Legislative Briefing Document on Shale Gas

The Commission on Hydrofracking will soon submit its report and the government will make its decision on the future of shale gas in the province. We have to ask: "After 5 years of examining the pros and cons what evidence has accumulated to support each side?"

The Economic Case

The sole argument offered by shale gas supporters has been its alleged economic benefits. If a solid economic case for shale gas ever did exist, it has now evaporated.

It is now common knowledge that to offset the rapid depletion of shale gas wells, producers continuously drilled more wells. With the resulting inevitable oversupply, prices plummeted to historic lows. Low prices forced companies to borrow heavily for new drilling. But prices remained low, which created a classic investment "bubble." As predicted, that bubble is now bursting. The result? Dozens of companies face bankruptcy and massive layoffs.

SWN, the largest gas leaseholder in New Brunswick, was not operating a single drilling rig at the start of 2016 and just laid off nearly half of its employees. Shares in its stock, once in the upper $40/share range, now sell in single digits. Moody's has now classified its bonds as 'junk' status.

Potash Corporation – one of our largest users of gas – left the province. Shares of Corridor Resources, which provided gas for Potash, are valued at thirty-nine cents. This demonstrates on two levels the risks of dependence on extractive commodities.

The record growth and low prices of renewable energy, plus reduced gas demand due to a weak world economy, have cast serious doubts on the viability of exporting LNG – a major part of the shale gas business case - and many projects have been cancelled or postponed.

Price-competitive renewable energy takes a bigger market share every year. In the USA - home of the shale revolution - the majority of 'new' electricity comes from renewables. With the world taking climate change seriously, investment in fossil fuels is decreasing.

These trends show no sign of changing in the near future, leading the Director of Gas Research at the Oxford Institute for Energy Studies, Howard Rogers, to tell *The Financial Times,* "There could not be a worse time to be embarking on challenging gas projects."

After enjoying a 'boom' that lasted less than a decade, communities and governments that hosted shale gas now struggle with the 'bust' of negative consequences: cuts to budgets and services, increased deficits, an aftermath of severe social problems including unemployment, and the expenses associated with a vast number of abandoned wells.

Fortunately, New Brunswick was wise enough not to tie its destiny to this get-rich-quick industry before examining it, or we would now be digging ourselves out of an even larger hole.

The Climate Change Case

While the economic case for shale gas has evaporated, the climate change case against it has strengthened immeasurably.

- 2015 was the hottest global year on record by a large margin.
- Scientists say what we do in the next decade or two will affect conditions on earth for 100,000 years
- The goals of the Paris climate change conference require that two-thirds of all proven fossil fuel reserves must stay in the ground
- People and politicians are finally taking the issue seriously. **Certainly the federal government and Liberal party are talking the talk,** as Canada has joined the United States and Mexico in a trilateral agreement marking the start of discussions on the first North American accord on climate change and clean energy.

The extent of the threat to the climate from the fugitive emissions of methane is evidenced in the increasing numbers of studies finding that methane leaks are much greater, at all stages of gas production and distribution, than previously thought. Methane is 86 times as potent as CO2 (carbon dioxide) as a greenhouse gas over 20 years.

Leaking methane from damaged cement seals on wells remains the Achilles' heel of the gas and oil industry. Despite decades of industry efforts, wells continue to leak at the same rates.

Recently, in California, a cement seal failure at a storage facility well leaked methane for 4 months, equalling the annual greenhouse gas emissions of half a million automobiles, and forcing the evacuation of thousands of people.
As decisions we make today matter enormously, any serious response to climate change means that unproven resources, like New Brunswick's shale gas, cannot be developed, and new fossil fuel infrastructure should not be built.

The Water Contamination Case

In Canada in 2014, the Canadian Council of Academies reported a total lack of scientific monitoring of groundwater at shale gas sites, indicating that there was no scientific basis for regulations. Recently in Fredericton, hydrogeological contamination specialist **Dr. John Cherry, chairperson of the Academies' report, reiterated that there is still no monitoring**, adding that New Brunswick shouldn't experiment with shale gas until that situation changes.

Contrary to mass media headlines, **the US EPA's draft report found cases of water contamination at every site and every category it covered,** and said many more are likely hidden behind court settlement 'gag orders'.

Here is what mass media has not widely reported: The EPA's Science Advisory Board's draft review of the report found that this evidence did not support the conclusion that no 'widespread systemic contamination' was found. It called for the removal of that phrase from the report. The Board also criticized the report's omission of high profile EPA investigations that had found contamination, and the failure to discuss the serious consequences of contamination where it did occur.

The Public Health Case

The EPA noted that **the health effects of 92% of chemicals used in fracking *remain unstudied and untested***, even as public health studies associate a growing number of serious illnesses with the industry, particularly those from airborne pollutants. Health concerns have been the main reasons behind new bans and moratoriums internationally.

Earthquakes

In Canada and the US, **earthquakes associated with shale wells have increased exponentially in number and strength,** occurred in more places, and are linked to both fracking and wastewater injection wells. As injection wells are the most common method of **wastewater disposal, this problem also remains unsolved**.

The Brighter Alternatives

During this same period investment in alternative energy has soared to a new global record in 2015 of $328.9 billion, despite cheap oil and gas. Renewables have proven to be price competitive, and don't suffer the uncertain price changes of commodities like gas.

In Canada in 2014, even before the oil crash, renewables were providing more jobs than the oil sands. In the US, the number of jobs in solar alone exceed those of oil and gas extraction and pipeline construction combined.

Conclusion

We have only discussed the major issues, but one can find little objective evidence that any of the much-discussed problems of shale gas have been resolved. Meanwhile, the facts show clearly that shale gas has a very dubious economic future, as its alleged economic benefits have obviously fallen victim to reality, and it cannot proceed in the face of climate change.

This is the current economic, scientific, and climate change context in which the government must review the Commission's report and make its decision. The citizens of the province and any future investors must have a clear message about where the province is headed.

The only logical and moral conclusion is to ban shale gas and hydrofracturing, or institute a minimum 10-year moratorium with strict criteria and a rigorous process for evaluating its economic, public health and environmental protection (including climate change) status at the end of 10 years.

It is apparent that the citizens in the areas affected by shale gas, including their local governments and First Nations, will accept no less.

And last, but not least, NBASGA would be much happier working with the government to promote and secure a sustainable future in our province, rather than pursuing justice in a court of law.