HYDRAULIC FRACTURING and PUBLIC POLICY

VIEWS from ACROSS CANADA

A Non-Operator Perspective

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Hydraulic Fracturing in Canada

- **HF active**
- **HF banned or suspended**
- **HF issue not clearly addressed**
Environmental Impacts of Shale Gas Extraction in Canada

The Expert Panel on harnessing science and technology to understand the environmental impacts of shale gas extraction

14 experts on the panel, mostly Canadian academics, were charged with the question:

“What is the state of knowledge of potential environmental impacts from the exploration, extraction and development of Canada’s shale gas resources, and what is the state of knowledge of associated mitigation options?”

Their basic answer: There are a lot of issues, there’s not much peer-reviewed science out there, so there’s lots we don’t know.
In 2013, the Nova Scotia NDP government imposed a ban on hydraulic fracturing, and promised a comprehensive review of the practice by an independent panel of experts.

The succeeding Liberal government appointed a 10-person expert panel, chaired by Cape Breton University President David Wheeler.


The process included: In-person and virtual meetings, preliminary reporting with public feedback, systematic decision-making, and public consultation over 8 months.

A 387-page report was submitted to the government in August 2014.
Top Level Recommendations: “A significant period of learning and dialogue is now required … and thus hydraulic fracturing … should not proceed at the present time”

“Independent research is required to model economic, social, environmental and community health impacts for all forms of energy production and use”

“Nova Scotia should design the test of community permission to proceed before … using hydraulic fracturing”

32 Contingent Recommendations followed, built on the assumption that hydraulic fracturing would proceed once the Top Level Recommendations had been addressed
Energy Minister Andrew Younger rejected report recommendations, and announced a “high-volume” hydraulic fracturing ban within a week of submission.

HF remains a political hot potato in Nova Scotia, although the Dept of Energy has released an *Onshore Petroleum Atlas* to highlight unconventional oil and gas potential.
Independent Panel appointed in October 2014 to conduct a public review of socio-economic and environmental implications of hydraulic fracturing in Western Newfoundland

Five-person expert panel, chaired by Memorial Engineering Professor Ray Gosine

**Expertise included:** Hydraulic Fracturing, Water Resource Engineering, Economics, Medical / Health. Other areas were addressed by contributing Subject Matter Experts.

**Two primary deliverables:**

1. Advice to the Minister with respect to Hydraulic Fracturing in Western Newfoundland
2. Respond to information gaps regarding balanced sources of scientific information in the context of Western Newfoundland.
The Panel recommended: “a number of gaps and deficiencies must be addressed before the necessary conditions could exist that would allow for hydraulic fracturing … to proceed reasonably and responsibly” (May, 2016)

The Panel also recommended: “the ‘pause’ in accepting applications involving hydraulic fracturing in Western Newfoundland should remain in effect while some of the supplementary recommendations are implemented”

- Followed by about 45 pages of discussion around a colour-coded list of specific recommendations
Premier Brian Gallant introduced the *Prohibition Against Hydraulic Fracturing Regulation – Oil and Natural Gas Act*, which placed a moratorium on hydraulic fracturing in the province (March 26, 2015).

The New Brunswick Commission on Hydraulic Fracturing was appointed on Mar 24, 2015 and was mandated to study the issue of hydraulic fracturing in New Brunswick to determine whether the following conditions can be met:

- A social license in place;
- Clear and credible information about the impacts of hydraulic fracturing on our health, environment and water, allowing us to develop a country-leading regulatory regime with sufficient enforcement capabilities;
- A plan that mitigates the impacts on our public infrastructure and that addresses issues such as wastewater disposal;
- A process in place to respect our obligations under the duty to consult with First Nations; and,
- A mechanism in place to ensure that benefits are maximized for New Brunswickers, including the development of a proper royalty structure.
3 non-technical Commissioners reported back in Feb 2016

- 9 Findings were listed, related to the original conditions
- **No recommendations**, but a statement that government has five options, ranging from “implement a legislated ban on hydraulic fracturing” to “remove the moratorium with no changes to current regulations”

Jan 2017 – Moratorium indefinitely extended **because the shale gas industry has not met the conditions necessary** to lift the moratorium
Committee consisted of 6 MLA’s, appointed May 2013. Mandate to make recommendations regarding a policy approach to hydraulic fracturing in Yukon that is in the public interest through:

- Gaining a science-based understanding of technical, environmental, economic and regulatory aspects of HF
- Facilitating informed public dialogue on potential risks and benefits
- Gathering input from public, First Nations, and stakeholders

The Committee could not reach consensus to make recommendations on the following matters:

- Whether or not hydraulic fracturing can be done safely,
- Whether or not hydraulic fracturing should be allowed in Yukon,
- Whether or not social license from the Yukon public is necessary before considering hydraulic fracturing in Yukon, and
- Whether or not to proceed with regulatory development of hydraulic fracturing
The Yukon Party government presented its long-awaited policy on hydraulic fracturing in April 2015. It says the controversial practice can go ahead in one area of the territory (Liard Basin), but only with the support and involvement of affected First Nations.

The new Liberal government promised to place an immediate moratorium on fracking in Yukon (Nov 2016)

Northern Cross Limited filed a lawsuit against the Yukon government, saying a moratorium on hydraulic fracturing in the territory has made its claims in the Eagle Plains area essentially useless (2017).
There is strong public concern about the safety and environmental implications of HF in jurisdictions unfamiliar with the oil and gas industry

- Fear of the unfamiliar, general distrust of regulators, misinformation propagated by anti-development advocates

Politicians have called upon panels (some expert, some not) to address concerns

Panels have returned cautious recommendations advising further study and research, which some governments have used to justify bans, moratoria, or simple inaction
Conclusions – A Dose of Reality

Society lives in a state of imperfect knowledge
   We must make assumptions in order to reach decisions
   Risks must be addressed using valid technical / quantitative methods, but we cannot eliminate risk entirely

Peer-reviewed scientific research ultimately improves our knowledge and our processes, but we often need to make decisions before the peer review process has run its course
   Industry develops many processes and makes many findings that are not documented in the literature

Canada’s petroleum-producing provinces have a long history of safe, well-regulated hydraulic fracturing with very few serious incidents
   HF is an industrial process conducted by fallible human beings. Expecting a perfect safety record and zero risk is neither reasonable nor realistic, and society does not expect this from any other industry
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March 2016: Minister of Natural Resources told the Legislature "Fracking is not occurring anywhere in the province of Ontario right now, and it does, should it be requested, require a licence under the Oil, Gas and Salt Resources Act. ...A legislative change would be required before we would consider moving forward with fracking in the province of Ontario."

May 2017: Liberal majority in the provincial legislature passed Bill 127, the Stronger, Healthier Ontario Act. Schedule 23 of Bill 127 amends the Act in a way that could be used to authorize fracking, and the Government did not state that this Schedule does not apply to fracking.

The Environmental Commissioner of Ontario comments, "Upon my review, it appears to me that parts of Schedule 23 are broad enough to be used to authorize fracking, although this may also be possible under the existing Oil, Gas and Salt Resources Act."