



Unconventional Resource Development

MARKET INTELLIGENCE FORUM REPORT

December 3, 2018



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CSUR organized and executed two market intelligence sessions in 2018, designed to facilitate discussions between industry, government, academics, first nations and other stakeholders. The sessions resulted in a detailed listing of areas and action items upon which players should focus in order to enhance economic development of Alberta's unconventional resources in the coming years.

Alberta's unconventional resources are world-class and are of the same scale and potential as the Eagle Ford shale play in the southern U.S.¹ They represent an unprecedented economic opportunity with the potential to grow Alberta's economy substantially, help in its recovery from the recent recession, and add significant previously unrecognized resources to Alberta's natural resource legacy. This report explores how we can nurture our unconventional resource development into the next stage of economic growth.

Some obvious issues that were identified include improved business tax regime, better market access, and temporary or permanent royalty adjustments. Alberta's provincial government has been a strong advocate for securing a new oil pipeline to tidewater, although Alberta and B.C. both increased their corporate tax rates recently². Some additional levers within government control include potential income tax adjustments, potential royalty credits, exemptions, or holidays targeting unconventional wells, and modifying the carbon tax and methane regulations to soften their impacts due to carbon leakage concerns. While the cost of operating in Canada is typically higher than in other jurisdictions, there are definitely some instruments that can improve the investment atmosphere in oil and gas here.

CSUR's Market Intelligence sessions were designed to look beyond the obvious, and explore how to best implement various strategies for improving economic development of our Alberta unconventional resources.

¹ Mark Young and Darrell Stonehouse, "Duvernay vs. Eagle Ford- Is the Duvernay catching up to the prolific south Texas shale play?" JWN, Calgary, 2018.

² Deloitte, "Corporate income tax rates," 2018. <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/tax/en-2014-2018-corporate-income-tax-rates-aoda.pdf>

Session 1

CSUR's first session was held in June, 2018. Attendees included representatives from the E & P sector, the Financial sector, and the Investment sector. 132 industry professionals attended, representing 18 E & P companies, 15 service sector and data companies and a wide range of other groups including many industry associations. The general atmosphere was one of extreme frustration, combined with a deep interest in searching for some answers to the question of how to improve the economic outlook for unconventional resource development in Alberta.

Aside from the obvious conclusions of improved tax regime, better market access and temporary or permanent royalty adjustments, our first discussion session zoomed in on communication: the discussion explored three areas where communication between various parties could be improved in order to result in better outcomes regarding economic development in the unconventional resource development sector.

First, it was recognized that although a fact-based analysis represented the go-to methodology for industry to solve its problems, a narrative-based approach would be more effective in understanding how potential solutions could work better. The average Canadian or Albertan is not the average "industry person," and we have to work hard to

connect and find more in common with them.

The discussion also revealed that "industry" in the common vernacular is often characterized as the oilsands, or big "oil", and aligned with government. The unconventional resource sector is comprised of many smaller and medium sized players, along with large-sized corporations. They represent a more diverse operational area throughout the province, and with a reach into many communities that is much more extensive than just the oilsands players.

The third main learning from our first session was a recognition that both provincial and federal governments in Canada are invested in both the ideal of our climate change goals, and the pragmatic of our economic growth goals. There is clearly a tension between the two, with policies behind one potentially eroding some success of the other, and we have to be aware of this tension when developing smart policy. The rhetoric of balancing environmental goals with those that are economic can be strengthened through a fact-based analysis of Alberta's potential within the global stage to impact GHG emissions.

Session 2

The second CSUR session was held in September, 2018. The attendees in this session included the service sector, government and indigenous partners, and also academic representation. There was a distinctly different atmosphere to this session: organizers noted a positive and engaging feeling to the room, potentially due to the different groups represented in the panel discussions, as well as recent positive news of approval of a largescale LNG facility and pipeline being announced.

As mentioned, the first session engaged representatives focused on risk assessment, investment decisions, and perhaps the group taking the highest risks in this industry, the E&P sector.

In contrast, the attendees of our second session were not the decision makers: the role of the service industry is to meet the needs of the E&P sector, once that sector decides how much or how little to drill, where, and when. While still impacted hugely by the up- and down-cycles of the oil and gas industry in Alberta, the service sector does not decide the magnitudes of the cycles – it is a follower, developing highly specialized technical expertise to maximize value in its work. Government and indigenous partners in oil and gas projects also typically fill a partnership role rather than a leadership role, again following on the proposals of mainstream E&P companies. And finally, from an academic viewpoint, post-secondary institutions do not determine E&P spending

levels and choices. They do, however, see the impacts of budgetary changes over time. If the industry is in a recession, donations and funding are impacted.

Two themes emerged from our second session.

First, there was a clear common thread about needing a global point of view to maximize the economic growth impact for this industry in Alberta. Competitiveness was pinpointed not as a technical issue, but rather a global policy issue.

The second point that emerged in discussions was that of leadership: private investors asked for positive leadership not just in words, but in action, from the various levels of government, with industry treated fairly and consistently with other industries. The average Canadian forms their views of industry from government direction, so if vocal policies are specifically designed to shrink the unconventional resource industry or penalize it in some way, that is remembered as a strong message. The biggest point made was a request for government to be non-partisan, and offer fact-based support of industry growth, for all industries, not just oil and gas. In reality, Alberta “wins” if all its industries grow and prosper.

Executive Summary

Building upon the conclusions from our two strategy sessions, the following “action” items were developed, specifically targeting an improvement in economic competitiveness and growth potential for Alberta’s unconventional resource industry:

1. Engage more industry organizations, including CSUR, that are integrated in unconventional development. Use these relationships to stretch further into all corners of Alberta to actively reach more Albertans, in an ongoing conversation. Government and industry could work together to develop a global and local narrative that reaches the average Canadian.
2. Develop a global, fact-based narrative which includes information about Canada regarding both climate change and fossil fuel energy in a vocal manner at the provincial and federal government levels, to help share facts about Alberta’s and Canada’s strengths and our potential options in the fight to reduce GHG emissions. Link Alberta’s economic success with future global GHG emissions reductions with fact-based analysis, working with industry to develop these narratives and to disseminate them.
3. Promote natural gas and LNG as a transition fuel in GHG emissions global efforts, integrating this into the fact-based narrative jointly developed by government and industry groups such as CSUR. Use fact-based analysis to study the potential length of this transition, and discuss it in public discourse – social media, position papers and briefings.
4. Formulate a fact-based discourse with both government and industry in various forums including social media, with a fact-based, positive leadership environment throughout. The polarizing effects of social media are especially tough when considering energy and environment issues; a re-energizing and reframing of energy and climate change policies would introduce a positive narrative and could restate government’s strong leadership in both areas. Establish strong collaboration between these two groups to help achieve these goals.
5. Introduce some general economic supports that benefit all industries, including fossil fuels. Allow market forces to choose winners as much as possible. Include some policies that will support the average Albertan during low cycles in the economy. These instruments could be temporary or permanent, and could include tax rate reductions, royalty modifications, minimum wage management for different demographic groups, or other creative ways to help companies continue to successfully invest in Alberta, even in the current downturn.

Discussion

I. ALBERTA IN THE GLOBAL CONTEXT

In CSUR's discussions, Schlumberger, a truly global company, noted that global hydrocarbon demand is growing and Canada is being left behind as Canada's spending in this sector has not grown, and has in fact shrunk over time. Alberta's unconventional resources were compared to other major plays in the U.S. and participants noted they both had equal technical potential. The difference in U.S. versus Canadian unconventional resource industry development was attributed to differences in policy – regulatory policy, competitiveness policy, but also in the general leadership voice and direction of government.

The BP Energy Outlook – 2018 report forecasts an increase in global liquid fuels demand of 13 mmbbl or about 14% from 2016 to 2040³. The BP report also predicts SE Asia countries will see a growth in energy demand of coal of 34% from 2016 to 2040⁴. The growth in energy demand is focused primarily in developing nations, particularly in Asia (China, India, Other Asia), while the demand in OECD countries will continue to decline.⁵

From a global perspective, developing nations require energy in order to develop and improve the life expectancy and standard of living for their populations. Gapminder data demonstrates the significant relationship between GDP per capita and life expectancy, with China and India and a number of other Southeast Asian countries sitting at significantly lower per capita GDP and therefore life span compared to OECD countries.⁶ China's population of 1.4 billion currently enjoys an average GDP per capita of about 35% of that in Canada, and India's population of 1.3 billion currently sees an average GDP per capita of 15% of that of Canada, both with lower life expectancy and corresponding other socio-economic implications.

Barring a new technology that is a game changer, the BP report is a reasonable tool for Canada, and Alberta specifically, to utilize in helping develop its global energy policy. The NEB creates its own energy forecasts, including oil and gas, for Canada on an annual basis. They consider Canada's consumption of energy and various policies in place at

time of writing, including carbon tax. However they do not analyze export markets or forecast growth of new oil and gas potential as it relates to global demand in any detail, and have minimal analysis regarding unconventional resource development.⁷

A fact-based narrative can be developed through discussions between government representatives, climate change experts, and technically focused industry groups such as CSUR. The link between Alberta's role in the global energy market, and Canada's climate change goals is seen as tentative and uncertain at this time in the eyes of most Canadians. Canada has a role in participating in the 2015 Paris Accord, committing to a global effort to reduce GHG emissions. Behaviour that is within Canada's control includes changing Canadian fossil fuel consumption, and its exports. By focusing on these two areas, Canada can maximize its impact in lowering emissions on two different fronts. Using Alberta's large unconventional resources, namely natural gas, related liquids, and light oil, to replace some of the coal and oil demand in SE Asia will result in significant global net GHG emissions reductions. A fact-based analysis can demonstrate how significant this is. Targeting these global goals will result in a stronger economic environment for Alberta's resources, while aiding in working to meet Canadian GHG emissions goals.

An additional result of an active discourse between government, industry, and other stakeholders regarding the link between energy and Canada's climate change goals is production of a rich source of fact-based informational material, along with supporting data, that would be distributed to the public. In the absence of facts, polarizing rhetoric fills social media and creates an unsupportive environment for some economic decisions.

³ "BP Energy Outlook, 2018 Edition," 2018. Accessed 2018-10-29. <http://www.bp.com/energyoutlook>

⁴ "BP Energy Outlook, 2018 Edition," 2018.

⁵ Ibid.

⁶ Gapminder, "Updated Gapminder World Poster 2015!", accessed 2018-10-29. <https://www.gapminder.org/news/updated-gapminder-world-poster-2015/>

⁷ National Energy Board, "Canada's Energy Future 2017 – Energy Supply and Demand Projections to 2040," Canada, 2017. <https://www.neb-one.gc.ca/nrg/ntgrtd/ftr/2017/pblctn-eng.html>

Discussion

II. LEADERSHIP

In our discussion, various participants discussed the role of government and industry leadership in unconventional resource development, and in improving the economic framework in Alberta. They focused on formal and informal leadership, social media soundbites, policy briefs, regulatory announcements, and other past examples and their consequences.

Some government policies developed in the last few years held a strong position of opposition to specific industries or projects. In 2016, the current Prime Minister repeated a comment he had made earlier regarding the Great Bear Rain Forest being no place for a pipeline.⁸ In addition, the federal government placed a moratorium on tanker traffic on the northern B.C. coastline in May, 2017.⁹ In October 2017, TransCanada cancelled its proposed \$16 billion Energy East and Eastern Mainline projects, citing the changing regulatory process and increasingly challenging issues and obstacles as some of the reasons for their decision.¹⁰ In August 2017, the NEB panel evaluating the Energy East project announced that in their assessment they would consider the pipeline's upstream and downstream GHG emissions and their impact on Canada's ability to meet government's greenhouse gas emission targets.¹¹ Despite these instances, the federal government has also repeated they are fully behind getting Canada's oil to tidewater and international markets.¹² The rapidly changing and often contradictory regulatory landscape has added another level of risk when assessing whether to spend large amounts of capital on a particular project, such as major unconventional resource plays.

On the provincial side, the dichotomy of a GHG emissions policy and an economic growth policy are evident. While the government actively supports the continued development of its fossil fuel industry, various regulations encouraging reductions in GHG emissions have potentially served to inhibit fossil fuel development. Alberta's carbon tax, while a solid policy for encouraging Albertans to reduce fuel usage, has

increased development and operating costs for industry. In addition, the imposition of a cap for maximum total industry emissions from the oilsands is a limiting factor for large oilsands developers, whose projects require longterm lifespans to be economic. The cap implies the provincial government is aligned with the concept of phasing oilsands development out with this as a regulatory tool, again sending divergent messages to potential investors.

In our discussion, participants repeatedly mentioned the feeling that various governments' tones toward fossil fuel development were at best tepid, and at worst oppositional. Public support was offered in government statements, however little action was noted behind these statements. Industry representatives in our discussion group asked for fair, non-partisan treatment. From an efficiency standpoint, it was suggested government give more general economic supports, and allow the marketplace to choose winners and losers.

For Alberta to nurture an improved environment for economic development of its unconventional resources, it is recommended vocal leadership consistently support industry, by simply showing faith in its systems and regulations, and its people. As always, government and industry will continue to improve their regulations, and building upon this as a narrative incorporating local stories and influences would show solid leadership. Messaging in support of industry in this manner would apply to all Alberta industries, not just our unconventional resource industry. Even if a government's policies currently lean toward one end of the spectrum versus another party's policies, a focus on general economic strategies that help all types of businesses in growth can be helpful in a non-partisan way.

During our discussion, participants described on the environment in which they executed their jobs, whether service-industry-related, academic or other. Lack of fact-based discourse in various settings was described as a barrier to some of their work, and in their daily lives in

⁸ Jason Fekete, "Trudeau says rainforest no place for pipelines, as Enbridge eyes alternative endpoints for Gateway," National Post, April 26, 2016. Retrieved Oct. 24, 2018. <https://nationalpost.com/news/politics/trudeau-says-rainforest-no-place-for-pipelines-as-enbridge-eyes-alternative-endpoints-for-gateway>

⁹ "Government of Canada introduces Oil Tanker Moratorium Act," Transport Canada, May 17, 2017. https://www.canada.ca/en/transport-canada/news/2017/05/government_of_canadaintroducesoiltankermoratoriumact.html

¹⁰ Pete Evans, "TransCanada pulls plug on Energy East pipeline," CBC News, October 5, 2017. <https://www.cbc.ca/news/business/transcanada-energy-east-1.4338227>

¹¹ "Energy East Pipeline review to look at upstream, downstream GHG emissions," CBC News, August 23, 2017. <https://www.cbc.ca/news/canada/calgary/energy-east-pipeline-review-ghg-greenhouse-gas-1.4259032>

¹² John Paul Tasker, "Trudeau committed to building Trans Mountain despite new legal challenges," CBC News, August 31, 2018. <https://www.cbc.ca/news/politics/tasker-trans-mountain-trudeau-1.4806361>

some respects. Oil and gas industry professionals spoke of acquaintances implying they did not follow regulations, worked in the industry due to its high rate of pay, and laid waste to the environment. Academics were personally affronted when asked if they felt their research results were directed or influenced by industry due to much of their funding coming from industry. They pointed out that they worked hard to retain independence in their research, complete with audit capabilities and documentation.

The truth is simple. Bottom line: Canadians follow the law, by and large. Although not well-known in circles outside of industry, over the years, oil and gas laws and regulations have become more stringent, as they have in all other resource industries in Canada. Canadians working in the oil and gas industry benefit from a global market, therefore justifying a somewhat higher average wage level than in other job areas – this is offset by times of recession when global resource prices are poor. A higher than average wage in Alberta is also not something to be apologetic for – it is just a fact. Canadian colleges and universities who participate in research programs are generally funded by industries prevalent in their home regions: thus Alberta schools see much of their funding coming from the resource industry from both individuals and corporations. Similarly, in other parts of the country, research may be supported by regional industries. It does not make practical sense to challenge this system. Some very astute first nations groups are involved in some ongoing energy development projects, and first nations will continue to be taking a more leading role in other megaprojects in the future.

Conclusions

Industry, when it speaks up, focuses on facts, and presumes two big things – that facts will convince other Canadians of the value of Alberta’s resources, and that other Canadians believe they are honest and hard-working. However, as earlier discussed, a narrative focused on real Albertans and their stories, combined with vocal support from various government agencies and levels, could potentially better share this information and grow support for various economic policies that would improve the economic development environment for Alberta’s unconventional resources. Government leadership of that narrative would be even more powerful. It is suggested that support be directed in a nonpartisan way, toward economic success of all Alberta industries, to be most effective.

Participants noted tone at the top matters, and the concept of shaping public discourse was discussed. Numerous industry groups, including CSUR, expressed an interest in actively helping form some of that public perception and discourse, beginning from school-age onward. There is a knowledge vacuum for the average Canadian or Albertan, and it is being filled with social media rhetoric. Instead, participants suggested active and ongoing communication between our unconventional resource industry and government representatives for a number of reasons: to jointly discuss and produce information sheets and educational material, to jointly brainstorm in developing policy that could enhance the economic environment for unconventional resource development, to help resolve and clarify if some policies have unintended consequences, and to help create some fact-based analysis needed to balance the tension between global GHG goals and our energy economy goals.

In the discussion around leadership, industry representatives focused on fact-based arguments and fairness. It is recommended policy experts with an external view and communications experience be engaged to aid in the stakeholder discussions between government and industry. CSUR and other industry organizations are dedicated and ready to step in and lead the way in making some of the recommendations contained herein a reality.

Appendix – Session Speakers

SESSION 1 – JUNE 2018

OPERATORS' PERSPECTIVE

Andy Mah, President & CEO, Advantage Oil & Gas Ltd.

Paul Myers, President & CEO, Canbriam Energy Inc.

Philippe Gauthier, GM Alberta Unconventionals, Shell Canada

FINANCIAL SECTOR PERSPECTIVE

Drew Ross, Managing Director & Head, Calgary Office, Global Investment Banking - Energy, Scotia Capital Inc.

Rafi Tahmazian, Senior Portfolio Manager & Director, Canoe Financial

Randy Ollenberger, Managing Director, BMO Capital Markets

INVESTORS' PERSPECTIVE

W. Brett Wilson, Prairie Merchant Corp.

Rob Cook, ARC Financial

SPECIAL GUESTS

Mike Doyle, President, Canadian Association of Geophysical Contractors

Chris Bloomer, President & CEO, Canadian Energy Pipeline Association

S. Brian Ahearn, Vice President, Canadian Fuels Association

John Bayko, Vice President, Communications, Canadian Association of Drilling Contractors

Tom Whalen, Interim President & CEO, Petroleum Services Association of Canada

Appendix – Session Speakers

SESSION 2 – SEPTEMBER 2018

SERVICE SECTOR PERSPECTIVE

Brian Hamm, President & CEO - McDaniel & Associates
Celine Gerson, President, Canada - Schlumberger
Dale Dusterhoft, President & CEO - Trican Well Service
Mark Scholz, President - Canadian Association of Oilwell Drilling Contractors (CAODC)
Tom Whalen, Interim President & CEO, Petroleum Services Association of Canada (PSAC)

PARTNERSHIP PERSPECTIVE

Shannon Stubbs, MP for Lakeland (Alberta)
Steve Saddleback, Director, National Energy Business Centre of Excellence – Indian Resource Council of Canada

ACADEMIC PERSPECTIVE

Dr. David Eaton, Professor & NSERC/Chevron Canada Industrial Research Chair, Micro-seismic System Dynamics, Department of Geoscience - University of Calgary
Chancellor Deborah Yedlin, University of Calgary

SPECIAL GUESTS

Ben Coleman, Manager, Government and Stakeholder Relations, Canadian Energy Pipeline Association
Cody Battershill, Canada Action
Craig Watt, Special Representative, Office of the Deputy Minister of Energy, Government of Alberta
Dianna Benoit, Oil and Gas Services & Technologies, Economic Development and Trade, Government of Alberta
Dinara Millington, Vice President, Research, Canadian Energy Research Institute
Larry Ottewell, Oil and Gas Services & Technologies, Economic Development and Trade, Government of Alberta
Mike Doyle, President, Canadian Association of Geophysical Contractors
Morley Kjargaard, Oil and Gas Services & Technologies, Economic Development and Trade, Government of Alberta
Nima Dorjee, President, Association of Professional Engineers and Geoscientists of Alberta
Rick Anderson, Synergy Alberta
Tim Egan, President and CEO, Canadian Gas Association
Tim Hazlet, Oil and Gas Services & Technologies, Economic Development and Trade, Government of Alberta