



ALBERTA OIL SANDS: A WHITE PAPER BY ALBERTA'S YOUTH





On December 10th, 2013, over 200 students from six high schools across Alberta, in partnership with Alberta Energy, The Centre for Global Education, the Pembina Institute and Inside Education, came together to collaborate, through the use of technology, in a Virtual Town Hall to discuss the youths' vision for the sustainable development of Canadian Oil Sands. From the rural community of High Prairie to downtown Calgary, from Medicine Hat to Fort McMurray, the youth of Alberta came together to exchange ideas, debate alternatives and ultimately create a document that represents their voice on the Oil Sands. The Virtual Town Hall, called an "archetype of grassroots democracy" by Senator Grant Mitchell, was the culmination of over a month of online teamwork, 1500 hours of student collaboration, over 100 hours of teacher facilitation, and a passion by Alberta's youth to understand the impacts of oil sand development on community, the environment and the economy.

In the month prior to the Virtual Town Hall, student leaders from each school, systematically chosen to represent Alberta's diverse geographic and demographic population, met on a weekly basis to exchange ideas, work with Alberta Energy and the Pembina Institute, listen to experts and create a common framework upon which their fellow students would be able to identify challenges with Alberta's carbon emissions and recommend a series of initiatives to mitigate them. Concurrently, the students were trained on how to use an arsenal of Web 2.0 tools (YouTube, Twitter, cell phone voting, Google Docs, H.323 Video Conference, discussion boards, blogs, etc.) to collaborate, build consensus and create community regardless of time or location.

Equipped with this knowledge and empowered through 21st century technology, the student leaders facilitated a full day Virtual Town Hall. In the morning, they led 200 of their peers through a dialogue with local and international experts. In the afternoon, the students worked in breakout groups to address three critical questions:

- 1. What are the economic impacts of the development of the Oil Sands?**
- 2. What are the environmental concerns Alberta's youth find important in the development of the Oil Sands?**
- 3. How is Oil Sands development impacting growth of communities?**

The data collected in response to these questions was synthesized into a survey which was, in turn, made available to be voted upon by the 2000+ students in the six represented schools.

This document, Alberta Oil Sands: A White Paper by Alberta's Youth, written by a committee of students, is the direct result of that process. The evolution of the document involved equipping leaders with knowledge and technology, having those leaders facilitate a larger conversation among their peers, taking the data generated to their community at large for feedback and direction, and then synthesizing the results in the student white paper. It represents the voices of hundreds of youth, educated in the complexity of Oil Sands development, unified through the power of 21st century technology, and sharing a passion to contribute to the dialogue taking place on the future of Alberta and natural resource development.

What are the economic impacts of the development of the Oil Sands?



The youth of Alberta recognize the significant impact, both positive and negative, that Oil Sands development has on the economy of Alberta. From the hundreds of thousands of direct and indirect jobs to the billions of dollars the government receives in royalties, Alberta youth recognize the integral role the Oil Sands play in the economy.

Along with the significant contributions, the youth also acknowledge that there are challenges that come with the continued increase in production and development. In order to ensure the long term health of the Alberta economy, the youth of Alberta make the following recommendations:

- 1. increase investment in the diversification of the the economy beyond the Oil Sands development**
- 2. increase the Oil Sands' royalty rates to subsidize investment in the diversification of the economy**
- 3. slow the rate of development of the Oil Sands to allow for more balanced growth**

The youth of Alberta believe that the Alberta government needs to increase the diversification of the economy beyond the Oil Sands. For too long, Alberta has been the victim of the boom and bust nature of an economy based on Oil Sands and traditional energy. To complicate this further, Alberta is presently on course to increase its reliance on the Oil Sands for economic growth and development. The youth believe that now is the time for Alberta to truly become a global energy superpower by giving a bigger section of the pie to renewable energies, moving from an over-reliance on traditional oil and gas energy and creating a more balanced energy portfolio. Research shows that a \$1 million investment in clean energy not only creates 15 jobsⁱ, compared to just two jobs from investing in oil and gas, but also results in a significantly smaller environmental footprint.

Beyond energy, the youth believe that Alberta needs to increase investment in other areas of the economy as well. From the arts and culture sector, to our medical and biotechnology industries, to renewable energy, Alberta has the potential to strengthen its economy and lessen the impacts when the price of oil drops.

The youth recommend that the funds for the diversification of Alberta's economy should come from an increase in Oil Sands royalties rates and GHG emission taxes. Especially with the support from the observation and analysis of Alberta's royalty system, which concluded that there is additional room to increase royalties without stifling industries profitabilityⁱⁱ. Although the youth believe that the royalties have to be increased, they also recommend that the government proceed with caution in order

to decrease impacts on and sudden challenges to the economy. This increase could also then be used to fund the research and development of renewable energy technologies, the provision of tax breaks for companies that share their finding with other groups, and the creation of new infrastructure to support the use of renewable energy, such as subsidies for people wishing to install solar panels on their homes. In addition, royalties should continue to be used for the development of higher efficiency oil extraction and refinement processes with a smaller environmental footprint.

Finally, the youth of Alberta are very concerned about the rapid increase in cost of living during the "boom" times and the impact that has on the economy and the everyday lives of Albertans. The cost of buying a home or renting an apartment, the price of food and the general costs of living are high not only in Fort McMurray but throughout the province. When the daily expenses increase faster than the wages of many working Albertans, life can become increasingly difficult. Furthermore, these rapid financial changes such as increased cost of living and wage increases make it difficult to diversify the economy as the other non-Oil Sands related companies cannot afford to compete for employees or pay the increased costs. This is demonstrated in Fort McMurray, where decreased housing space led to housing market inflation, resulting in increased cost of livingⁱⁱⁱ. The youth recommend that these obstacles can be overcome through subsidization obtained from the royalties. As well, moving forward more cautiously and slowing the pace of development would ameliorate many of these economic challenges.

What are the environmental concerns Alberta's youth find important in the development of the Oil Sands?



The youth of Alberta are concerned about the impacts the development of the Oil Sands has on their province's environment. Although they acknowledge the many great initiatives and regulatory frameworks currently in place, the youth strongly believe that further action needs to be taken to protect our land and biodiversity, air and water.

The youth believe that the Government of Alberta needs to:

- 1) increase monitoring to determine and track the environmental impact of development
- 2) put in place stricter environmental development regulations relative to current standards
- 3) enforce greater accountability in the case of breachment/violation of regulations
- 4) increase investment in new technology to mitigate environmental impacts

LAND AND BIODIVERSITY

Alberta's youth are highly concerned with the deforestation, decrease in biodiversity and overall impact on land that has accompanied the rapid growth of the Oil Sands. In order to address these concerns, the youth believe that the government of Alberta needs to do a comprehensive overhaul of its present policies on Land and Biodiversity.¹

The youth believe that there needs to be a greater number of monitoring strategies put in place when dealing with animal, plant and lichen species within ecosystems surrounding the Oil Sands. They feel strongly that a larger pool of data must be developed with this information and shared with all groups that may have an impact in that vicinity. This data will then allow government, industry and all invested stakeholders to work together to create policies that will help maintain a more sustainable environment.

Furthermore, government needs to more strictly enforce existing regulations while increasing the consequences to industry when a breach has taken place. By increasing the liabilities, industry will be more likely to proactively address potential environmental disasters and increase the resources the government will need to mitigate their effects.

One area of particular concern is the deforestation taking place for the expansion of Oil Sands development. Many species are

harmed while others are even being brought to the point of endangerment. Furthermore, the pace at which land reclamation is taking place is further compounding the negative impacts. A prime example of these consequences is the 65% decline in Alberta's Woodland Caribou herds over the last 16 years due to the significant decrease of habitat in northeast Alberta.^{iv}

WATER

The Lower Athabasca watershed is a significant water source for Alberta, making up 17% of Alberta's fresh water^v. This major watershed is critical in maintaining ecosystems throughout the region and must be used sustainably. As of June 2012, the Oil Sands operations consume approximately 170 million cubic meters of fresh water per year^{vi}, primarily from the Athabasca River.^{vii}

While current steps to safeguard surface and groundwater and reduce waste water volumes are a start, some impacts on the watersheds are alarming to the youth of Alberta. To produce one million barrels a day for one year from the Oil Sands requires a volume of water that could supply a city of two million people^{viii}, the bulk of which is not recycled into the water system due to contamination.

The volume of Oil Sands production is currently just over two million barrels per day and projected to increase to a possible

¹The youth recognize that although this work has begun in the form of the Lower Athabasca region plan, there is concern that the plan will not result in adequate mitigation measures.

nine million barrels per day when one includes projects in approval, under construction and disclosed. Given that recent studies have shown levels of toxins to be higher than originally thought and adequate monitoring to be a continued challenge^x, Albertan youth fear that these increases will have a significant negative impact on the surrounding environment.

The youth of Alberta are concerned about the limited monitoring of toxins in waterways, groundwater and soil surrounding Oil Sands development (footnote: Lower Athabasca regional plan, pg. "the management response will not be a mandatory part of the regional plan until there is better understanding of the current state of groundwater in the region" - Government of Alberta) . They want to see policy that addresses the various impacts on local health and biodiversity as well as the necessary waste control to reduce such impacts. Buffer zones should be increased around bodies of water for the preservation of water that is used for drinking, hunting and fishing. Enhanced consultation with local First Nations communities would help the province understand what areas are most important and where negative effects are currently being felt.^x

Finally, the youth of Alberta would like to see greater investments in technologies that reduce the quantity of water used for extraction and allow for more water to be purified and recycled. This can be achieved through the development of incentives that encourage companies to implement cleaner practices, such as boiler blowdown reduction technologies (COSIA document) and direct contact steam generation. Considering the current rate of water withdrawal and regulation, it will be necessary to implement a more accurate monitoring system of the Athabasca

River flow rate, one that is reflective of sustainable flow levels off of which to base regulation. The youth of Alberta are aware of the current efforts, yet they respectfully push for the aforementioned increase.

AIR

Although the youth of Alberta recognize that the government has taken measures to lessen the GHG emissions of the oilsands, there is a strong consensus that significant action is required. The youth believe that for the necessary changes to come into place, the government needs to place greater liability on the companies that fail to increase GHG mitigation measures. The current enforcement is to reduce their CO₂ emissions by 12 percent per barrel. Also, a 15\$/tonne contribution must be made by companies that emit over 100 000 tonnes of CO₂ emissions annually. The youth believe that both these numbers must be increased to make meaningful GHG reductions. This can come in the form of the government increasing the carbon tax and implementing greater fines for violations.^{xi}

Although the youth agree that a portion of the funds should continue to be used to improve environmental innovation in the Oil Sands industry, they also believe that it is important that the government look to mitigate the overall environmental footprint in Alberta, facilitating a reduction in emissions from the individual citizen all the way to big industry. With focused targets, quality data collection and an empowerment of all Albertans, the youth believe that all of Alberta can be seen as a leader in emission mitigation.



How is Oil Sands development impacting growth of communities?



In examining the impact of Oil Sands development on our communities, the youth of Alberta examined the effects on the local, regional, provincial, national and international community. Alberta youth recognize that the impact and action of Oil Sands development, in these rapidly growing “boom towns,” has had both greatly positive and extremely negative consequences on all levels of community.

To tackle these issues, the youth of Alberta recommend that government:

- 1. invest a greater percentage of Oil Sands revenue in the building of sustainable communities, specifically related to housing access and affordability and infrastructure needs**
- 2. create more incentives, supports and regulations that encourage young people in Oil Sands communities to pursue post secondary education**
- 3. boost wages for non-oil field workers by further increasing the minimum wage**
- 4. continue to work with aboriginal communities to ensure that their voice is heard in the creation of both new developments as well as creation of regulations regarding the protection of the environment**

Basic to all Albertans is the need to have a roof over their heads. With Alberta’s rapidly expanding economy, individuals and communities are struggling with access to affordable housing. Although the problem is particularly acute in communities like Fort McMurray and Cold Lake, affordable housing is a problem throughout much of the province. Communities are further confronted with stresses to infrastructure including narrow, dangerous highways and travel delays when heavy in-situ equipment is transported to production sites. Further stresses include long wait times in outpatient departments as matters usually dealt with by family doctors are being forced into outpatient or emergency departments due to a shortage of doctors. In light of this, the youth of Alberta see a need to increase investment in building sustainable communities. The government needs to work with communities and other stakeholders to build a systematic and creative strategy to address these needs.

In non-oil-sands-related fields, wages are often much lower, making it hard to retain employees who cannot afford the local cost of living, resulting in a chronic shortage of basic services in some of the most rapidly growing communities of the province.

By the government continuing to increase minimum wage and the funding available for young people to pursue their post-secondary education, the government will go a long way to help alleviate the problem. Furthermore, these challenges are compounded by the rapid development of the Oil Sands and the inflation that comes along with it.

Local aboriginal communities also face major impacts because of the loss of their traditional hunting/fishing grounds due to poor water quality. Much of this has to do with the increase in oil sand production, specifically in-situ production. Once one element in an ecosystem is changed, the entire ecosystem is altered as it is highly interdependent. Environmental impacts on these communities also include issues like accidental or unplanned discharge of toxic waste or raw product resulting in further devastation to local aboriginal communities. The government of Alberta needs to work with all stakeholders to ensure that protections are put in place for those most vulnerable and ensure that these communities are part of any consultative discussions on future development and production.

Overall Conclusion



In conclusion, the youth of Alberta recognize that the Government of Alberta is moving forward to balance protection of the environment and communities with economic interest. We understand and believe in the importance of sustaining a growing industry that has a balanced environmental and social cost. In the midst of this, Alberta's youth are unanimous in the conviction that the environment and communities have to be protected and developed at a sustainable pace. Many of the challenges facing Albertans are compounded by the development of the Oil Sands at such a rapid pace that communities and the environment struggle to keep up. From the cost of housing to the overcrowding in hospitals, from the significant increases in GHG emissions to the dying caribou population, the government needs to slow the pace of Oil Sands development and put in a comprehensive plan that will maintain a sustainable environment, economy and communities for years to come.

ⁱ More Bang for our Buck: How Canada can create more energy jobs and less pollution, <http://bluegreencanada.ca/sites/default/files/resources/More%20Bang%20for%20Buck%20Nov%202012%20FINAL%20WEB.pdf>

ⁱⁱ Building Confidence: Improving Accountability and Transparency in Alberta's Royalty System, (2008), Retrieved from http://www.energy.alberta.ca/Org/pdfs/Valentine_ABRoyalty.pdf

ⁱⁱⁱ Modjeski, M, (2012, March 6) Income Inequality And The Oil Sands: Fort McMurray's Rich 20-Somethings Find Hard Times Hard To Understand, Huffington Post, Retrieved from http://www.huffingtonpost.ca/2012/03/05/income-gap-oilsands-fort-mcmurray_n_1321666.html

^{iv} Dyer, S., Pembina reacts to draft Woodland Caribou Recovery Strategy, (2011), Retrieved from <http://www.pembina.org/media-release/2257>

^v Water Use in Canada's Oil Sands, CAPP, Retrieved from <http://www.capp.ca/getdoc.aspx?DocId=193756>

^{vi} Environmental Research Centre, Univ. of Alberta, 2007, "Running out of Steam?: Oil Sands Development and Water Use in the Athabasca River -shed" <http://www.ualberta.ca/~ersc/water.pdf>

^{vii} Water Use in Canada's Oil Sands, CAPP, Retrieved from <http://www.capp.ca/getdoc.aspx?DocId=193756>

^{viii} Environmental Research Centre, Univ. of Alberta, 2007, "Running out of Steam?: Oil Sands Development and Water Use in the Athabasca River -shed" <http://www.ualberta.ca/~ersc/water.pdf>

^{ix} Kelly and others, Oil sands development contributes polycyclic aromatic compounds to the Athabasca River and its tributaries, (2009) Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2789758/>

^x Droitsch, D. & Simieritsch, T, Canadian Aboriginal Concerns with Oil sands, (2009) Retrieved from <http://www.pembina.org/pub/2083>

^{xi} Alberta Energy, Fact and Statistics, Retrieved from <http://www.energy.alberta.ca/oilsands/791.asp>

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School

Queen Elizabeth
Fort McMurray High School
Communication Technology Centre
St Andrew's School
Medicine Hat High School

Lead Teacher

Terry Godwaldt
Sheldon Dahl
Catherine Smith
Daniel Gillmor
Rhonda Hunter

Principal

Sue Bell
Bill Forster
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School Board/Nation

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