

Term Project

Energy Production and Climate Change: Tar Sands Pipelines

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Introduction

Tar sands oil from Canada has been brought into and through the United States for many years. The oil is used both in the US and internationally and is transported mainly by pipelines as well as large ships across the Atlantic and Pacific oceans. Tar Sands oil receives such a name from the thick, tar-like consistency and color that the oil material presents in its natural state. This material is a combination of clay, sand, water and bitumen— a heavy black viscous oil (*Ostseis.org*). Since all of the organic particles within the tar sands naturally are not necessary for use, the tar sands must be mined and processed in order to extract and separate the oil-rich bitumen from the organic material. According to the Oil Shale & Tar Sands Program, “... extracting oil from tar sands is more complex than conventional oil recovery”. The process of extracting bitumen from tar sands includes a variety of processes, all of which have environmental and health repercussions. From cancer, oil spills, and leaking of carcinogenic material, the tar sands have many cons in contrast to the few positive economic attributes.

Canada has first-hand experience of the harsh side-effects of the tar sands industry as well as the United States. Canada has experienced climate problems as well as directly related adverse health effects. The US has also experienced issues with the tar sands projects, mostly from pipeline breaks and leaks.

As history teaches the US of the many negatives and few positives of the tar sands industry, Washington DC has a new decision to make: to pass the construction of the Keystone XL pipeline or not. If passed, the KXL pipeline will carry tar sands oil from Canada through the US to refineries in the gulf coast, mostly in Texas (*Foe.org*). The problems now arise: is the KXL pipeline necessary, what health implications are at stake, and what are the positives and negatives of the pipeline for the US?

Case Study

To increase my knowledge on the topic, I decided to observe *part 1* of the documentary *To The Last Drop: Canada's Dirty Oil-Sands*. Throughout this informative movie, I was shocked to learn about the infinite health and environmental implications that these tar sands have on the community surrounding it.

The tar sands in Canada are located in Alberta near freshwater delta ecosystems. As the knowledge of bitumen and production of the tar sands industry began to grow, the natural habitats have been exponentially destroyed. Allan Adam (Dene Chief of Fort Chipewyan, Alberta) recalls the treaty that was made by his ancestors which allows the, "Freedom to hunt and fish on the land"(Poulson). Unfortunately, for the people of Fort Chipewyan and the Dene Tribe, the land that they so love and make a living from is quickly being destroyed due to tar sands operations.

Referred to as "Dark satanic mills" by National Geographic, tar sands refineries and mines have wreaked havoc on the Alberta environment and humanity. Due to increased prevalence in cancers, brain tumors, and other adverse health effects, a local doctor began looking into related cases and found they all traced back to toxins within the environment. Dr. John O'Conner reported an exponential increase in lupus, rheumatoid arthritis and multiple cancers. To cover up obvious problems relating to the tar sands, the Canadian government filed reports against Dr. O'Conner, stating that he was "raising undue alarm" amongst locals.

Lucky for Alberta, O'Connor was not the only doctor interested in the health affects related to the tar sands industry. Dr. Solomon from the University of California did multiple studies on patients from the Ft. Chipewyan and found astonishing results. Cancers, leukemia,

lymphoma, and a rare disease called soft tissue sarcoma were all prevalent in the Chipewyan area. From her many years in the health field as well as research on the topic, Solomon found that all of these cancers in the Alberta area were due to hydrocarbon exposure from oil and petroleum products (Poulson).

These carcinogens exposed from the tar sands extraction and refining processes are released into the environment in a few ways. Harmful cancer-causing carcinogenic materials such as arsenic, lead, and other heavy metals are exposed throughout the soil as well as surrounding waterways. This poses a huge problem for local fisherman due to the close proximity of the mining and refineries of the tar sands to the freshwater, delta ecosystem of lake Athabasca. Local fisherman, Ray Ladouceur, tells a story of how his grandfather moved to this area of Alberta and fell in love with the wildlife and nature. Unfortunately for Ray and many others in the area, this is no longer the case. Wildlife has decreased and the incidence of cancer has struck the community. In contrast to his grandfathers' time, Ray has experienced many friends that have died of cancer. Ray is a firm believer that the cancer in the area is directly related to the water of Lake Athabasca. In the clips following Mr. Ladouceur, Chief Adam of the Dene tribe made a point to say that the community relies heavily on traditional foods. If the environment is infected with carcinogens, the animals will be as well and therefore the people will be who are consuming the animals.

Due to the problems showcased in Alberta, Canada from the tar sands, many questions have been raised and continue to arise as time persists. Not only are these repercussions viewed in this unique documentary relevant to the area where the oil is extracted, but it is also affecting those in surrounding areas in which the oil is transported. This topic will be discussed in the next section.

Keystone XL Pipeline Analysis

On February 17th, 2013, I traveled to Washington DC to join the largest climate rally in history: Forward on Climate. Enticed by my friends, persuasion from my health and environment class, and my own interest, I joined in on the action. Unaware and uneducated on the topic of the Keystone XL Pipeline and its negative implications, I quickly became aware of the *many* problems with its construction.

The most recent appearance of the tar sands pipelines in US can be seen throughout the controversy over the building of the Keystone XL Pipeline. This pipeline, if built, will stretch from Alberta, Canada all the way through the US to reach refineries in the Gulf Coast of Texas. Though this pipeline may bring economic abundance for the government of Canada as well as the oil company, TransCanada, “Along its route from Alberta to Texas, this pipeline could devastate ecosystems and pollute water sources, and would jeopardize public health”(foe.org).

Not only would the pipeline bring the health and environment hazards experienced in Canada closer to home for US citizens, it would also barely be used for US purposes. Containing the “dirtiest oil on earth”, this KXL pipeline would dominantly be bringing oil *through* the United States to the coasts to be shipped internationally, not necessarily *to* the US (*Forward On Climate Blog*). A video from the Climate Blog states, “Americans take on all the risks while oil companies take on all the rewards”.

As the US public looked to the many problems that the pipeline had caused in the past for Canada’s indigenous populations and the global environment, our country realized that action must be taken. As a result, the Forward on Climate rally was assembled and moved as a unit of 50,000 activists from the Washington Monument all the way to the White House. Chants, posters and costumes were shown from people all over the world and of all ages at the Forward on

Climate rally. As part of this movement, I was proud to be surrounded by such a wonderful group of individuals who truly care about their fellow American's and are motivated to stand up for what is right. I was shocked to see such a large, powerful, yet calm group of people take part in present day activism for our planet.

Conclusion

Overall, the tar sands oil companies have a lot on their plate. Governments in Canada and the US are urging them to continue their practice in order to build up the economy while activists and locals are fighting back due to serious health and environmental repercussions. While the controversy sways back and forth, it is important that we, as citizens, speak up about our views. Whether we agree or disagree about any topic, voicing our opinions in the Land of The Free and The Home of The Brave is all part of practicing our rights as US citizens and taking advantage of living in democracy.

My favorite poster/sign held by an activist at the rally was owned by a young woman standing in front of the White House. The sign stated, "Only when the last tree has died, last river poisoned, and last fish caught will we realize WE CANNOT EAT MONEY". This poster stuck with me for a few reasons; but mostly because many of the large (oil) companies around the world are solely motivated and focused on money. Yes, profit is a necessity for survival, but so is the land and resources that we take away from our earth. If we are focused only on money and business and turn away from looking at ecological sustainability, we will quickly lose our most valuable item: our land and environment itself. Without a healthy environment and habitat, we have nothing. No food, no water, no air: no life. Money will not be a factor in the future if we do not first look at our environment and the direction that it will be going in the years to come.

Works Cited

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