

Quebec Must Reject the Proposed Liquefied Natural Gas (LNG) Plant in Saguenay, Quebec

Thereby also avoiding the construction of the Saguenay natural gas pipeline

Submission to the *Bureau d'audiences publiques sur l'environnement* (BAPE), the Quebec environmental review board, in the context of the Quebec government's public consultations on the Saguenay LNG plant

Name of BAPE File: **Projet de construction d'un complexe de liquéfaction de gaz naturel à Saguenay**

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May 20, 2020

The Project

The Énergie Saguenay Project developed by GNL Québec involves the construction of a natural gas liquefaction complex in Saguenay, Quebec. It also involves the construction of a natural gas pipeline across Quebec from Ontario by Gazoduc Inq., and the shipping of natural gas abroad via the Saguenay River.

Quebec as Clean Energy Leader

It would be in the best interest of all Quebecers for Quebec Premier François Legault and his government to say no to the Saguenay LNG mega-project given the many environmental, public health and societal risks the project would entail.

To start with, Quebec is one of the most "clean" jurisdictions in North America, if not the world, in terms of freedom from fossil fuel development, given the almost total absence of oil and gas drilling and

extraction in the province, and Quebec's abundant supply of hydroelectricity, considered a clean, renewable energy.

This puts Quebec in a perfect position to become a leader and model for other countries and regions in the transition to 100% renewable energy, a transition that is essential in view of the major contribution of fossil fuels to the climate crisis and other environmental problems. Quebec is positioned to be a true climate leader. But Quebec can only maintain this position if it rejects this LNG fossil fuel project.

By allowing this project to proceed, Quebec's credibility as a responsible renewable energy leader could be seriously compromised. It would also be contributing to the climate crisis by promoting the expansion of the natural gas industry and the resultant increase in green house gases (GHGs) driving global warming.

Do we want Quebec to become an accomplice to a vast expansion of the fossil fuel industry at a time when we should be doing everything in our power to reduce fossil fuel use, the main cause of climate change and a contributor to other serious environmental and human health issues?

Both Quebec politicians and the general public take great pride in our abundant clean energy and favourable position in the world of clean energy production. Quebec's competitive edge, the related economic benefits and this pride, however, could be lost should this project be allowed to proceed.

Natural Gas Not a Transition Energy

Contrary to the myth perpetuated by the industry, fossil fuel-derived natural gas is not considered by scientists to be a transition energy for replacing oil on the way to 100% renewable energy production and use.

Natural Gas is a Potent Short-Lived Climate Pollutant (SLCP)

Natural gas is primarily methane (CH₄), one of the greenhouse gases known as “**short-lived climate pollutants**” (Climate and Clean Air Coalition-CCAC).

Methane has an atmospheric lifetime of only about 12 years (<https://www.factcheck.org/2018/09/how-potent-is-methane/>).

“Methane is a powerful greenhouse gas with a 100-year global warming potential 25 times that of CO₂. Measured over a 20-year period, methane is 84 times more potent as a greenhouse gas than CO₂.” (UNECE)
(UNECE - <https://www.unece.org/energywelcome/areas-of-work/methane-management/the-challenge.html#:~:text=Methane%20is%20a%20powerful%20greenhouses,are%20due%20to%20human%20activities>).

Methane emissions caused by human activities are one of the most significant drivers of climate change. Methane is also the main precursor of tropospheric ozone, a powerful greenhouse gas and air pollutant (Climate and Clean Air Coalition-CCAC).

Reducing methane emissions has great – and urgently needed – potential to slow global warming in the immediate future (Guy Dauncey, The Climate Challenge).

Reducing the production and emission of short-lived climate pollutants such as methane is essential to control global temperature increases (Climate Summit 2014, Action Area: Industry, UNEP).

Much of the natural gas that would be pumped along the proposed LNG pipeline would come from fracked shale gas and fracked natural gas in general.

By saying no to the construction of the Saguenay LNG plant and pipeline, Quebec will be saying no to the natural gas pumped to the LNG plant from Alberta and elsewhere and no to an industry constituting a major driver of human-induced climate change.

It will be saying no to shale gas and fracking, one of the most destructive industrial processes in the world (See details about fracking and shale gas in the Appendix) and the threat these pose to human health, as well as ecosystems, water, agriculture and food security (as documented in many studies).

It will also be saying no to air pollution from tropospheric ozone (smog) and the cost of such to human health.

Could the construction of the LNG plant and pipeline put the Quebec government in a position where it would be pressured to allow large-scale fracking and shale gas operations in the Saint-Lawrence Valley where the fossil fuel industry wants to drill and operate 20,000 shale gas wells using fracking?

Not only could this dramatically increase Quebec's methane emissions and contribution to the climate crisis, it would also constitute a serious threat to public health, communities, ecosystems, water and agriculture in this area – which would be a travesty after the extraordinary combined efforts by Quebec citizens, community groups, scientists and political and other social leaders starting in 2010 to prevent this from happening.

Other Problems Related to the Saguenay LNG Project

(See Appendix for more details)

Other problems with the Saguenay LNG project are similar to the environmental hazards and problems inherent in the now defunct Energy East Pipeline project.

(See the Appendix of this document for an overview of these similar hazards and problems as detailed in my submission to the BAPE's Energy East pipeline hearings in 2016).

Such problems consist, among other things, of the threat to ecosystems, farmland, waterways, public health and quality of life along the pipeline's

path and in the Saguenay region. These issues can arise during the construction phase and operation phase of the pipeline and LNG plant.

The threat to ecosystems includes shipping of the liquefied natural gas to foreign markets via the Saguenay River ecosystem, not to mention the additional threat to oceans and wasteful pollution from shipping to such distant locations.

Pipelines, for their part, are well-known to leak. This gas pipeline to be built from Ontario across Quebec to the proposed LNG plant in the City of Saguenay on the Saguenay River would most certainly be connected to the TransCanada Pipelines network running from BC to Eastern Canada. The company, which recently changed its name to TC Energy, is the number one natural gas pipeline operator in Canada. Moreover, TC Energy is suspected of being one of the main financial backers of the Saguenay LNG project and closely linked to the smaller companies spear-heading the project (http://nonviolence.ca/index.php/energie-saguenay-gnl-quebec-et-gazodug/?fbclid=IwAR0Ac9BCfSaGUtMq05zWslqrq2EyHhi_7rt_cm-I2vvM7mssw03HybEtI54).

Équiterre, a leading environmental group in Quebec, estimates that TransCanada's (TC Energy) oil and natural gas pipelines experienced 412 leaks and spills from 2004 to 2016 (<https://www.equiterre.org/fiche/le-veritable-bilan-des-deversements-de-transcanada>).

The Appendix of this submission details a number of pipeline spills, including a TransCanada spill, and also looks at TransCanada's questionable pipeline safety record as revealed by a former employee and whistleblower.

Another hazard related to gas pipelines is explosions. A quick search on Google reveals a long list of natural gas pipeline explosions around the world, in the USA and in Canada, including a TransCanada explosion in Northern Alberta (*"CBC News has uncovered a damning report about a TransCanada pipeline explosion that the federal regulator kept buried for years"* -

<https://www.youtube.com/watch?feature=share&v=3A8arxtFdc&app=desktop>).

These explosions and other explosions documented at LNG facilities have caused injury and death as well as extensive material damage. **See the submission to this BAPE consultation by Ellen Nutbrown** for details of some LNG explosions.

I also recommend consulting the submission to this BAPE consultation by the **Regroupement Vigilance Hydrocarbure Québec (RVHQ)**, a broad coalition of voluntary, citizen-based, environmental groups and scientists at the forefront of the promotion of a clean energy transition in Quebec since 2010 and the phasing out of fossil fuel development and use. As always, their submission promises to be highly informative.

You can also view RVHQ representatives present their submission in person before the BAPE on October 27, 7:00 p.m. Go to the BAPE website.

Conclusion

As previously mentioned, reducing methane emission has great potential to help in the fight against climate change. For this reasons, and all the other problems and risks related to this project, **Québec premier François Legault and his government must reject the Saguenay LNG plant and pipeline project and focus on Quebec's clean energy transition** as an environmental and public health priority and the only way to preserve our reputation and place as a climate and clean energy leader.

In Quebec, citizens have long expressed their desire to live in a healthy, sustainable society and be leaders in the renewable energy revolution. It is surely the Quebec government's duty to support these needs and aspirations.

See Appendix next page

Appendix

Quebec Should Say No to the Energy East Pipeline

Submission to the *Bureau d'audiences publiques sur l'environnement (BAPE)*, the Quebec environmental review board, in the context of the Quebec government's public consultations on the proposed Energy East Pipeline.

By Steve Timmins
Resident, Greater Montreal Area

May 2016

Overview

I am writing this submission as a citizen, father and long-time environmental activist committed to a healthy planet and climate for the well-being of my family, community, and all Canadians.

With regard to the project under review, I believe that the Quebec government should say NO to the construction of the Energy East pipeline in Quebec.

While maybe not having direct jurisdiction, the Quebec government does have the ways and means to close the door, and it is only a matter of having the political will to take a stand.

Saying "No" is the ethical and practical thing to do in view of the many public health²¹, environmental and economic hazards a major oil spill from the Energy East pipeline would entail, not to mention the risk of damage and disruption during the construction phase.

It is also the right thing to do because of the fossil fuel operations the pipeline would support that drive climate change and cause a host of other problems for communities and the ecology. The operations in question are the Alberta Tar Sands and the Bakken oil fields in North Dakota - the main sources of the oil to be pumped through this 4,600 km long pipeline.

Rejecting Energy East is not only in the best interest of Quebecers but of all Canadians because the five other provinces the pipeline would cross will face the same public health²¹ and environmental risks. They are Alberta, Saskatchewan, Manitoba, Ontario and New Brunswick.

In this matter, the precautionary principle must take precedence to protect the welfare and livelihoods of our communities.

Dance Around the Dinosaurs

Quebec must not be intimidated by the backlash from the oil industry and its proponents. Moreover, a rejection of the pipeline would likely draw wide support from environmentally aware Canadians everywhere concerned about climate change and a healthy future for their children.

Energy East Pipeline

The Energy East pipeline mega-project would have the capacity to transport 1.1 million barrels of oil a day (175 million litres, or 2,024 litres per second).¹ It would be the longest pipeline in North America, pumping crude oil 4,600 km from Alberta to Saint-John, New Brunswick, through Quebec and five other provinces to tanker ships in Saint-John headed for world markets.^{1,2} It is not clear how much of this oil would or could be refined in Quebec for domestic use, but the amount appears minimal.

The project requires the laying of a new pipeline in Quebec and New Brunswick. Elsewhere, an old natural gas pipeline will be repurposed. In Quebec, the 700 km long pipeline will cross dozens of municipalities and hundreds of waterways including the Saint-Lawrence River.²

Energy East in Quebec – Damage and Risks

There are serious risks associated with the Energy East pipeline project both in the construction phase and the operation phase.

Pipeline Construction Phase

In the construction phase, we are looking at turning part of southern Quebec into a 700-km long industrial worksite. This is a 700-km swath cutting through the heartland of Quebec in the St. Lawrence River Valley and home to 70% to 80% of the population of Quebec, including the metropolitan Montreal area, itself home to almost one half the province's population.

Work crews would dig, bulldoze and clearcut through residential and rural areas, farms, wetlands and forests². How many millions of trees will be decimated? Trees that create a healthier human environment by purifying the air and preventing heat islands, and that help mitigate climate change by sequestering CO₂. And how many wildlife habitats will be fractured or decimated?

Farming and farmers' livelihoods are also at risk and their fields could see extensive damage or be rendered unusable. And how will the construction phase affect tourism and other critical local industries?

Turning a 700-km long portion of southern Quebec into an industrial work zone could leave a heavy footprint in terms of environmental damage, disfigured landscape and loss of quality of life and income. Our river ecosystems could be at serious risk, even before the crude oil starts flowing.

Pipeline Operation Phase – Toxic Oil Spill in Quebec

When in full operation, Energy East would pump up to 1.1 million litres a day of dilbit and other petroleum products through southern Quebec across hundreds of waterways including the Saint-Lawrence and other major rivers.

The risk of major oil spills would be omnipresent. These are risks pipeline proponents have played down. But spills are accidental and accidents are by their very nature unpredictable. Statistics or no statistics, a catastrophic oil spill can happen anytime, anywhere. The many past oil spill disasters are a testament to this reality.

Threat to Drinking Water

The organization Environmental Defence, in collaboration with several partners has published an in-depth report entitled *Energy East: A Risk to Our Drinking Water*.³ The report warns that the drinking water of millions of Canadians would be threatened in the event of an oil spill. It details other risks as well.

Not mincing words, the report states that:

“TransCanada’s proposed Energy East pipeline project threatens the drinking water of more than **five million** Canadians. This alarming finding is the result of a detailed examination of Energy East’s proposed route across Canada.”

“From Manitoba to New Brunswick, nearly 3,000 lakes, rivers, streams and aquifers, which are relied upon by millions of Canadians as sources of clean drinking water, would be at risk of oil spills. Just one pipeline rupture in any one of these vulnerable locations could contaminate drinking water sources for years to come...”

“...Given the amount of oil flowing through such a massive pipe, even a short duration spill has the potential to release large quantities of crude oil into the environment and cause substantial harm.”

“Crude oil spilled into the environment is rarely fully recovered. In most large pipeline ruptures into water, only a percentage of the released oil can be cleaned up. This leaves a lasting legacy of water, soil and sediment pollution that means people and ecosystems are dangerously exposed to toxic hydrocarbon chemicals for decades. Acute or chronic exposure to hydrocarbon pollution can significantly impact ecosystems and human health.”³

Drinking Water Threat in Quebec

According to the report, the Energy East pipeline would threaten the drinking water of over **3 million Quebecers**. The authors looked at nine urban centres in Quebec located along the pipeline route including the Montreal region, Lévis and Sainte-Foy (a borough of Quebec City). For each of these municipalities, it gives details on water intakes and rivers crossed where a pipeline rupture could impact municipal drinking water.³ (*The report is downloadable in English and French from the Environmental Defence website. See Reference 3 of this submission.*)

Metropolitan Montreal Area

The Quebec section of the report provides a more detailed case study for the Montreal region, highlighting the risks, not only for the region's drinking water, but also for its environment and economy. It states that:

“Energy East would cross parts of the greater Montreal area in a number of municipalities, including Mirabel, Sainte-Anne-des-Plaines, Terrebonne, Mascouche, Repentigny, L'Assomption, Saint-Sulpice, Laval and Montreal proper. The pipeline's proposed route would cross three important rivers in the region, Rivière des Outaouais (Ottawa River), Rivière des Mille Îles, and Rivière des Prairies (both are part of the Ottawa River system).”

“Extensive public consultations saw the 82 municipalities in the Communauté Métropolitaine de Montréal (CMM) reject Energy East in January 2016, citing the threat to municipal drinking water as the biggest concern with the project.”

“Their opposition was based on research of spill risks and impacts on water. Spill consequences are directly related to spilled pollutant volume, reaction time and response time. Experts retained by the Communauté Métropolitaine de Montréal modelled the potential timespan for a spill spreading in the greater Montreal area as it would affect water intake points. The analysis showed that not only the City of Montreal, but also South Shore communities and the city of Laval's water intakes would be threatened.”

“If a significant spill were to occur, many drinking water intakes would be affected. According to the most recent route projections, the pipeline would cross the Rivière des Outaouais (Ottawa River), which provides drinking water to tens of thousands of residents of the Montreal region. Rivière des Mille Îles provides drinking water to 90,000 Terrebonne residents and 400,000 other residents in communities north of Montreal.”

“A recent study concluded that the proposed pipeline route north of the Saint Lawrence River would be at high risk from landslides due to unstable river banks in 19 locations. Icy winter conditions on the rivers in the Montreal area would make any clean up even more difficult and costly.”

“There are many other economic and ecological costs associated with the risk of degraded water quality around Montreal in the case of a spill. Tourism as well as commercial traffic on the Saint Lawrence could be affected or interrupted. Agricultural and industrial sectors that rely on water supplied by one of these rivers would be impacted as well. Degraded water quality would have adverse impacts on water and land ecosystems. Likewise, any spill could impact the ecological services provided by the region’s watersheds, such as carbon capture, flood prevention, heat wave mitigation, and pollination support. Together, these economic benefits have been valued at \$4 billion per year. These were some of the risks highlighted by Montreal Mayor Denis Coderre on behalf of all 82 CMM municipalities as he explained the municipalities’ opposition to the Energy East proposal.”³

Oil Spill - Worst Case Scenario for Quebec

During the first part of the BAPE Energy East consultations, TransCanada presented an example of a possible worst case scenario for an oil spill that could occur in Quebec. In the scenario, a rupture of the Energy East pipeline could leak up to 3.6 million litres (22,800 barrels) of crude oil into a Quebec river. If the spill occurred in the Etchemin River, the oil could reach the Saint Lawrence River and water intakes for Lévis and Québec City within 5 hours, threatening the drinking water of these communities.⁴

TransCanada’s Questionable Safety Record

Former TransCanada engineer and whistleblower Evan Vokes has denounced TransCanada’s track record and what he saw as shoddy workmanship and an ongoing lack of concern for quality and safety. In one case, he said substandard welding, which he warned the company about, but was ignored, was the cause of a spill on a TransCanada pipeline.^{5,6} (*For Vokes’s video interview, see Reference 5 of this submission.*)

The following section gives an overview of some major ruptures and spills by various companies including a spill and chronic leaks on TransCanada’s Keystone 1 pipeline. In addition, the above Environmental Defence report reveals more disturbing details on TransCanada pipeline deficiencies.³

TransCanada’s track record and the shocking pipeline failings below do not bode well for pipeline safety in Quebec.

Oil Spills Disasters

TransCanada Keystone Oil Spill, 2016

TransCanada’s Keystone 1 pipeline (not to be confused with the Keystone XL pipeline rejected by the Obama administration) transports tar sands petroleum from Alberta to

refineries in Illinois and Oklahoma. A spill discovered on April 2, 2016 by a local landowner (not the company) leaked 63,000 litres of oil covering a 300 sq. ft. area and requiring the removal of contaminated soil and restoration measures.^{7,8,9,10}

Moreover, according to the Canadian Transportation Safety Board, there were 71 leaks on the Canadian section of the TransCanada Keystone 1 pipeline in the first two years of operation.³ (See the *Environmental Defence report for more details - Reference 3 of this submission*).

Enbridge Kalamazoo Oil Spill, 2010

The 2010 Kalamazoo dilbit petroleum spill is the biggest onland oil spill in U.S. history.¹¹ In 2013, the U.S. National Transportation Safety Board (NTSB) issued a detailed report on the incident and the failings of Enbridge, the pipeline operator.¹²

According to the NTSB, the oil spill on the Enbridge Line 6B pipeline released over 3 million litres, or 843,444 gallons, of crude oil into wetlands in Marshall, Michigan and the nearby Kalamazoo River. The leak went undetected by the Enbridge control centre for 17 hours. Local residents self-evacuated from their houses, the environment was negatively affected and 320 people reported symptoms consistent with crude oil exposure.¹²

The probable cause, said the NTSB, was corrosion, deficient pipeline maintenance, and deficient management and procedures.¹² In other words both mechanical and human error, and what some might call gross negligence.

Three years later in 2013, according to the U.S. Environmental Protection Agency (EPA), much of the oil had still not been recovered, with an estimated 180,000 gallons (nearly 700,000 litres) of submerged oil remaining in the riverbed. Flood conditions contributed to the scope of the disaster.¹³

Noteworthy is the fact that the Enbridge pipeline was transporting diluted bitumen (dilbit) from the Alberta Tar Sands region. Energy East would also transport tar sands dilbit, which is heavier than other crude, can sink in water and mix with sediment in the riverbed making it much harder to fully recover, especially with winter ice or other extreme weather conditions.^{14,3}

Rainbow Pipeline Oil Spill, Alberta, 2011

“A poorly welded and highly stressed section of the Rainbow pipeline owned by Plains Midstream cracked and spewed about 4.5 million litres of oil into low-lying marshland near the northern Alberta aboriginal community of Little Buffalo”.¹⁵

Nexen Oil Spill, Alberta 2015

The recent Nexen oil spill in July 2015 is one of the largest petroleum spill disasters in Canadian history and was bigger than the Kalamazoo spill. A rupture in a pipeline

spewed 5 million litres (31,000 barrels) of bitumen oil, waste water and sand (which the company calls “emulsion”) into a muskeg ecosystem covering over 16,000 sq. metres, the size of two football fields. Nexen’s “fail safe” spill-detection system had failed. The company claims the emulsion did not contain the more carcinogenic dilbit.^{15,16}

Chaudière River Oil Spill, Lac-Mégantic, Quebec, 2013

The “bomb” train that exploded in Lac-Mégantic in 2013 killing 47 people, decimating this “picturesque small town in eastern Quebec and turning its downtown strip and waterfront into an oil-soaked wasteland”, was transporting Bakken oil from North Dakota. After the derailment, in addition to the explosion, an estimated 100,000 litres of oil leaked into the Chaudière River mixing with the sediment. Three years later in 2016, scientists have recorded an “unprecedented” spike in fish deformities in the wake of the spill.¹⁷

Tar Sands Dilbit and Bakken Oil – Hazardous Liquids

The NTSB referred to the dilbit petroleum in the Kalamazoo spill as a “hazardous liquid”, a designation that speaks volumes.¹² Energy East would be pumping huge volumes of such hazardous liquids through Quebec, namely, tar sands diluted bitumen (dilbit) and Bakken oil from North Dakota. This constitutes an additional hazard as both contain toxic chemicals and display other troubling characteristics.

Diluted Bitumen (Dilbit) – Toxic and Tends to Sink in Water

Dilbit is a mixture of bitumen, a heavy tar-like substance extracted from the Alberta Tar Sands that is thinned with lighter chemical dilutants to enable it to flow through pipelines.¹⁴

According to Inside Climate News, which spent months researching the Kalamazoo dilbit spill, diluted bitumen presents at least two serious problems. First, it tends to be heavier than other crude oils, so it can sink more easily and be even more difficult to recover from waterways, especially during winter ice conditions.^{14,3}

Second, the composition of the chemicals contained in dilbit is considered a trade secret, but the mixture often contains benzene, a known carcinogen, making it more toxic to humans and wildlife in the case of exposure. Local residents and cleanup crews directly exposed to dilbit may be especially at risk, and cleanup is more difficult due to the “secret” or proprietary nature of the chemical mixture.¹⁴ This also makes it harder for doctors to diagnose and treat those exposed.

Bakken Oil – Flammable and Toxic

Bakken oil may account for up to 30% of the crude oil transported by the Energy East pipeline.¹⁸ This is the same flammable petroleum that was involved in the Lac-Mégantic

train disaster. Bakken oil has, in fact, two features that can make it more dangerous than regular oil. First, the greater flammability compared to other crudes as confirmed by the US Pipeline Hazardous Material Safety Administration in a safety alert. And second, its toxicity, which like dilbit, can make it even more harmful to humans and wildlife following exposure.^{19,20}

Scott Smith, chief scientist with Water Defense, attributes the presence of volatile organic compounds (VOCs) such as toluene, xylene, benzene and hexane, or in some cases hydrogen sulfide, in Bakken oil as the probable reason for its flammability and toxicity. Bakken oil, says Smith, is “found trapped between layers of shale rock about 2 miles below ground with no surface outcropping that might allow volatile or gaseous compounds to escape. As a consequence, when the oil is extracted it often contains high levels of VOCs or other hazardous compounds.”^{19,20}

If Bakken oil can catch fire and explode when coming into contact with a spark in a “bomb train” derailment, could it not just as easily explode in a pipeline rupture under the same conditions?

Bakken Oil Fields, North Dakota - Ethical Issues

There are important ethical issues concerning the Bakken oil fields in North Dakota. BAPE commissioners and the Quebec government should consider these when deciding whether Quebec should become an Energy East and Bakken partner by allowing this pipeline, given that up to 30% of Energy East crude is expected to come from the Bakken region.¹⁸

In addition to Bakken oil contributing to the “bomb” train phenomenon, several years ago, the Bakken oil fields saw an oil boom, spurred on by the wide-spread use of hydraulic fracturing, or fracking, a highly polluting and destructive industrial method.^{21,22}

Families, communities and farms in the Bakken region are facing all the fracking and fossil fuel nightmares that Quebec citizens and environmentalists fought for years to prevent in our province. These fracking-related problems include massive industrial water use (billions of gallons a year), oil and fracking wastewater spills, illegal dumping of toxic frack fluids, farmland degradation, lower crop yields, drilling and fracking on private land against the will of the landowners, radioactive material released into the environment, air pollution, high volumes of truck traffic, and the disfiguration of the countryside.^{21,22,23,24} Children are especially vulnerable to environmental pollutants associated with oil and gas production.^{21,25}

In the area of climate responsibility, the Bakken oil industry is also failing miserably. Among other things, it flares off huge quantities of the natural gas that comes up with the oil due to insufficient infrastructure to bring natural gas to market.^{23,24,26}

Flaring natural gas produces carbon dioxide, the main greenhouse gas (GHG) causing global warming and destructive climate change. In 2012, flared gas in North Dakota added 4.5 million metric tons of CO₂ to the atmosphere, roughly the equivalent of adding one million cars to U.S. highways. High volumes of flared gas are also linked to air pollution and health problems.^{21,24,25,26}

Alberta Tar Sands – Ethical Issues

Energy East is intended primarily to bring tar sands petroleums to market and enable the expansion of the Alberta Tar Sands. The Tar Sands, or “*Oil Sands*” as industry prefers to call them, are one of the largest industrial operations in the world.

Moreover, the Tar Sands are the “fastest-growing source of greenhouse gas emissions in Canada” notes the Alberta-based Pembina Institute²⁷.

According to the David Suzuki Foundation, the Tar Sands are responsible for one third of Canada’s GHG emission increases since 1990. The Foundation warns that “emissions from the oil sands are projected to triple in the next decade unless leadership is taken. Environment Canada documents show the oil sands will be responsible for 95 per cent of Canada’s growth in industrial greenhouse gas pollution over the next decade if nothing is done to curtail them.”²⁸.

In addition, the Tar Sands are associated with other environmental and health issues, including high cancer rates in first nations communities downriver from Tar Sands operations.²⁹

Climate Change

Climate Change is considered the most serious environmental crisis of our time. The primary source of the carbon dioxide (CO₂) driving climate change is fossil fuels.³⁰

For skeptics and those wanting a better understand of climate change, a good place to start is “The Scientific Guide to Global Warming Skepticism³¹, which debunks denier misinformation and explains the lines of evidence behind the science.

Conclusion

As the above information and examples show, the Energy East pipeline is a high risk venture that would expose Quebecers to a plethora of unnecessary hazards and threats. Moreover, it would make Quebec an oil industry partner and an accomplice to a vast expansion of the fossil fuel industry, at a time when we should be doing everything in our power to reduce fossil fuel use, the main cause of climate change and a contributor to other serious environmental and human health problems. For all these reasons, Energy East is unacceptable.

Saying No to Energy East would not be selfish as some fossil fuel proponents would have us believe. It would not only be good for Quebec, it would be good for all Canadians by helping us break free from our fossil fuel addiction and promoting the transition to renewables.

On the other hand, allowing Energy East would only further entrench Alberta's dependence on fossil fuels and the domination of its government by the oil industry. This over dependence has resulted in thousands of jobs lost and wide-spread suffering among its citizenry, for which the Alberta government has only itself to blame. The best way to help Alberta, in my mind, is to help it diversify into a renewable energy future. This is where federal assistance should be directed.

In Quebec, citizens have long expressed their desire to live in a healthy, sustainable society and be leaders in the renewable energy revolution. It is surely the Quebec government's duty to support these needs and aspirations.

But while often echoing these goals and putting some progressive policies in place, the Quebec government's commitment is often questionable, especially when it seeks to spend millions studying large-scale oil and gas development projects in a province that is virtually free of any major fossil fuel production, and where the main source of energy is renewable hydro-power.

The question of the day is not pipelines vs. trains. The question is fossil fuels vs. clean, energies. And, should the Quebec government decide to greenlight Energy East and the other oil and gas mega projects it is contemplating, the result would likely be prolonged social conflict with its environmentally-minded citizenry.

Starting in 2010, Quebec citizens, opposition politicians and environment groups have spent thousands of hours opposing the shale gas industry and Quebec government support for the industry. The Quebec government has invested huge amounts of time and taxpayers' money on studies and the promotion of the shale gas industry, and is now in the process of examining the proposed Energy East pipeline.

Would it not be better to channel all that time, money and talent to working together on a sustainable future? And would not those millions of dollars the Quebec government wants to spend on more fossil fuel studies be better invested on renewable energy research and development? Such collaboration will only be possible if the Quebec government rejects the Energy East pipeline and all new fossil fuel development in the province.

The renewable energy transition starts now, not ten years from now, and the first order of business is to say, "Thanks, but No Thanks" to Energy East.

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