SHALE GAS
vs.
GREEN ENERGIES and ECOLOGICAL GOVERNANCE

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Développement durable de l'industrie des gaz de schiste au Québec
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Background

The Quebec government has plans to allow the mining and production of shale gas, a heavy industry activity, throughout the Saint-Lawrence Valley of Quebec, a largely rural and agricultural region. It has already granted shale gas drilling licenses, and drilling and extraction of shale gas has begun in a number of locations.

The mandate of the commission looking into shale gas development as appointed by the **Bureau d'audiences publiques sur l'environnement (BAPE)**, Quebec's environmental hearing board, which reports to the Minister of Développement durable, de l'Environnement et des Parcs of Quebec, can be summarized as follows:
To propose a framework for the development of shale gas exploration and production in harmony with the activities of the local populations affected, the environment, the other sectors of activity present in the region concerned, and in a manner that is safe and sustainable. It is also to consult with scientific experts. As part of its work the commission also consults the industry, Quebec government ministries and the general public.

I am a resident of the Richelieu Valley area, one of the areas targeted for shale gas development. Also, I have been involved in the environment movement in various capacities for many years, and I am a strong believer that a healthy natural environment and healthy living environment are absolutely essential to human health and quality of life, and to a healthy economy.

Position

After careful consideration of information presented in phase 1 of the Commission's hearings, and based on information from other reliable sources, my position on this matter is that **shale gas exploration and production as presented in the Government's plan is not sustainable, environmentally sound, or safe, nor is it harmonious with the commercial and other activities, way of life or living environment of the local populations.** And it cannot become sustainable, ecological or harmonious. Therefore, in my view,

proceeding with this project would be extremely detrimental to the environment, to human health and the economy of the region concerned and Quebec as a whole.

Accordingly, I urge the Quebec government to impose an **immediate and permanent moratorium on all shale gas drilling and production operations in Quebec**, and to consider the matter closed following the termination of the BAPE's work.

Rather, the Quebec government should focus on something much more beneficial to all Quebecers and to the entire global community, namely, on developing an authentic form of **ecological governance**, including the development of **clean, renewable energies, a green economy and green jobs.**

Such a direction would be in keeping with the world's most progressive countries and regions, including Germany, Japan, Denmark and California. And by focusing entirely on green energies now, Quebec will be better able to ensure the optimum health and welfare of its citizenry, a much healthier economy, and a better chance of catching up to and staying in pace with other progressive societies.

Why a Moratorium is Necessary

The Earth's natural environment, or biosphere, is our life support system, and human life cannot survive without it. The health of the biosphere, however, has been seriously degraded in the past two centuries by human activity and urgent change is needed to protect it, and to ensure human health and quality of life. As well-known Canadian scientist and environmentalist David Suzuki puts it: "Human beings are not just close to nature, human being are part of nature….and whatever we do to the environment we do to ourselves."

Scientists, environmentalists, progressive politicians, and citizens around the world understand and agree that the planet is already heavily polluted and its eco-systems and resources are overexploited and overburdened, and that we must drastically reduce the amount of man-made pollution we put into the environment, NOT ADD TO IT, and that we must stop overburdening and overexploiting the Earth's eco-systems and resources, NOT ADD AN EVEN GREATER BURDEN.

It is evident through an examination of the facts, including the American shale gas experience and the limited Quebec experience to date, that the proposed shale gas development threatens to add untold amount of pollution to the environment and would impose a huge burden on Quebec's eco-systems. It could also produce bigger economic losses than benefits.

The bottom line is that, this project does not meet the criteria of sound environmental management or sustainability, and is, therefore, not a good fit for Quebec. The project, as proposed, is a Pandora's box of short and long-term negative and potentially devastating environmental and public health consequences.

SHALE GAS PROBLEMS AND HAZARDS

The Threat to the Environment, Water Conservation, and Human Health

The main problems and hazards associated with shale gas drilling and production as experienced in the United Sates (see Appendix) are massive, wide-spread toxic contamination and pollution, exposure of humans to toxic pollution, the threat to public health, including cancers and other crippling and life-threatening illnesses, as well as short and long term damage to flora and fauna eco-systems, the threat to agricultural and food security and the threat of contamination of drinking water and the enormous amount of water use required for shale gas operations, which poses a serious threat to an already overburdened water system in Quebec and Canada.

The Quebec environment ministry's claim that it will have tighter regulations and do a better job of regulating the industry than in the past in Quebec (St-Louis, Quebec) and than other jurisdictions is completely unreasonable.

No regulation in the world is going to make a difference because of the methods used at the very heart of the shale gas drilling production procedures. Chemicals are intentionally put into the ground to protect the drill head and as part of the rock fracturing process.

There are multiple cases of leaks due to human error and mechanic error to allow methane gas and toxic chemicals to leak into ground water, wells, household taps, rivers and streams. And numerous cases of wells and the various drilling and production site facilities spewing and release a host of toxic chemicals into the air, surface water and ground.

As a basic ecological principle, it is environmentally unsound and unacceptable to put toxic chemicals into the ground.

In terms of water use, shale gas drilling and fracking require that millions of gallons of water be taken from rivers and or other sources, in direct violation of the principles of responsible water conservation and management. According to Polis Project on Ecological Governance (see Appendix), surface and ground water are already under intense pressure in Canada due to urban development and climate change and that water over pumping and overdraft can have serious environmental consequences for aquatic ecosystems, the environment overall and society.

Because, under federal law in the United States, gas and oil companies do not have to disclose the chemicals used in their fracking fluids and other materials, there is a veil of secrecy surrounding many or some of the chemicals used.

Moreover, according to Dr. Theo Colborn, Environmental Health Analyst, who studied the health effects of shale gas drilling in Garfield County, Colorado, the pollution and contamination from the operations are impossible to monitor because they don't know what all the chemicals are. Dr. Colborn identified the presence of over 596 chemicals in 900 chemical products, but many of the chemicals still remain unknown.

In terms of the fracturing itself, the long-term effects of causing millions of fractures (cracks) in the rock formations beneath the ground is not known.

Long-Term Social Conflict and Division

Socially, this development would not be harmonious with the way of life, living environment, values, and needs of the people living in the Saint-Lawrence Valley. Involving the industrialization of large parts of this mainly rural and agricultural region, threatens to destroy the natural assets of the region and the living environment that residents know and love, and want to preserve.

This is a extremely socially divisive project that, if it were to proceed, would lead to long term conflict between the government and the shale gas industry on the one hand, and citizens who feel their way of life, their sense of place, their sense of home, and their close connection nature is being destroyed, on the other. It would create serious conflict for municipalities by pitting municipal mayors and councillors either against their residents or against the Quebec government and industry, depending on the direction they take. Local populations were not consulted, and have no control over the project. They feel disrespected, betrayed and victimized. This project threatens to be highly divisive to Quebec society.

Economic Problems

Locally, the proposed shale gas operations, could cause significant harm to other industries, especially tourism and agriculture, and diminish local economies with fewer tax dollars for municipalities, higher poverty levels and less money spend in local businesses, not to mention lower real estate values.

Provincially, shale gas development could result in huge costs and a greater tax burden for Quebecers as a whole. Upon analysis, the financial benefits much tooted by the industry appear to be mostly for the industry with contracts going mostly to outside contractors and outside skill labour. The short term less skilled jobs pale in comparison with the green jobs and government revenue that would be lost. Germany, for example, by focusing on the development of green energy created 250,000 jobs in its renewal energy sector, and has boosted its economy and experienced a boom in renewal energy exports.

The additional cost to Quebecers of paying for the training and salaries of the hundreds of civil servants and inspectors needed to try to monitor and regulate the industry, of training workers in vocational schools in the Quebec public school system, of emergency or long-term decontamination and environmental restoration due to wide-spread toxic contamination and degradation of the environment, when companies refuse to pay or can't afford to pay due to bankruptcy, etc. of the additional burden on the health care system of treating shale gas related illnesses, of the government's legal fees when companies refuse to pay fines or damages, of the closing of abandoned orphan wells, and of hauling in drinking water when local water supplies are contaminated, could range in the millions, if not billions of dollars.

Wasted Time and Energy

The enormous amount of time and energy the Quebec government and huge investment of time and energy on the part of the Quebec government and Quebec civil society will spend fighting over this project and that the Quebec government will invest in this project, would be much better spent focusing on and prioritizing the development of a truly green energy sector, green jobs and a green economy, and all the incalculable benefits of this direction. This project could constitute a huge drain on Quebec society both emotionally and economically.

Diminished Democracy and Civil Rights

Consideration for democratic process and civil rights in the way shale gas operations have started in this area has been hugely inadequate, with no public consultation taking place, especially of local communities, and no proper environmental assessment being carried out prior to the issuing of shale gas drilling licenses.

The highest and best form of democracy occurs when the government makes decision in partnership with the citizens. This has not happened in this case. And here again, citizens feel betrayed and disrespected and have the impression that the Quebec government cares more about the shale gas industry, than it does the fundamental rights and welfare of Quebec citizens, especially those living in the areas targeted for development.

Isn't the **primary role of government** in a democratic country to **protect and promote the safety and well being of its citizens?**

Isn't democracy supposed to be **by** and **for** the people?

What is the legitimacy of the government's allowing this highly questionable activity to come into our region and our lives without asking our opinion and getting our permission?

Food Security Threat

There is also a risk to food security. The shale gas project could pose a major threat to agricultural activities in the Saint-Lawrence Valley and food supply for the Quebec population as a whole, because this is such an important food producing region. Precious agricultural land would be lost. Biodiversity, which supports crop growth and quality, would be threatened. The risk of farmland, crop and livestock contamination, and the public consuming contaminated food is considerable. Moreover, the time spent by municipalities and MRCs (counties) to deal with the shale gas industry is precious time they could be spending developing and reinforcing the agricultural sector, especially organic and sustainable agriculture, which remains quite undeveloped.

Political Fallout

Politically, going ahead with shale gas development could be damaging to Quebec's international reputation as an environmentally progressive jurisdiction, with a corresponding loss of influence and environmental leadership opportunities.

Internally, a majority of Quebecers pride themselves on being ecologically minded and want the government to focus on the development of a truly sustainable society. Promoting this industry could be highly damaging to any political party that does so.

SOLUTIONS

RENEWAL ENERGIES and ECOLOGICAL GOVERANCE

The solution to Quebec's energy needs is to use our society's creativity, talent and innovative spirit in prioritizing and advancing the development of progressive, green renewable energies. Germany is a shining example of what can be done, with 15% of all its energy now coming from renewable sources and the possibility of achieving a 100% renewal energy supply by 2030 if Germany continues along the same path.

By following the examples of Germany, Denmark, California, Japan and other progressive countries and regions of the world, Quebec could make great strides toward the creation of a truly sustainable society, food security, environmental stewardship, a green economy and the development of hundreds of thousands of green jobs.

APPENDIX I

THE AMERCIAN SHALE GAS EXPERIENCE

The documentary film *Gasland* reveals the situation in the U.S. where shale gas mining and production is taking place on a massive scale in numerous states and pending approval in other states. *Gasland* documents real life experiences of residents living close to shale gas wells or in areas where is operations are being carried out. It also interviews many experts who have been studying the impacts of the industry, a whistleblower from the United States Environmental Protection Agency (EPA) and a former EPA employee.

Shot in mostly rural areas all across the U.S., the film shows how large regions of the US comprising farms, ranches, small towns and villages, pristine wilderness and other beautiful natural areas, areas much like the Saint-Lawrence Valley region, have been transformed into to hell on earth for the residents who are being exposed to a range of toxic chemicals and other pollutions, and feel that there way of life has been destroyed.

The film documented multiple cases of the following problems and hazards (based first hand accounts, water lab tests, interviews with experts). These are hazards that Quebecers could face should Quebec's shale gas project be allowed to proceed**:**

- exposure to hydraulic fracturing fluids through contaminated ground water and surface water.
- water contaminated by various hydrocarbons.
- hydraulic fracking fluids found to contain over 596 chemicals, many still unknown
- wells contaminated by methane and the other chemicals
- natural gas exploding out of a well for over 3 days
- flammable tap water that can catch on fire if lit with a match
- hazardous or explosive conditions inside houses due to methane in drinking water
- some residents terrified that their houses might catch on fire or blow up
- acute health problems
- sick or dying animals
- destruction of land
- workers with chemical burns on their hands and faces
- cases of wastewater contaminated with fracking fluids being dumped illegally onto fields and into streams

- In the case of multiple wells on a property, fumes from venting condensation tanks, at times so strong that they surround the house in a cloud of toxic vapour
- contamination of large stretches of rivers
- flammable water in streams that can be set on fire
- odours experienced from one thousand feet away from a well
- residents drinking contaminated water for years because the contaminant was odourless and colourless
- dairy and beef cattle that will eventually go to market, breathing toxic air
- little information about what was in water or air from gas companies or government
- secrecy about chemical used by companies, allowed under loophole in federal environment law**:**
    - non-disclosure by companies of fracturing fluid chemicals is legal
    - non-disclosure agreements when landowners sign contract to allow drilling
    - non-disclosure agreements with residents who receive compensation for damages to prevent them from talking about the contaminants identified in their water, etc., (thereby preventing knowledge sharing in the industry, development of safer practices, and also resulting in potentially tighter government regulation).
- WATER CONSERVATION PROBLEMS: billions of gallons of water required for fracturing
- exponential increase in truck traffic (i.e., in one gas field, as many as 1,000 truck trips for 1 well completion, i.e., initial drilling phase and first fracturing operation).

APPENDIX II

REFERENCES

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