



Newfoundland Environmental Industries Association 2016 Newleaf Conference

Enabling Local Innovation



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“Check Against Delivery”

SLIDE 1 – Introductory Slide (Title)

Thank you for inviting me to speak at your conference this year. I've realized I've developed a habit of agreeing to speak at events like this before knowing the topic. So when I saw my presentation title I altered it slightly to add a question mark. So instead of "Enabling Local Innovation", like a statement of fact, it's now C-NLOPB ...Enabling Local Innovation? I'll tell you what we're up to and you can decide if we're enabling local innovation.

But first, a little about me since some of you are probably asking, "Who's this guy?" I'm not to be confused with my brother Steve, the Mayor of CBS. So, if you have snow clearing or garbage collection concerns, call Steve. My position is that of Chair and Chief Executive Officer of the C-NLOPB. I would like to share with you a little of my background up front, some of which touches various elements of the environmental sector.

My first post-MUN job was with the St. John's Harbour Atlantic Coastal Action Program, or ACAP as you may know it. After that, I worked for two years with the Canadian Council of Ministers of the Environment out in Winnipeg.

I then spent 15 years with the federal government in Ottawa with the Departments of Fisheries and Oceans and Health Canada. I left the federal government to work as a Policy and Regulatory Affairs Advisor with the oil industry in Calgary and I am now into my fourth year with the C-NLOPB. I also serve as a Board member for the Marine Environmental Observation, Prediction and Response Network, also known as MEOPAR.

SLIDES 2 - Safety Moment

By way of a Safety Moment, as is common practice in the oil and gas sector, some you may have seen the *Deepwater Horizon* movie by now. This disaster of course illustrated the serious risks that come from working in an inherently hazardous industry. That tragedy is a poignant reminder of the importance of caution, prevention and doing things right even when short term costs are a concern.

Of course the tragedies of the past in our offshore area are well known, as are their lessons learned.

We've also had some very serious near-misses. As the saying goes, "a near miss is actually a near hit".

Governments, regulators and the industry all share the objective of reducing risks to a level that is low as is reasonably practicable, but the ultimate responsibility for doing that offshore rests with the Operators.

The risk in offshore operations is especially acute in our harsh environment.

That's why we are "the way we are" at the C-NLOPB, to the chagrin of operators at times...

SLIDE 3 – Regulator for Canada-NL Offshore Area

I firmly believe based on my experience at the Board and in dealing with other regulators across Canada and around the world over the past three years that the C-NLOPB is a world-class regulator, in all parts of our broad mandate.

We also provide an effective mechanism for arm's length, joint management on behalf of governments. The Atlantic Accord has served the country and the province well over the past 30 years.

We report through the federal and provincial Ministers of Natural Resources and also have a reporting relationship with the Minister of Service NL.

Our regulatory tool kit is effective and it has expanded significantly in the past two years, with an occupational health and safety amendment to the Accord Acts and new powers under the Energy Safety and Security Act and its provincial counterpart.

We work closely with the Nova Scotia Board, the National Energy Board, other government agencies and regulators around the world to improve offshore safety and environmental protection.

We have been described at times as a rubber stamp for industry and by others as their greatest impediment. It depends on who is doing the criticizing. Being a regulator is not a popularity contest, fortunately and our decisions are always made in the public interest.

SLIDE 4 – Our Role

So, the Board's role is to exercise regulatory oversight of Operators' activities.

Operators are required to mitigate risk to “as low as is reasonably practicable”, or ALARP.

Our regulatory tools include legislation, regulations, guidance and operational conditions imposed on specific activities.

Enforcement and compliance tools include notices of non-compliance, orders, revoking of authorizations and prosecution. The *Energy, Safety and Security Act*, and its provincial counterpart, strengthened our enforcement capability with provisions that will also enable us to impose administrative monetary penalties.

SLIDE 5 – Canada-NL Offshore Area

This map notes the areas of activity and interest and provides a visual inventory of licences and Calls for Bids parcels.

Presently, there are

- 29 Exploration Licences;
- 56 Significant Discovery Licences; and
- 11 Production Licences.

Of particular note, much of the interest and action is now beyond the 200 Mile Limit, which brings special, international elements. Our jurisdiction, as per the *Accord Acts*, extends to the outer edge of the continental shelf, the limit of which is subject of Canada's claim under an international process.

431 wells have been spudded since 1966, including 167 exploration wells; and 1.5 billion barrels of oil has been produced from 4 projects – Hibernia, Terra Nova, White Rose and North Amethyst.

SLIDES 6 – Offshore Activities

The Board regulates a broad range of activities and installation types. On the production side, we regulate gravity-based structures like Hibernia and the Hebron Platform, which is approaching completion. Suncor and Husky Energy are producing oil using Floating Production Storage and Offloading Vessels, commonly referred to as FPSOs.

On the exploration side, we regulate seismic activity and electromagnetic surveys. Exploration drilling is done from mobile offshore drilling units, or drill rigs. Occasionally, drilling is performed from drill ships, like the Stenna Caron that drilled a deepwater well for Chevron in the Orphan Basin a few years ago.

On the development side, we regulate subsea expansion, which sometimes requires specialized vessels, equipment and training.

The experience that we have accumulated over the past 30 years, and with good success, has contributed to us being a world-class regulator.

Slide 7 – 2016 Exploration Activity

Although the industry is in a downturn due to low oil prices, exploration activity and interest in our offshore area remains high. There has been a number of seismic data acquisition programs this year producing regional 2D and 3D seismic data.

- 3 of these were in Eastern Newfoundland;
- 1 in Southern Grand Banks; and
- 1 in Offshore Labrador.

Also, Geological Programs were just completed in the Flemish Pass and Labrador.

Slide 8 – Scheduled Land Tenure and Calls for Bids

Our scheduled land tenure system seems to be working from the perspective of seismic activity and the nominations and bids, along with the number of actual and potential new entrants.

The system which was introduced in December 2013, extends the prospect assessment period between the request for nominations and the close of the Call for Bids. Potential bidders now have more time to become familiar with our offshore area and assess the data that is available.

The land tenure system is based on three categories:

- **Low Activity regions**, that have few exploratory wells and limited seismic data acquisition;
- **High Activity regions**, that have elevated exploration activity levels including 2D and 3D seismic data acquisition and exploration drilling; and
- **A Mature region**, which has substantial 2D and 3D seismic data coverage and extensive exploration and delineation drilling and production activities.

The system also works on Time Cycles

- **A Four-year cycle** for the Low Activity category;
- **A Two-year cycle** for High Activity;
- **A One-year cycle** for the Mature category; and
- **A One-year cycle** for lands not publically announced in the scheduled system

The Board has two active Calls for Bids; one in the Eastern Newfoundland Region with 13 parcels available and one in the Jeanne d'Arc Region with 3 parcels available. The closing date for both is November 9, less than a month from now and it's fair to say the eyes of the oil and gas world will be upon us that day.

Slide 9 – Offshore Safety and Environmental Protection are Paramount

Offshore safety and environmental protection are paramount in all Board decisions. The regulatory regime is robust and activity cannot occur without an authorization or approval from the C-NLOPB.

There is a long list of requirements that must be met by Operators, including, but not limited to a Safety Plan, Contingency Plan, Oil Spill Response Plan and Ice Management Plan.

In addition to reviewing and approving those, our oversight activities include:

- audits and inspections;
- reviews of Operators' daily reports, incident reports, complaints and Workplace Committee meeting minutes; and
- Bi-annual Safety Forums combined with meetings with Workplace Committees

The C-NLOPB also has Special Oversight Measures for higher risk drilling programs such as high pressure and high temperature wells, ultra deepwater wells, and harsh environment drilling where there is increased potential for a well control incident.

Slide 10 – Sharing Safety and Environmental Education

The C-NLOPB values its relationships with other regulators. We are active participants in the International Regulators Forum, or IRF, and the International Offshore Petroleum Environment Regulators, or IOPER.

The IRF is a group of 12 regulators of health and safety in the offshore upstream oil and gas industry. It exists to drive forward improvements in health and safety in the sector through collaboration on joint programs and information sharing. In a few days I will be attending the annual meeting of IRF in New Zealand.

We are a founding member of IOPER, which is a collaborative group of 10 regulators from eight countries whose members are dedicated to raising environmental performance standards applicable to the industry's normal operations, as well as environmental emergency prevention, preparedness and response.

The C-NLOPB's Well Operations Engineers have a lead role in liaison within external groups such as the Wells Working Group for the North Sea Offshore Authorities Forum and also with members of the IRF to share best regulatory practices in the area of well operations. Attendance at key well control conferences and exhibitions also provides the opportunity to stay abreast of key technological developments and state-of-the-art well control training, practices and procedures.

Slide 11 – Environmental Assessment

Strategic Environmental Assessment, or SEA, provides an overview of the biophysical and socio-economic environment, including potential environmental sensitivities and is principally conducted in support of the C-NLOPB rights issuance process.

Call for Bids issued in a region will not close for a minimum of 120 days after the completion of an SEA or SEA Update.

We are presently working to prepare for an update of the Labrador SEA in partnership with the Nunatsiavut Government.

The Board conducts project-based environmental assessments under the *Accord Acts*. No activity can take place without a project-specific Environmental Assessment.

Designated Projects under the Canadian Environmental Assessment Act, 2012 are currently led by the Canadian Environmental Assessment Agency.

Slide 12 – Oil Spill Prevention and Response

The C-NLOPB is the lead regulatory agency for oil spill response respecting drilling and production installations on site and a resource agency in all other cases.

Federal and provincial agencies with environmental emergency related responsibilities provide advice.

Operators are responsible for emergency response. The legislation requires Operators to:

- Report all spills to C-NLOPB;
- Have a contingency plan, which includes an oil spill response plan;

- Conduct an annual field countermeasures exercise; Synergy was held just recently.
- Take “all reasonable measures” to respond to and mitigate spill including subsea well intervention and relief well drilling where necessary; and
- Have in place financial instruments for all “actual loss or damage” resulting from spill or debris.

The C-NLOPB’s Chief Conservation Officer has authority to intervene in spill response to the extent of “taking over” from an Operator.

Slide 13 – New External Considerations

In the past year, environmental issues have become a focus of the federal government and this has led to some new considerations for the Board.

In particular, climate change, methane reduction, zero routine flaring, and environmental assessment review.

Slide 14 – Climate Change

The federal government has begun to take action to meet the commitments Canada made in signing the Paris Agreement on Climate Change in April.

The Paris Agreement is binding with global participation. It aims to limit global warming to 2 degrees and countries are to prepare national targets.

For our local industry, Operators are required to address climate change in their project-specific environmental assessments.

SLIDE 15 – Methane Reduction

On March 10, President Obama and Prime Minister Trudeau announced a joint commitment to reduce methane emissions in the oil and gas sector. Canada committed to reduce levels by 40-45% below 2012 levels by 2025.

Methane regulations are expected from the Department of Environment and Climate Change by the end of 2017 with first requirements coming into force in 2018.

As well, the World Bank Group is calling on Canada to endorse an international initiative to end the practice of routine gas flaring at oil production sites by 2030.

It will be incumbent upon industry, regulators and governments to develop strategies to meet methane reduction targets.

SLIDE 16 – Federal Environmental Assessment Review

The Minister of Environment and Climate Change has established an expert panel to review federal environmental assessment processes. The panel was in St. John's this past week and heard from a number of presenters. The panel intends to engage broadly with Indigenous people, key stakeholders, and all Canadians.

The C-NLOPB conducts environmental assessments under the *Atlantic Accord Acts*, as I mentioned earlier, but is not yet a Responsible Authority under CEAA 2012.

The Canadian Environmental Assessment Agency also conducts environmental assessments on offshore activities that are designated projects under CEAA 2012. For example, the agency is presently seeking public input on the environmental assessments for proposed drilling programs by ExxonMobil, Husky Energy and Statoil, each of which is a designated project.

The C-NLOPB has been invited to a meeting with the panel in Ottawa in November. Our EA process is very comprehensive and transparent and offers ample opportunity for public input. So, we are looking forward to the meeting.

SLIDE 17 – Back to the Question

Now that I've said all that, I want to go back to the original question. What role, if any, does the C-NLOPB have in engaging local innovation?

SLIDE 18 – Benefits Plans

Beyond safety, environmental protection, exploration and resource management, our mandate includes regulatory oversight of industrial benefits.

Our role is to oversee operator compliance with the requirements for a Canada-Newfoundland and Labrador **Benefits Plan**.

A Benefits Plan addresses the Operator's statutory obligations for employment, procurement, research and development, and education and training.

Benefits Plans must meet statutory requirements under the Accord Acts including:

- Establishment of an office in the Province with appropriate levels of decision-making;
- A plan for the employment of Canadians, in particular members of the labour force of this Province;
- Provision for manufacturers, consultants, contractors, and service companies in the province, and other parts of Canada, to have full and fair opportunity to participate in the supply of goods and services, with first consideration provided to those within the Province on a competitive basis;
- Expenditures for research and development and education and training are to be made here in the Province; and

- Disadvantaged individuals or groups are to have access to training and employment opportunities and be able to participate in the supply of goods and services.

Of particular interest to this audience, given the question at hand, would be the requirements for expenditures in research and development and education and training.

SLIDE 19 – Research and Development and Education and Training

In 2004, the C-NLOPB issued R&D and E&T Guidelines under the Benefits Plan Guidelines to stimulate expenditure on R&D and E&T locally. The guidelines do not focus on innovation, although innovation is welcomed.

The guidelines establish a process for calculating the Operator's R&D and E&T obligation annually.

Operators are not required to submit applications to the C-NLOPB for approval, but most submit applications for pre-determination of eligibility.

And I'd note that we've initiated an update to our benefits guidelines and are consulting on those proposed revisions.

SLIDE 20 – R&D Eligible Criteria

The criteria for eligibility includes the following:

- Expenditures can be made by Operators, Contractors and Sub-contractors, but must occur in the province;
- They must be primarily oil & gas related, but can include other sectors;

- An expenditure is generally eligible if it meets the definition of Scientific Research and Experimental Development in the *Income Tax Act* - The definition includes basic research, applied research and experimental development. But that isn't the final word;
- R&D initiatives should aim to resolve a scientific or technological uncertainty or make a scientific or technological advancement;
- The C-NLOPB may accept projects that don't qualify under SR&ED. For example
 - Increased R&D capacity in the Province, and
 - Research in non-scientific areas such as socio-economic and environmental
- Other eligible R&D expenditures include:
 - Infrastructure;
 - Equipment & Materials;
 - Salaries & Wages; and
 - Overhead

Slide 21 – E&T Eligibility Criteria

For Education and Training, eligibility includes:

- Establishment and/or enhancement of educational Infrastructure;
- Establishment of E&T Programs;
- Professional training;
- Trades training;
- Technology transfer;
- Support for Chairs, Fellowships and Scholarships; and
- Work Terms for students both in and outside the Province.

Non-Eligible expenditures include:

- Community Investment; and
- Regulatory requirements

Programs may be also be 'partially' eligible.

Since April 2004 when the guidelines came into effect, until March 31, 2015, producing operators have spent \$401 million on Research & Development and Education & Training in the Province. \$74 million was spent about evenly between eligible R&D and E&T during 2015.

In summary, there has been substantial spending by operators with respect to R&D and E&T, and environmental research is one of the areas that is potentially eligible for such expenditures.

So if anyone in today's audience has any ideas about potential areas of research, my advice is to contact local operators for follow-up, since that's our primary regulatory relationship.

If necessary, Board staff in our Benefits Department can provide specific contact names of R&D coordinators within each oil and gas company.

SLIDE 22 – Environmental Studies and Research Fund (ESRF)

A final program that is not a C-NLOPB program, but may be of interest to you is the Environmental Studies and Research Fund (ESRF).

This is a national research program which sponsors environmental and social studies. It is designed to assist in the decision-making process related to oil and gas exploration and development on Canada's frontier lands. First consideration for Newfoundlanders and Labradorians does not apply.

Funding is provided through levies on frontier lands paid by interest holders such as the oil and gas companies.

The ESRF is directed by a joint government/industry/public Management Board comprised of:

- Four Federal Government representatives;
- One representative from each of the two Offshore Boards;
- Four from the petroleum industry;
- One person appointed by the Minister of Natural Resources Canada; and
- Another appointed by the Minister of Indigenous and Northern Affairs Canada

Research Priority Areas include:

- Spill Preparedness and Response, Fate and Effects;
- Regional Effects Assessment and Management;
- Seismic, and
- Oil and Gas Liquids Spill Fate and Effects

Although innovation in individual studies may be welcomed, encouragement of innovation is not a core component of the ESRF.

Slide 23 – To Answer the Question

To sum up, while the C-NLOPB does have a strong role in facilitating local innovation, we don't have an explicit mandate to steer R&D. I'd offer that success in innovation requires collective effort from industry, governments, academia, and all of you. Our enabling role might be best described as recognizing and crediting innovation when we see it and otherwise doing what we can to get out of the way!

Slide 24 – Thank You and Contact Information

Thank you for your attention. If you would like to know more about us, visit our website, follow us on Twitter, or view our videos on YouTube.