

# OPINION PIECE

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## Big Changes in the AER that Everyone in the Petroleum Industry Should be Watching

### Introduction

For most engineers and geologists, dealing with the Alberta Energy Regulator (AER), formerly the Energy Resources Conservation Board (ERCB), is a significant component of one's working life. For the most part, this involves preparing applications of various types for everything from well licences to enhanced recovery.

In the past, if you were clever, you would obtain a copy of the Oil and Gas Conservation Act and Regulations and put them in a binder. The Act was broken down into various sections, such as drilling, production and enhanced recovery. There were also some very interesting sections that dealt with allowing smaller operators to effectively compete with large companies and to avoid duplication (or economic waste); including sections regarding common purchaser, common carrier and common processor. Although not obvious to most Canadians, the oil industry was a very technical business. The breadth of issues that were covered in this binder on my bookshelf was a very sophisticated and high quality system of regulation. It was widely regarded as one of the best systems in the world.

Very briefly, the Oil and Gas Conservation Act dealt with the following fundamental issues:

- Conservation of a scarce resource (prevention of waste);
- Safety;
- Providing an equitable development environment; and
- the Environment.

The Oil and Gas Conservation Act was administered by a stand-alone government organization: the Energy Resources Conservation Board. Most people referred to the organization as simply, "the Board." The ERCB attracted a team that was very strong technically. For instance, George Govier, who was Chairman of the ERCB for some time, was an academic at U of A who was an expert in multiphase flow in pipelines and had written a very comprehensive textbook (which I still have a copy of). The

ERCB literally "wrote the book" on testing gas wells and the authors subsequently went on to write some very successful software for analyzing pressure transient tests. As a junior engineer, when attending courses, we'd trade notes on our respective regulators. The Canadians all agreed that the ERCB staff were very knowledgeable and had definite technical requirements that were quickly spelled out. Most of the people that I had contact with over the years at the ERCB were long-term employees. It was clear that the ERCB was a good place to work.

The oil industry has some unique characteristics. Drilling wells is very expensive and involves specialized equipment in the field. Since the equipment is expensive, the work physically demanding and potentially dangerous, the business developed a culture that is "rough and ready" and very sensitive to timing: delays are extremely costly. Services in the industry run 24 hours a day, 7 days a week with only one break a year from Christmas to New Year's day. The regulatory environment was adapted to these economic realities. Response from the government on field operations, such as well abandonments, were done in the field in a quick time frame by experienced inspectors. A well license could be obtained in a week. The ERCB was jointly funded and operated by both the Government of Alberta and industry. It was widely recognized that economic efficiency and clear guidelines were in both the government's and the industry's best interests.

At the core of the ERCB as an organization was a group of individuals that, in corporate terms, might be viewed as the Board of Directors. More accurately, this group of individuals were responsible to the government for approving licenses, conducting hearings and providing advice to government ministries and the Alberta Cabinet. The majority of the Board members were senior civil servants with engineering and geological backgrounds, as well as some regulatory lawyers. Historically, the government of Alberta recognized that administering the industry required very specialized knowledge and this was best left to those that had developed this expertise.

## Fast Forward

Change is, of course, inevitable and the industry has indeed changed considerably from when the Oil and Gas Conservation Act was first written. Probably the largest change is the industry has changed from the most growth occurring in the conventional oil and gas industry to major developments in the Steam Assisted Gravity Drainage (SAGD) area, Oil Sands mining area and to the area dealing with “Unconventional Resources” which require massive hydraulic fracture programs. The scale of expenditures has increased dramatically and the complexity of the business has leaped forward by orders of magnitude.

In my view, most Canadians are accustomed to a government that relies heavily on the civil service for a great deal of scientific analysis in the generation of policy. If you travel to our larger neighbour to the south and listen to the TV or watch the radio, I'm always surprised how much debate there is on very local issues. It might be something as simple as a school board change. To Canadians, this is a bit foreign. Schools are run according to provincial regulations and, although the boards are run by municipalities, all the teachers are licensed by the Province. One is pretty much the same as the other and we don't spend a lot of time worrying about this. For our neighbours south of the 49<sup>th</sup> parallel, quality education is not a given.

About a year ago, the AER announced a moratorium on shallow SAGD projects. This is an unusual move for the provincial government. Historically, the government has been on the forefront of technical issues in the industry. They have decided they need to study the issue in more depth.

Indeed, there have been some failures that are somewhat out of the norm. The ones that stand out are Joslyn, where steam reached surface, and Primrose where bitumen came to surface. The Joslyn problem was new; it had not occurred in the past. However, the failure attracted very little attention from the press and the operating company issued a short press release on the event, with little effect on their company.

The other failure was the bitumen to surface at Primrose. This has attracted extensive national news coverage. The failure at Primrose is a CSS project and the potential for this type of failure has been studied extensively in the past. It was different in that bitumen and not steam came to surface.

These are not the first times there have been failures. Blow-outs occur when wells are drilled at a very low rates of frequency and there have been some thermal well failures in the past related to cyclic steam projects. These issues have resulted in continuous regulatory improvements.

Recently, I've talked to a couple of individuals with the AER at technical conferences who were quite reluctant to talk about technical issues and it was clear that their roles were changing rapidly in the organization. This seemed completely out of character for an organization that previously was very strong technically, and normally very stable with a long-term operating staff. I figured I'd better do a bit of digging and find out what was going on.

## I Couldn't Believe the Changes

It started with the AER website. The Province of Alberta has replaced the Energy Resources Conservation Act and replaced it with the Responsible Energy Development Act (REDA). A few of the changes are immediately evident from the AER website. Perhaps most surprising is I do not recall extensive discussion in the media. The AER is now a stand-alone corporation that has a Board of Directors.

## The Board of Directors for the AER

The content of the Board of Directors would surprise most petroleum professionals. Names of the individuals are not listed in the following, however they can be easily obtained from the AER's website. I have summarized their experience from the website description with a view to understanding how the regulations and government policy has changed.

1. The chair has more than 35 years' experience in the energy industry, including 15 years as an executive officer of En-Cana Corporation and one of its predecessor companies PanCanadian. This appointment drew some heated criticism from the opposition in the Legislative Assembly in Edmonton. Clearly this individual has a lot of experience within the industry and is capable. From the public perspective it may look a little like the fox was put in charge of the hen house. To be fair, a responsible executive recognizes that good regulation is good for the industry. However, the government did have the option of appointing a career energy regulator from one of the ministries or the predecessor organization (ERCB).
2. Board Director #2 was born in Edmonton, resides in Calgary with his wife, who is from a third-generation farming family in Alberta. A more detailed description reveals that he is a management consultant that worked with a major international consulting firm on corporate strategy.
3. Board Director #3 is a veterinarian whose career has moved from veterinary practice to executive management and consulting. He is a widely respected expert on the meat and livestock industry with particular interests in how the industry uses land and water. He is a sales manager for Alta Genetics Inc. He is an official judge for Holstein Canada.
4. Board Director #4 held a series of technical, management and executive roles in Canada's energy industry over 25 years. In 1999, he returned to the U of A to hold the Poole Chair in Management for Engineers. In this role, he reactivated the engineering management graduate program in the Faculty of Engineering, revamped the faculty's undergraduate financial education program, and conducted an extensive research program focused on the economics of renewable energy and deregulated power price patterns. He teaches a short course on understanding financial statements aimed at managers and executives.
5. Board Director #5 is president and CEO of a not-for-profit organization dedicated to assisting Alberta's youth in career awareness. Previously, he worked in the forest industry for more than 25 years throughout both B.C. and Alberta. He was also an instructor at the Northern Alberta Institute of Technology (NAIT) and University of Alberta forestry schools.
6. Board Director #6 has 35 years of experience in the oil, gas, pipeline, and petrochemical sectors. She has worked for NOVA, Petro-Canada, Pan-Arctic Oil and Amoco. Her most recent experience was a senior VP responsible for human resources, investor relations, public relations and government affairs.
7. Board Director #7 worked at the executive level of all three levels of government, including as deputy minister with the Government of Canada and the Province of British Columbia. She worked as Consul General in a major U.S. city.

The Board of Directors for the AER could not be more different than that of the Energy Resources Conservation Board. It looks more typical of a public corporation than a regulator agency.

The AER, as laid out in REDA, is actually a corporation. The mandate, as set out in REDA, is to regulate the various energy acts of the Province of Alberta. Paradoxically, REDA states specifically that the corporation is not an agent of the Crown. There is one glaring change in the mandate from that of the ERCB; the mandate no longer includes conservation.

Most of us will recall that one of the cornerstones of the Oil and Gas Conservation Act was that the Province wanted to ensure that recovery was maximized. The development of the Turner Valley Field was a key issue in this. In my opinion, the Turner Valley field was actually a rich gas condensate field (yes, with a 42 degree API condensate) which would have had a much higher recovery had this been recognized at the start. There are a lot of anecdotal accounts of huge gas flares south of Calgary that lit up the sky all the way to Calgary. The need for conservation originated with the bizarrely named Texas Railroad Commission (think Texas Oil and Gas Conservation Commission). Indeed, improper field development, such as depleting a gas cap first on oil reservoirs with a gas cap, substantially reduces economic recovery for both operators and the Province of Alberta. Similarly, there has been a long series of gas over bitumen hearings where depletion of overlying gas was determined to be detrimental to the future recovery of a vastly more valuable bitumen resource. Apparently, conservation is no longer a priority.

REDA changes a number of other key things. They include:

1. The government, through the energy minister, now exerts considerable control over the AER. Historically, the ERCB was responsible for the “safe, orderly and fair development, etc.” on an arms-length basis. It was assumed beforehand that the Province of Alberta wanted the oil and gas resources of the Province to be developed and that the best people to administer this were technical experts.
2. The essential mandate historically for determining the approval of projects was “the public interest.” The ERCB had to determine the benefit of the project in broad terms that would include economic, social, the environment and safety terms. REDA has been constructed to give the government freedom to vary the terms that would be considered in a hearing, in addition to the ministerial oversight of the regulator.
3. Time limits are introduced through regulations that allow the government to set how much time will be allowed for consideration.
4. Standing in a hearing has long been an issue and has been the subject of debate, particularly with regard to who gets standing. The existing test has been “directly and adversely affected.” Historically, the ERCB had been inclined towards inclusion for the most part, although long-term cumulative environmental effects have been one area that frustrated environmentalists. REDA limits these rights and allows the AER, through regulations, to determine that a hearing is not required. This differs from the legal rights that the ERCB was formerly required to meet from a legal perspective.
5. The conditions for appeal have been considerably narrowed and oversight of the AER’s decisions seems to be considerably reduced. Although this has been relatively uncommon in the past, other changes in REDA may make this a substantive issue.

## Commissioners

Historically, hearings were heard by a subset of the members of the Board of ERCB. Under REDA, hearings are heard

by Commissioners. It’s time to introduce the background of the commissioners:

1. The Chief Hearing Commissioner served as a board member of the ERCB. He is a professional geologist and member of APEGA. He holds a B.Sc. in Earth Sciences and a Masters in Management Sciences. Prior to joining the ERCB, he was a consultant and worked for Anderson Exploration on environmental, community and regulatory affairs. He also worked as an exploration/development geologist with Home Oil.
2. Hearing Commissioner #2 was vice-chair of the ERCB. He served previously on the Public Utilities Board of Alberta (PUB) and served on numerous board panels dealing with utility and energy-related hearings. He practiced corporate and commercial law in Calgary prior to working for the various boards.
3. Hearing Commissioner #3 is a regulatory, environmental and energy lawyer, also trained as an engineer. She spent her early career as a geophysicist working with energy companies before moving to the legal profession. She worked with Enbridge as a senior regulatory counsel and has appeared before the ERCB, NEB and FERC (U.S.).
4. Hearing Commissioner #4 is a past board member with the Environmental Appeal Board. She previously worked with the ERCB on a variety of regulatory issues. She spent a decade working for an NGO aimed at coordinating air quality policy. She spent her early career working with the Government of Alberta as a senior intergovernmental officer.
5. Hearing Commissioner #5 served as a board member for the ERCB. He holds a Masters of Environmental Design and a Bachelor of Arts degree in Psychology. He served as a commissioner and chairman of the British Columbia Oil and Gas Commission. He has held senior positions with Calpine, CAPP, Shell and Gulf Canada Resources.
6. Hearing Commissioner #6 (part-time) is a chartered mediator. She is currently chair of the Banff Development Appeal Board and has experience as a board member with the Alberta Municipal Government Board and the Federal Farm Debt Review Board, and has served as a mediator for Alberta Municipal Affairs, the ERCB, the Court of Queen’s Bench and the Calgary Police Service.
7. Hearing Commissioner #7 (part-time) was a board member of the ERCB. He is a fifth-generation farmer in Lacombe County. He has served as a county reeve of the county. He was an elected municipal official for several years and has directed and chaired numerous commissions, review boards and public hearings.
8. Hearing Commissioner #8 (part-time) previously had a position as Vice President of Government Relations for Suncor. She was seconded to the Government of Alberta as Assistant Deputy Minister for Oil Sands Sustainable Development Secretariat with the Treasury Board to develop a long-term strategic plan for oil sands development.
9. Hearing Commissioner #9 (part-time) owns and operates a farm and a ranch in southern Alberta. He has a master’s degree in public administration and a B.A. in recreation administration. He spent more than 21 years with the Government of Yukon in various capacities. He was appointed as the acting president of the Yukon Energy Corp., owned by the Government of Yukon, and as the deputy minister of several departments.



10. Hearing Commissioner #10 (part-time) is a founder and director of Peak Swine Genetics. He has been farming since 1970. He owns and runs a 3000-acre farm and is involved with the Alberta Livestock and Meat Agency, the Alberta Products Marketing Council, the International Meat Secretariat, Lac Ste.-Anne Woodlands Surface Rights Group, as well as the boards of the Alberta Swine Breeders Association, Canada Pork International, the Canadian Agrifood Trade Alliance, the Canadian Federation of Agriculture, and the Institute for Agriculture, Forestry and Environment.
11. Hearing Commissioner #11 is a lawyer specializing in aboriginal, intergovernmental and trade law. He provided consulting services on aboriginal issues focusing on resolving questions of aboriginal, government and resource development issues. He worked as a land agent, acquiring surface and mineral rights throughout western Canada. With Alberta Justice, he provided legal advice to government on Metis issues, as well as general and specific aboriginal and treaty rights issues. His clients have included tribal councils, First Nations communities and industry.

## Implications of Hearing Commissioners

I spent a number of years of my life preparing for and appearing in the Chard-Leismer Gas Over Bitumen hearing. The hearing was heard by J.D. Dilay, P.Eng., C.A. Langlo, P.Geol and W.J. Schnitzler, P.Eng.: all are APEGA members. I have also appeared in Alberta Court of Queen's Bench as a reservoir engineer expert. There are actually considerable differences between appearing before the ERCB and the Courts. From a legal perspective, there are a lot more rules of evidence associated with the Courts. However, the really big difference is the amount of work that is required to explain technical reservoir engineering to a judge, compared to a seasoned ERCB board member. Considerably more preparation is required for a Court.

The question that I now have is, how could the Chard-Leismer hearing or a sour gas hearing be conducted with the Commissioners outlined above? Clearly some of them have ERCB experience; however, the majority that have ERCB experience are lawyers. To be accepted as an expert witness before the Courts requires considerably more qualifications than appearing before government tribunals. Direct technical experience is required and there is usually a requirement that expertise be well demonstrated (such as publications). There are specific requirements of an expert witness appearing before the Courts. They have a duty to the Court that does not apply to experts in tribunals. When an individual appears before a government tribunal it is generally assumed that the panel members are technical experts and that they are able to assess the validity of the material presented.

It is very clear that a number of those appointed to be hearing commissioners have no technical expertise in oil and gas at all. The implication of this is that vastly more preparation will be required. This would dramatically have changed the conduct of the Chard-Leismer hearing and could very likely have affected the results. Recall that REDA has removed the conservation mandate (i.e. gas over bitumen) that the ERCB had, although it is still contained in the oil and gas conservation act.

## Sour Gas: A Significant Rural Issue

Sour gas development has been a very contentious issue. It is my belief that this is one of the areas where dissatisfaction with

the regulatory process in Alberta has not been resolved. It is particularly unpopular with those who are near the plants, which are mostly located in rural settings.

While the safety history for sour gas has been very good in the Province and the probabilities are much lower than getting hit by lightning or winning the lottery, I don't think anyone really wants a sour gas plant near their house. From the Province of Alberta's perspective, the risk v. return has historically favoured sour gas development with stringent regulation. Clarification from land owners is usually along the lines of "basically I'm potentially expendable for the benefit of the Province's coffers?" PR specialists discourage expressing this view. None-the-less, people play golf on hot afternoons, drive their cars on the Province's highways, buy lottery tickets and worry about airline crashes. A significant incident would be very damaging for both the government and the operating company. Sour gas will never be popular.

The ERCB required consultation with stakeholders, which is quite logical. Legally speaking, their mandate governs safety. In practice, the Board has not appreciated stakeholders attempting to intrude on their mandate. As a consequence, some operators simply directed safety issues from stakeholders to the ERCB. This generally frustrates residents. My experience indicates that safety is by far the resident's biggest concern.

This is one area where corporate senior management greatly prefers to have public relations professionals speak in soothing tones and general terms so as not to alarm the residents. In my experience, this is entirely the wrong approach. Almost any resident can smell a sales job and react to this very poorly (often using analogies related to cattle). It is also very obvious that PR types do not know the nuts and bolts details. Based on direct experience, I have found residents would listen intently to the actual facilities design engineers with pens and pencils in their shirt pockets. Undoubtedly, the residents would not pass a test on the specific details of the licensing process. This includes the offset distances from dwellings, design of emergency shut-down systems and hydrostatic testing requirements, maintenance requirements and all of the applications that have to be obtained before anything actually got built. Most residents were surprised at the extent of what was required and were under the general impression that companies were free to do what they want. They actually liked talking to the engineers that were really going to do the work. It would seem that their own safety is of great interest as, under most circumstances, engineering discussions are normally considered socially inappropriate since they are very mundane (boring). The ERCB viewed this explanation as stakeholder consultation and an expense that should be borne by "proponents." This is one area, in the author's opinion, that the ERCB could and should have been prescriptive. In essence, "thou shalt explain to residents the licensing process for plants, pipelines and wells."

It is convenient for the Government of Alberta to say that the proponents of all the projects should do the explaining. However it is not industry's job to govern. That falls to the Provincial Government and I submit that both the lives of the regulators and the politicians would have been much easier had resources been directed to a detailed explanation of the regulatory requirements for all development. This would have been perceived as a more knowledgeable and authoritative source than from "proponents." They are, after all, trying to sell the project.

Presenting the entire regulatory structure in each and every hearing is expensive. Independent industry and government presentation / consultation would likely be significantly better. It is the author's belief that this issue is quietly still burning in the hearts of those in rural Alberta (read farmers and ranchers). Industry can't understand it due to the vast scope of regulation on

a daily basis. The system works so well the public perceives that nothing is happening. In the author's opinion, communication is required and is the source of significant dissatisfaction with the energy regulator.

## Technical Complexity Increasing

The presentations that I made to the ERCB for the Chard-Leismer Gas Over Bitumen hearing included a considerable amount of geomechanics. This was contentious at the time. Although the AER has recognized all of the issues that were presented in their recent reservoir containment series, it is clear that there has been a great variety of different approaches that have been submitted in applications relating to caprock integrity (reservoir containment). This area has not been a traditional part of petroleum programs and is an area where the industry is actively learning. Geomechanics also plays a major role in the massive hydraulic fracturing programs that are part of the unconventional resource business. This has resulted in some seismic activity associated with the treatments. Most of this has to do with a thorough understanding of tectonic stress regimes in B.C. and Alberta.

In my opinion, the technical issues have become more difficult, not less difficult. The requirement for expert technical review has increased, not decreased. Of course, the commissioners will have the support of AER technical staff. However, the weighing of evidence will be different for that with which they are directly familiar than that of their "underlings." Perhaps the many agricultural boards will be actively seeking oil and gas professionals to serve on their board during this time of price upheaval.

## Political Changes

The changes from REDA clearly indicate the government was no longer happy to have technical experts administer the oil and gas business. The underlying current of the changes is to replace the arms-length organization with both people and a structure that are directly controlled by the Premier and the Provincial Cabinet. Energy projects which were once decided on in the "public interest" are now highly political decisions. The Province has installed many levers to achieve these objectives.

The provincial progressive conservative party's support came mainly from business and rural farming interests and the choice of both the Board of Directors and Commissioners would seem to reflect this base of support. Of course, the government that constructed REDA has been replaced in no uncertain terms. The new government has signaled they are interested in reviewing these matters.

Alberta has an Administrative Procedures and Jurisdiction Act which establishes procedural obligations of designated administrative tribunals. The APJA does not list the AER. Indeed, REDA eclipses some of the rights that are available through the APJA. REDA places the AER as a corporation that answers to the government, enforces Provincial Acts, and yet is not an agent of the Crown. It's all very cute. However, I don't think the judiciary will be amused and may declare it a legal abomination. It may only be a matter of time before some First Nation group takes perverse delight in correcting this matter at the Supreme Court of Canada. It will take a lot of time, extensive delay and be very expensive.

## Federal Changes

The federal government has made a number of changes through the Canadian Environmental Assessment Act of 2012. For the most part, these changes have been aimed at significantly reducing the amount of environmental oversight. The Feds have also made changes to the National Energy Board Act. The REDA changes actually mirror what the federal government has already done. For those of you that are interested, the Alberta Legal Review has a paper by Harrison, Olthafer and Slipp entitled, "Federal and Alberta Energy Project Regulation Reform – At What Cost Efficiency?"

## Social License

The mining industry introduced the concept of "social license to operate" in 1997. This is not a new concept. It was introduced by Placer Dome in 1997 at a World Bank meeting. The essence of the concept is that the support of communities affected by resource extraction could only be obtained and maintained if companies demonstrated transparency, responsibility and entered into an open dialogue with stakeholders. The concept is openly discussed in regulatory conferences and while it is somewhat intangible, it explains a great deal of political realities. Social license requires:

- Society's confidence in the company to behave ethically,
- Requires compliance with laws, but extends beyond strict legal requirements,
- Is often project or location specific, and
- Has to be earned and maintained.

Although apparently intangible, the political effects can be very real. I will expand on this later in the article. More information can be found in the mining and legal literature, and there are even websites on this.

## Expediting Approval and One Stop Shopping

In a nutshell, both industry and government have indicated they want to speed up the application process for major projects and reduce the number of agencies that must be dealt with. There is no doubt that project approval has become a lot more complex and this is very expensive. Such a situation does sound great on first blush. A few cautions might be in order.

1. The industry knows from the Piper Alpha disaster in the North Sea that very bad things can happen if regulations aren't properly constructed and enforced. In the case at hand, the DOE in the UK was responsible for promoting development and maintaining safety. After this disaster, the UK government split the safety mandate and the development mandate. Safety is not a luxury to be weighed off against development economics. An internal decision by a government agency to weigh development over safety requirements will eventually result in a political disaster that is bad for both industry and government. The Mocando blowout, in the Gulf of Mexico, likely has the same lesson. Federal oversight was widely considered in the press to be too cozy with industry. The matter was pursued in the U.S. Courts with criminal findings.
2. The federal government has sped up the approval process for the Northern Gateway Pipeline. The Conservatives are seen as an active proponent of the project and have tried to "fast track" the project. The "fast track" has potentially

trampled on constitutional (First Nations) and administrative law principles and it may take a very long time to correct the “fast track” process. It may be that considerable portions of the approval process will have to be redone. In this context, social license may express itself as a legal reality.

3. New federal legislation has reduced environmental oversight by the federal government. Clumsy muzzling of government scientists has robbed the industry of a credible external review. The political handlers of the scientists regurgitating preset government speaking points seems to profoundly alienate journalists. There are unconfirmed rumours of a well-known Australian political strategist suggesting the use of Budgerigars (tropical Australian bird) with the handlers. Polling research shows Canadians are much more familiar with South American parrot and have adopted this change for the Canadian public. Parrots are a significantly larger, more colourful, entertaining and knowledgeable alternative. The company that does the Telus ads is thought to be assisting. No actual parrots would be hurt using computer animations.
4. From the standpoint of a person preparing applications, government scientists are generally rational, have research papers and a sound knowledge of chemistry, biology and international standards to talk about. Discussions with scientists are normally to the point and understandable. Regrettably, such expertise takes time to develop: the systems that were in place cannot be replaced anywhere near as quickly as they were dismantled. I believe government scientists are much easier to deal with than environmental demonstrators.

There are a number of observers that are of the opinion that the Northern Gateway, one of the major potential engines of Canada's future economic growth, appears to be very unlikely to proceed. Several serious violations of the social license to operate appear to have occurred. Environmentalist presentations state that the maritime portion of the application presented by Enbridge to the NEB was perceived to be misleading. First Nations groups have openly challenged the consultation support figures from Enbridge. This has led to a series of constitutional challenges by the First Nations as a group. One may presume that stakeholder consultation was not entirely amicable. The Province of B.C. seems equally unhappy with their publically listed requirements. Opposition parties state they believe that principles of natural justice have been violated in accelerating approval. While some, such as the NDP leader, have a definite political agenda, it would be fair to point out he was a former provincial environmental minister and he is a lawyer. His points were specific. Although some have suggested that an important national asset has been hung up by a very small group of people, the large number of conditions (209) imposed by the NEB is a clear indication that some criticism of the project was justified.

It is clear that a significant portion of opposition to the pipeline is predicated on greenhouse gas emissions. The Europeans have finally recognized that the oil sands are not significantly different than conventional production. Holding the Northern Gateway pipeline responsible for greenhouse gas is clearly misplaced from a technical perspective. This is a debate that belongs squarely at a national and international level. However, the environmentalists have correctly recognized that the Northern Gateway project is an area where considerable pressure can be brought to bear on the Federal Government. The Canadian Government's recent record on greenhouse gas emissions is seen by most environmental groups as inadequate. The legitimacy of the government is compromised to a large segment of Canadians with environmental

concerns. It would appear that elements of the social license are perceived to be contravened and apply, to some degree, to government as well.

## The World Gone Mad

We now find ourselves in the bizarre world of shipping huge volumes of oil by rail instead of pipelines. From a technical engineering perspective, the world has gone mad. Those in Lac Mégantic do not see this as remotely funny. People in Toronto are incensed that the oil in an underground pipeline is going from right to left instead of left to right in a buried pipeline they can't even see (or vice versa depending on where you stand). The U.S. doesn't want additional capacity for oil from Canada despite congressional and state department approval. (Perhaps explaining Obama's normalization of relations with Cuba – Venezuela is next and Obama's real objective is Venezuelan oil?)

## Energy Leadership

The premiers recently got together and announced that resource development was good, provided it was environmentally responsible. Obe Wan Simpson's response was rumoured to be a terse: “duh.” Homer's comic relief aside, there is a silver lining in this development. The provincial leaders have expressed a national policy consensus that just might allow important developments, such as pipelines, to go ahead. They might even succeed on developing a consensus with First Nations. Although not specifically stated, this would indicate they may not approve of the reduced environmental monitoring. Canadians do not have to look far to see the effects that bitter partisan politics has on the effectiveness of government in other nations and the reputational effects that go with it.

If one accepts the experience from Piper Alpha and other past events, then a separate and unique door for each “must have” issue might be the best reality. In practice, these divisions are often not that black and white. Actually, multiple doors may not be that bad, provided it is clear who is responsible for what and these responsibilities do not overlap.

There may be another alternative to limiting the amount of debate and restricting access to hearings. Specifically, more resources available to the appropriate Provincial and Federal ministries might allow policy to be developed and clear guidelines enunciated in a timely fashion. In the past, the government had a list in the back of the OGCA compendium that told you what issues had to be addressed. I would love to have that list that told me what issues to address for caprock. This requires significant research and experience. It would be nice to have rational, credible scientific requirements. This, of course, involves dedicated civil servants. I would also suggest that academia has a significant role to play in this type of analysis. Corporate research centres are out of vogue and we no longer have access to this source of detailed analysis. Once again, building such institutions is not a quick process. Surprisingly, government scientists are broadly considered to have much higher credibility ratings than politicians, despite not being elected. This may be disturbing to politicians.

With respect to seismicity related to hydraulic fracture treatments, the B.C. Oil and Gas Commission has indeed produced some very good guidelines. Does the reader see the AER staff actively appearing at technical conferences? Are they likely writing the book on caprock integrity that will be used worldwide? Hopefully, this is the case.



The Government of Alberta has moved away from the model where industry and government both funded the ERCB. It was run by career civil servants with technical backgrounds: i.e. engineers, geologists and regulatory lawyers. It was very much a standalone organization that was not directed by either government or industry.

In the 1980's, there was considerable discussion with ERCB board members and staff that I worked with. We actually had meetings. This practice has long since disappeared. Meetings are now, in my perception, rare. ERCB staff all had personal contacts in industry that would tell them what was really happening. During the past decade, the cabinet has steadily interfered with board membership and replaced direct Board approvals with Cabinet Orders in Council. The politicians have been anxious about ERCB independence for some time now.

In the past, when I worked for some U.S.-based companies, the companies were very careful not to offend a foreign (Provincial or Federal) government. In the 1990's, many of these companies sold out and were replaced by Canadian-based companies that had a considerably more aggressive relationship with the Provincial Government. I'm not sure that the more collegial relationships of the 1980's will ever return. In part, due to these changes, I believe the ERCB moved to a series of "Directives" and "Enforcement Ladders." I suspect political pressure also played a hand.

If we look at the recent history in SAGD, the industry spends years developing a project and enormous resources on new technologies. Then the AER gets a huge application for a project which is not the cookie cutter repeat that came to be the norm in conventional production. They have limited experience with the latest changes since they do not independently engineer the projects. They do not have the resources to independently engineer these projects.

The recent Reservoir Containment issue is a classic example. The government has logically surveyed the applications they have received and discerned the better approaches. However, they have had to institute a moratorium on shallow projects. With limited resources, this would be highly responsible. Regrettably, this has also had profoundly negative effects. Some companies have literally gone out of business while they wait for approvals. There is a fundamental gap here. In the current situation, the AER must direct the industry and anticipate the technology developments that industry has not yet applied for without the resources for independent technical capability. This cannot work. Further delays and moratoriums are likely to become the norm.

## Conclusion

The REDA, as it now stands, introduces the potential for administrative and constitutional review. The move away from ERCB independence and technical capability comes at a time when issues have become both more technical and of larger consequence. There were good reasons in the past for this approach and Canada's legislation was widely regarded to be of a very high quality. This was historically a winning formula.

The developers of the Responsible Development Act likely view their changes as advances. True "one stop shopping" in light of Piper Alpha experience may be, pardon the pun, a pipe dream. There is some early empirical evidence to suggest it has not been successful. There are parallels with changes to federal legislation which also suggest serious difficulties.


I will let the reader decide on the qualifications of the AER Board and Commissioners. I do suggest that significant changes will be necessary in presenting material for hearings because of the background of the new Commissioners. This may have some profound effects on the hearing process and outcomes.

The new government in Alberta is a significant change. Public statements indicate there will likely be many regulatory changes in the coming months.

Probably the most important lesson from all of this is that the concept of social license. There have been a lot of changes that were touted as industry friendly—even what the industry has specifically asked for. In the context of social license and previous major incidents, these changes may not have been what industry really needed or wanted. I have always felt pretty good about the sophisticated manner in which issues were handled in the industry. This view is strongly reinforced when I go overseas. It is clear to me that the majority of the lengths that the industry goes to, to remain hidden from the public is to the detriment of both industry and government. The concept of social license significantly changes priorities and I suggest that obeying these "laws of human nature" will be necessary for the industry to fully succeed.

Forrester, Howie and Ross have prepared a paper, "Energy Superpower in Waiting: New Pipeline Development in Canada, Social License and Recent Federal Energy Reforms" for the Canadian Energy Law Foundation. Our jobs depend on getting our oil to market—I would suggest reading up on this.

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## Author's Biography



**M.R. (Mike) Carlson** founded Applied Reservoir Enterprises Ltd., a petroleum engineering consulting firm specializing in reservoir engineering, numerical simulation and economic evaluations, in 1999. He has more than 35 years of experience in the petroleum industry, working for such corporations as Amoco Canada, Home Oil, Scientific Software-Intercomp, McDaniel & Associates Consultants Ltd, Silverwing Energy Inc., Petro-Canada, RPS Energy Canada and Alberta Oil Sands. A geological engineer from the University of Toronto, he is a member of the SPE, APEGA, CWLS and the CSPG. He has written over 25 papers and served as technical program committee chairman for the CIPC, SPE Gas Condensate Forum in League City, was a director of the National Board of the Petroleum Society of CIM, and was on the Industry Advisory Committee for the University of Regina Petroleum Engineering Department. He is the author of *Practical Reservoir Simulation* (2003, PennWell). He has taught courses in 18 countries on reservoir simulation, reservoir management and thermal reservoir simulation. Currently, he is actively involved in the development of Steam Assisted Gravity Drainage (SAGD) projects in north-eastern Alberta, working on caprock and solvent-assisted SAGD. He continues to provide conventional reservoir engineering expertise, as well.