario Triangle ("EOT"). The conversion of certain EOT Mainline assets as proposed will leave Ontario with a shortfall in capacity required to meet contracted long-haul demand. To offset the removal of this capacity, TCPL is planning to construct a new pipeline, between Markham and the community of Iroquois (the "Energy Eastern Mainline Project").[1]

In considering the impacts on Ontario natural gas consumers in terms of prices, reliability and access to supply, as required by the Minister's Letter, SEC submits the Board must consider how natural gas transportation tolls may be affected by the removal of certain Mainline assets from its rate base[2] and the corresponding additions of the Energy Eastern Mainline Project assets.

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[1] Energy East Mainline Project: Project Description, May 2014
[2] The transfer of assets from TCPL's Mainline to Energy East is listed as Issue 3 on the NEB's Energy East List of Issues – Commercial and Financial Matters - Part IV and V of the NEB Act

T. (416) 483-3300 F. (416) 483-3305

mark.rubenstein@canadianenergylawyers.com
www.canadianenergylawyers.com

SEC recognizes that this is a difficult task considering uncertainty regarding the future of the Mainline tolling framework because of the proposed 2015-2030 Settlement Agreement [3] currently being contested before the National Energy Board.[4] There is also very limited financial information available on the cost of the Energy Eastern Mainline Project.

Ultimately, the price of natural gas paid by Ontario consumers will be affected by the Energy East project and the Board must consider those impacts in its report to the Minister. It should also consider whether the Energy East Mainline Project is the optimal solution to relieving the EOT capacity shortfall caused by the Energy East Project.

Yours very truly,
Jay Shepherd P.C.

Mark Rubenstein

cc: W. McNally, SEC (by e-mail)

[3] The Settlement Agreement was examined in the EB-2013-0433/EB-2013-0451/EB-2014-0074 proceeding
[4] See National Energy Board File No. RH-001-2014

When I presented in Cornwall I'd mentioned that we should move toward a greener economy, as was the intent of the Green Energy and Economy Act. This would generate greater economic benefits and position Ontario better for a world that desperately needs a carbon-neutral future.

As I mentioned at that time, the HRAI (Heating, Refrigeration and Air Conditioning Institute) has done research concerning the economic benefit of government incentives during the ecoEnergy program. Those results are very telling: they indicate that investments in efficiency provide very significant economic benefits. I add that making our domestic infrastructure more efficient also makes our population and economy more resilient to rising energy prices.

The following link takes you to their website. In it you will find links to their research. http://saveecoenergy.ca/hrai-letter-to-prime-minister-harper-20110217

I strongly suggest that you read the letter and consider this information as supportive of one of the points I raised: that investment in the Energy East pipeline provide fleeting economic benefits to Ontario but lasting risk, whereas investments in efficiency provide lasting benefit, greater economic benefit and less reliant upon the carbon energies that threaten our future.

Regards,

Robert Ethier
Armstrong / Earlton
705-563-2375

Arla West
Brethour
705-647-1712

Guy Labonte
Casey
705-647-7257

Bill Dickinson
Chamberlain
705-544-8088

Wayne Pawson
Charlton / Dack
705-544-7525

Tina Sartoretto
Cobalt
705-679-8877

Dan Cleroux
Coleman
705-679-8833

Nina Wallace
Englehart
705-544-2244

Jack Briggs
Evanturel
705-544-8200

Bill Johnson
Gauthier
705-568-8951

Pauline Archambault
Harley
705-647-5439

Martin Auger
Harris
705-647-5094

Morgan Carson
Hilliard
705-563-2593

Larry Craig
Hudson
705-647-5439

Terry Fiset
Elk Lake / James
705-678-2237

Terry Phillips
Kerns
705-647-5439

Bill Enouy
Kirkland Lake
705-567-9361

Patricia Bodick
Larder Lake
705-643-2158

George Lefebvre
Latchford
705-676-2416

Bev Hine
Matachewan
705-565-2274

Clermont Lapointe
McGarry
705-634-2145

Lorie Hunter
Temagami
705-569-3421

Carman Kidd
Temiskaming Shores
705-672-3363

Ron Vottero
Thornloe
705-563-2205

TeMAG

Temiskaming Mayors Action Group
P.O. Bag 1757
Kirkland Lake, ON P2N 3P4
temag@tkl.ca

March 24, 2014

To Whom It May Concern:

My name is Bill Enouy and I am the Mayor of Kirkland Lake. I also am Co-Chair of the Temiskaming Mayors' Action group. This organization is made up of 24 reeves and mayors and represents a district which is approximately the size of France. The gas pipeline and the proposed oil pipeline winds its way through our entire diverse district. I use the word diverse because Temiskaming is composed of hard rock mining towns and very productive farmland areas.

As a group, we understand that dealing with any form of energy is a necessary but potentially dangerous venture. To that end, we have had individual meetings with the consulting firm hired for this project. We have also entertained the company itself at an official Temiskaming Mayors Action Group meeting. John Vantoff, MPP for Temiskaming, has been in attendance for some of our meetings when this issue was discussed.

The company was forthright in dealing with our concerns and strong in their commitment to due diligence and safety for the project. The company followed up with open house meetings for the public in Temiskaming Shores and Kirkland Lake.

We, as a group, are throwing our support behind this project. We will continue to monitor the progress the company makes towards moving Canadian oil east to be refined in and for Canada. We will never waver in our duty to ensure it is done safely.

The Temiskaming Mayors Action Group fully supports the TransCanada Energy East Project.

Sincerely

Bill Enouy

William Enouy
Co-Chair, Temiskaming Mayors Action Group

Temiskaming Mayors Action Group Co-Chairs

Bill Enouy
william.enouy@tkl.ca

Terry Fiset
elklake@ntl.sympatico.ca

Carman Kidd
ckidd@temiskamingshores.ca

Understanding the Risks Profile Associated with Long Distance Pipeline Transportation of Crude Oil through Ontario

The accumulated risk factors show that Trans Canada's proposal to ship crude oil across the country cannot be done without considerable damage to Ontario communities and the environment.

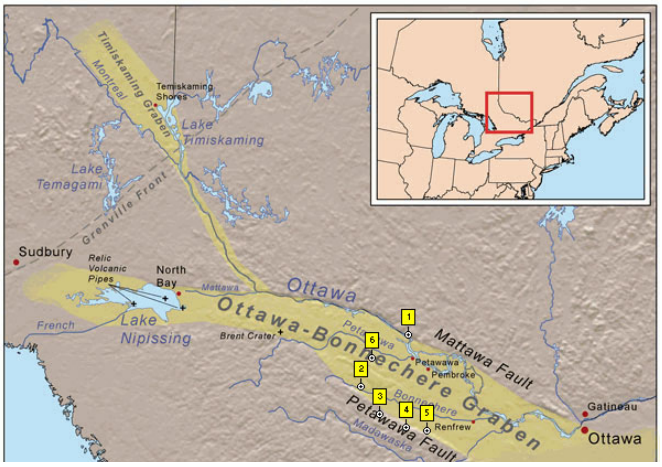
Ontario citizens are being asked to take on a significant risk with the Canada East pipeline proposal. Accumulating evidence indicates that the shipping of crude oil across Ontario will create a series of catastrophic environmental disasters that could lead to the loss of a safe water source for millions and, without appropriate due diligence, serious financial hardship for the province.

The shipping of crude oil long distance is a relatively new science and the publicly traded proponent, Trans Canada (TC) has very limited experience in it. The liability potential of the proposal could far exceed the asset potential of TC. There have been 12 leaks since TC started shipping oil in 2010. This shows that the science of using gas pipeline to ship crude oil mixed with naphtha gas is not fully understood. The crude oil pipeline leak into the Kalamazoo River has taught us that leaks are expensive and very different to clean up. Even after spending over a billion dollars, much of the oil sits at the bottom of the river and will continue leaching toxic and carcinogenic chemicals into the water supply indefinitely or until it is removed.

This pipe was inspected and considered safe but eventually leaked 20,000 barrels of oil into the Kalamazoo River

Lessons Learned from the Kalamazoo Leak: Pipelines that are capable of carrying pressured gas are not necessarily capable of carrying the crude oil naphtha gas mix under pressure. The major difference is that turbulence in the oil causes vapour drops in the Naphtha. These collapsing vapour drops result in vibration that sucks the ions out of the steel, opening up any cracks. This cavitation occurs at rough locations where turbulence caused by minute cracks triggers the decomposition of the steel. The cracks which eventually opened up to spill 20,000 barrels of crude were known about prior to the leak, but were not considered problematic when gas was transported. The lesson from this is that when gas pipeline is used to transport the crude-naphtha combination, leaks will develop through cavitation. These leaks will occur more frequently at or around river crossings where additional turbulence would be expected due to piping contours. As a result, we expect that there will be a significant number of leaks in the thousands of kilometers of pipe involved in crossing Ontario over the life time of the project. How many leaks will occur and can they be cleaned up are both unknowns , but Ontario is being positioned for a significant risk.

Assessing the Risk: The pipeline in Ontario will be thousands of kilometers long and will travel through dozens of aquifers and hundreds of river crossings. In addition, a sizable portion of the line will be traveling down the Ottawa-Bonnechere Grabe Fault where any leakage would travel downstream in the Ottawa River. There will be thousands of microscopic cracks that will begin to cavitation once the crude/naphtha is added to the line under pressure. Many will eventually leak. In the event of leaks there will be water, water table and air contamination. It will be very costly to clean up. Many of these rivers feed lakes used as primary water supplies and leaks into any of the hundreds of river crossings will create long term health impacts to those living downstream as well as sizable economic impacts. Unless these leaks are cleaned up completely (we don't know if this is possible) then the oil sediment on the bottom of the river will continue to leach into the water resulting in long term health problems such as the cancers that are being observed in the population on the Fort Chipewyan Reserve downstream from the tar sands operations.



Trans Canada's lack of experience with oil transmission has led them to underestimate the level and volume of risk associated with the proposal. Gas pipeline breaks (and there have been hundreds) cost next to nothing to clean up. Cut the broken section out, put in a new one and put the dirt back that the explosion removed. In oil leaks, especially the slow development leaks that cavitation creates, the loss of oil might not be noticed for months or years, well after the contamination of the water supply has occurred. Depending on where the leak occurred it could cost billions or 10's of billions to clean up the leak. If a leak occurred anywhere in the Ottawa River basin hundreds of kilometers of the Ottawa River bottom would require expensive clean up by the owners or the limited partners who "own" the pipeline. What happens if a series of spills bankrupts the holding company? With the water supply of millions threatened, including Ottawa and Montreal, the attempt to clean up the escaped oil could very well extend to hundreds of billions of dollars, causing severe financial distress for the province.

Ontario's Due Diligence: Evidence suggests that, far from being an extreme scenario, major leaks and many less serious breaks are a likely scenario for Ontario- given the extensive length of the pipeline and the technical issues around pipe deterioration. Each leak could cost upwards of a billion dollars to clean up. Ontario needs to ensure that the resources will be there to clean any and every spill. Additional resources will be required to compensate property owners and municipalities for their losses, as occurred in the Lac Megantic train spill. Ontario taxpayers are getting next to nothing as far as benefits from this project and they need to be protected from potential losses.

Protecting Ontario Citizens: The incorporation act makes it simple for corporations to escape liabilities by structuring their organizations. Simply by forming a limited partnership, those profiting from the proposal can protect themselves from any additional liabilities, effectively walking away. This forces the

taxpayers to pay the costs of cleanup and property replacement. We have seen this in the mining industry. Mining companies, after cleaning out the resource, sell the assets to a third party. This effectively eliminates their responsibility for cleaning up the site. While the decision to proceed with the project is in the hands of the Federal Energy Board**, Ontario does have the responsibility to do its due diligence and ensure that adequate resources within the industry are available to cover all potential costs of spills.**

Financial Assurance: How much would it cost to clean up a Kalamazoo type project? A billion has been spent and only a small fraction of the oil has been recovered. The insurance that was carried was depleted and assets of Enbridge are being consumed to cover costs of a clean-up that has taken over 3 years so far. If an oil spill in a small river with a small population downstream cost over a billion dollars, what would a spill in the large Ottawa River cost? 10 Billion or perhaps 20 Billion? What if over the next 20 years we had 10 or 50 expensive leaks? Who would pay after the first one or two bankrupted the pipeline company? Once the pipeline company had paid all they could, the tax payers of the province or country would have to not only pay the financial cost, but be forced to pay for the environment costs and cleanup. If Enbridge averaged one leak per month, the Trans Canada Proposal (a much longer line) two leaks per month might be expected. If 10% of the leaks had large impacts then Trans Canada, or its appointed subsidiary, could be bankrupted in the first year.

In the mining industry the skipping out of liabilities has been reduced by forcing the company to set aside an adequate amount of money for mine closure and to cover cleanup cost. As a provincial requirement the money needed to clean up oil spills would need to be set aside in an escrow account that is not controlled by the company undertaking the projects so that Ontario citizens can be protected from this highly risky proposal.

In conclusion, the Ontario Government has the responsibility to take required steps to protect the people of Ontario and the environment under their jurisdiction. They need to use due diligence to ensure there is no major economic and environmental damages.

The proposal to ship crude oil across the province using a largely unproven technology is irrational and dangerous.

Sincerely,

Ambrose Raftis for

Timiskaming Environmental Action Committee

timto@parolink.net or 705 544 7722

I have been in discussion with some "risk management" people who have been assessing their involvement with the oil industry and have uncovered some additional concerns about the proposal for Trans Canada to pipe crude oil across the country.

1) The pipeline would travel down through a major earth quake zone that runs up the Ottawa Valley. Modeling indicate there is a 7.1 earth quake potential in the future. This is considered a high risk area for a quake.
"The entire corridor between Ottawa, Montreal and Quebec City is prone to earthquake risk, so think about the Ottawa River valley and the Saint Lawrence River valley," said scientist Jay Guin.
The research team estimated total losses at a staggering $75 billion for the west coast scenario and $61 billion in losses for the central Canada scenario. Both potential earthquakes would also entail significant loss of life, said Guin.

2) The risk factor multiply due to the pipeline's up stream location to the water supply of major population centres. From the Kalamazoo River Oil spill they learned that the naptha that is added to the heavy unrefined oil is released to the environment early in the spill. The remainder of the oil is heavier than water and drops down in the water table or the river system. Here the heavy oil leaches into the environment creating a permanent leak of toxins in the environment. In this scenario it would be the source of millions of people's water from the Ottawa River. In the Kalamazoo River Oil spill over 20,000 barrels of oil have been spilled into the river and the clean up is expensive and ineffective. This single spill has spent over $1Billion dollars and still the river is contaminated down stream from the site. Estimates are that even after three years of dredging the river less than 1% of the oil has been recovered. If political pressure can be maintained to continue the clean up it could easily cost over $50 Billion dollars as the bottom of the river bed needs to be removed to get at the oil. The clean up from that one spill on that small river could go on for decades. With our larger rivers and downstream populations we have a far larger risk.

3) An a additional multiplier on risk can be added with what was learned about the cause of the leak occurred. The pipe had passed the required pressure tests but a leak developed later due to a fluctuating pressure caused by the cyclical vaporization of the naptha. This type of vaporization could have occurred as a result of contour changes in the pipeline required around the burial of pipe under the river. The result was the persistent fatiguing of a location on the pipe resulting in the fracturing of the line. This would be somewhat similarities to cavitation that occurs in turbines where the metal is torn away. This leaves river crossings to be at higher risk area. External corrosion can be controlled with coatings and cathodic protection. There is no clear method of preventing internal degradation as this cavitation works on the inside of the pipeline.
With over 30 river crossings included in the proposal the potential for a

devastating leak or a number of them is extremely high.

4) The multiplication of the many risk factors along with the size (Ottawa River) and frequency of risk adds up to potentially massive liability for Trans Canada. The science of oil transportation is very different than that of gas transportation.Trans Canada is new to the oil pipe line business putting in its first in 2010. In gas transportation the risks are much smaller with no liquid induced cavitation and little clean up required. With over 3,000 kilometers of line would Trans Canada be in over its head when it come to liability arising from a leak or leaks? In the event of a earth quake, Ontario could already be faced with a $61 billion dollar loss even without a oil catastrophe. There is now compelling evidence that oil leaks will occur and to protect Ontario's people and their water supply, Ontario should require a modest minimum of a $100 Billion up front insurance against environmental damage similar to what we require for mining problems with much smaller environmental foot prints. If the underwriters would not take on that level of risk then Ontario citizens should not be the default insurer of a project that has little to no benefit to the province.

Thanks for now,

Ambrose Raftis

TEAC

RR 1 Charlton, Ontario P0J1B0

705 544 7722

Email Address: timto@parolink.net

http://greentimiskaming.ca/

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April 10, 2014

OEB Energy East Consultation
720 Bathurst St.
Suite 500B
Toronto, ON
M5S 2R4

RE: Conversation Toolkit

A meeting was scheduled on Wednesday, March 26, 2014 with all the membership. A copy of the Consultation Backgrounder and Discussion Guide was distributed to every member present at the meeting.

Following are the notes of our discussion and participants name and emails.

Hope this information will help promote the TransCanada PipeLines proposed Energy East Pipeline.

Yours truly,

Michael Reid
Business Manager
United Association - Local 71

Question 1

What are the impacts (positive and negative) that you see in connection with TransCanada's proposed Energy East Pipeline: In your community? Province-wide?

The economic impact to our members in the construction of the pumping stations during the first phase of the construction and the work opportunities that this project will have in working in the refineries in Montreal, New Brunswick and also the work opportunities that will come working in the oil sands projects in Alberta. And on going economic impact for the maintenance on these new pumping station that will be constructed in the Pembroke, Ottawa, Cornwall region.

Our members are very excited about this project and the important it means to the energy needs of our country.

In overall the membership maintains that safety is their first concern and that the TransCanada proposal is the most safe means of transportation compared to the transportation by trains with all the catastrophic implication that we have seen lately.

The safety testing of the pipeline is not well enough understood by the population.

The only negative impact is that this project was not implemented 10 years ago.

Question 2

What are the impacts that you think the Ontario Energy Board should focus on most closely in its report to Ontario's Minister of Energy?

Not just the revenue and jobs that this will bring to the province of Ontario will also make our country stronger in having its own energy means from coast to coast and will not have to import oil and gas from other countries. This revenue and taxes will help all the provinces to actually grow in there energy needs for the future.

The original version of this completed Conversation Toolkit included three additional pages with 24 names and email addresses of members of the United Association Local Union 71 who participated in a conversation and contributed to the answers provided. The three additional pages with names and email addresses have been removed to ensure anonymity.