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THE GOOD, THE BAD AND THE OIL SANDS: A CRITICAL ANALYSIS OF THE ENERGY SECURITY PARADIGM

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INTRODUCTION

The period of human history since the beginning of the 20th century can be defined as the Age of Oil. Addicted to petroleum, those nations in possession of this important commodity through have been utilizing traditional methods of exploitation in order to quench our species' voracious thirst. As these conventional methods, such as drilling both on and off-shore, reach the conjectural Peak Oil point, or the forecasted maximum rate of production following which the production eventually declines to zero[1], new unconventional sources and methods are being explored and utilized. Although seen as both a blessing and a curse, the Albertan Oil Sands have been put forward as Canada's gateway to enhanced energy security and economic growth. Only second to Saudi Arabia, the 178 billion barrels of petroleum reserves will not only sustain Canada's oil requirements for the next century, it has the ability to provide energy security on a global scale by increasing the diversity and reliability in the global market[2]. But, with this oil boon comes a heavy warning. As expounded by many state and non-state actors on the varying pros and cons of the Oil Sands and associated projects such as the Keystone and TransCanada Pipelines, it can be argued that the Oil Sands dialogue has been centered on energy and economic considerations while minimizing others. Projects which aim to directly enhance the output of the Oil Sands, such as the Keystone Pipeline, have encountered numerous hurdles, including a lack of support on the regional stage by the United States of America. By broadening the debate to include other key aspects of security, particularly society and environment, we will be able to appreciate the full security issue in order to develop a sound opinion on the matter.

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[1]Peak Oil, "Info & Strategies," last accessed 05 May 2015, http://www.oildecline.com.

[2] Kenneth P. Greenand and Stephen Eule, "Risk to Canada's Energy Sector." *Fraser Institute Alert*, May 2013, 3.

In order to develop this balanced understanding of the security implications of the Albertan Oil Sands, this paper will outline the complexities associated with the exploitation of this natural resource based on a critical security studies framework with a view to assessing the validity of the opposition being encountered both domestically and abroad.

To begin, this paper will first look at the geopolitical nature of oil. With an understanding of the degree of importance of oil as a world commodity, the overall idea of energy security will then be dissected through the use of the framework as laid out by the Copenhagen School model for International Relations. This paper will briefly explore and comment on the Canadian Government's analysis of the issue by exploring the five facets of the model; military, political, societal, economic and environmental. The next step will be to appreciate the regional complexities between Canada and the U.S.A. Finally, this paper will offer some observations and conclusions on the ongoing efforts to include the Oil Sands as a key component of security, and the implications of applying a broader definition of security.

It is important to acknowledge a key criticism of the framework as laid out by the Copenhagen School model, namely that it is too broad, and thus has the potential to confuse the issue. This paper posits that, as an alternative method of analyzing International Relation issues of the critical security studies realm, it has real value, since it recognizes and pays attention to key issues where traditional narrower methods of analysis do not.

DEFINING ENERY SECURITY

Before proceeding, we must appreciate what energy security is. Not defined by the Canadian government thus far, the International Energy Agency's (IEA) definition will be used as a suitable replacement. Energy security is the "uninterrupted availability of energy sources at

an affordable price". Expanded into long and short-term considerations, it also includes attributes of economic development, environmental needs and the supply-demand nexus. Based on this description, there is good reason to apply the framework from the Copenhagen School model.

GEOPOLITICS

In the geopolitics of oil, there are no significant substitutes for this 'black gold'. It is a non-renewable and finite resource affected by supply and demand principles. In order to balance out price fluctuations, oil producing Nations within the Organization of Petroleum Exporting Countries (OPEC) can inject surplus capacity into the system as carried out by Saudi arabia in the 1990s[3]. As another major oil producing area, Texas increased their production as well to offset oil reserve concerns during this period, but it wasn't until 2003 that Canada contributed to reducing the risk to the global reserves by adding its proven reserves to the pot[4]. With this simplistic review of geopolitical events, it becomes apparent that Canada does have a role to play on the wider geopolitical arena. However in order to do so, Canada must be able to exploit the oil sands and distribute the product to the global markets. Traditionally, the primary considerations given to this process have included economic, military and political, and we will now briefly investigate these.

SECURITY FACTORS FOR THE OIL SANDS

Firstly, let's consider the military factors relevant in securing the Oil Sands. Defined as the right to self-government over a specified territory, sovereignty is the central driving factor in

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[3] Robert McNally and Michael Levi, "A Crude Predicament: The Era of Volatile Oil Prices," *Foreign Affairs*, July/August 2011, 7.

[4] Kenneth P. Greenand and Stephen Eule, "Risk to Canada's Energy Sector." *Fraser Institute Alert*, May 2013, 6.

military terms for the majority of nations[5]. Benefiting from having a large water body between Canada and all other nations bar one, living in our 'fire proof house' has meant that threats towards our sovereignty and our possessions including our natural resources are minimal. For the Oil Sands, the threat of physical disruption or appropriation by other nations is unlikely therefore allowing government agencies to focus inward on internal threats such as sabotage[6]. Although the American military footprint has been expanded as far as the Middle East on their quest to improve both national and energy security abroad, Robert Bryce and others counter this expansionist idea based on the belief that the interconnectedness of the $5 trillion-per-year global energy market is the key to security and not military might[7]. Despite minimal perceived threats, the Canadian security apparatus has continued to have key involvement, particularly as manifested in the creation of the 5th integrated National Security Enforcement Team (INSET) in Edmonton, Alberta in 2012. This multi-agency counter-terrorism team focuses on security threats and political opposition to the oil sands industry[8].

From a political perspective, threats towards the stability of the state and the political system are considered[9]. Similar to the military threat, there is no obvious external threat to the system but internal issues are the driving factor. With minimal risk of being overthrown, the political security issue is more concerned about political longevity in a democratic society. In

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[5] Barry Buzan, Ole Waever and Jaap de Wilde. *Security: A New Framework For Analysis* (Colorado: Lynne Rienner, 1998), 49.

[6] "Canada Establishes Counter-Terrorism Force to Protect Oil Sands," *Jane's Intelligence Weekly*,4.24 (2012).

[7] Robert Bryce, "Energy Security Means Security Interdependence," National Defense University, Institute for National Strategic Studies (October 2009).

[8] "Canada Establishes Counter-Terrorism Force to Protect Oil Sands," *Jane's Intelligence Weekly,* 4.24 (2012).

[9] Barry Buzan, Ole Waever and Jaap de Wilde, *Security: A New Framework For Analysis* (Colorado: Lynne Rienner, 1998), 141-145.

today's context of the Oil Sands, it could be argued that the current government is solely focused on energy security and economic growth. Whether it was Harper's first address to the business community in 2006 where he declared Canada to be an energy superpower, or more recent speeches during a visit to the Irving Oil refinery in New Brunswick in 2013, the message has been the same; job growth, economic growth and long-term security[10].

Critical of this messaging, several state and non-state actors ranging from opposition leaders Justin Trudeau and Thomas Mulcair and non-profit organizations such as the Polaris Institute[11] have identified the fact that there is little consideration given to the environmental issue. Not an easy overall task to please all interested parties, the current government will have to balance all aspects of security if it is going to remain the majority government. A very recent example of this potential change in government can be related to the Alberta provincial elections where the oil supporting Conservatives where ousted for the left-of-center New Democratic Party whose environmental platform appears to be renewable energy focused based on public opinion[12]. Though the environment is only one issue among many, and that time will tell, this change in government at the provincial level demonstrates how the citizens within society have sought change.

Beginning to look outside of the traditional security topics of sovereignty and institution, national and regional concerns begin to emerge. Encompassing society and more specifically

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[10] Michael Tutton, "Prime Minister Harper says pipeline to East Coast helps build Canadian energy security," *Globe and Mail l*ast accessed 01 April 2015, http://www.theglobeandmail.com/news/politics/pipeline-to-new-brunswick-will-help-energy-security-harper-says/article13661537.

[11] Am Johal, "Canada-Report: Mining oil sands has not aided energy security," *Global Information Network* last accessed 24 April 2015, http://search ,proquest.com/docview/457560416?accountid=9867.

[12] "Alberta NDP's rise to power raises hopes for renewable energy," *Globe and Mail* last accessed 10 May 2015, http://www.theglobeandmail.com/report-on-business/alberta-ndps-rise-to-power-raises-hopes-for-renewable-energy/article24359711.

communities, the energy security debate on the oil sands has been addressed by many communities. The Aboriginal people of Northern Alberta have raised concerns regarding potential health effects, water quality and diversions, impact on wildlife populations and air quality. As if these issues were not enough, constitutionally protected rights as laid out in the various treaties have now become a focal point of this community[13]. Even though the Alberta Health Services issued a press release indicating that there were no problems associated with the Oil Sands, independent findings have revealed significant increases in various forms of cancer, leukemia and lymphoma[14]. Moving away from the directly affected geographical area, a West Coast independent newspaper, the Tyee, journalist Gordon Laxer has highlighted free trade matters whereby the oil needs of Atlantic Canadians would not be protected in the shadow of export regulations[15]. Even though there is ample documentation demonstrating how the Federal and Provincial governments as well as many organizations are consulting with Aboriginals in order to identify and mitigate these issues, 1500 employment opportunities for Aboriginals does not counter the increased cost and shortages for housing and increased pressure on regional traffic, health care and education systems as highlighted by the National Energy Board[16].

When reviewing the economic costs and benefits of the oil sands, it is a known fact that the processing of the oil is very costly due to the large quantities of natural gas and water needed[17]. Because of this heavy burden, it has been calculated that the global cost per barrel of

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[13] Danielle Droitsch and Tera Simieritsch, "Canadian Aboriginal Concerns With Oil Sands: A compilation of key issues, resolutions and legal activities," The Pembina Institute (2010).

[14] *Ibid.*, n.d.

[15] Gordon Laxer, "No Security in Canada's Pipeline Plans,." The Tyee, 20 August 2013.

[16] Danielle Droitsch and Tera Simieritsch, "Canadian Aboriginal Concerns With Oil Sands: A compilation of key issues, resolutions and legal activities," The Pembina Institute (2010).

[17] Daniel Moran and James A. Russell, *Energy Security and Global Politics* (New York: Routledge, 2009), 118-119.

oil be no less than $50 - $60 in order to be profitable[18]. Tied to the geopolitics of oil, the potential profit margin is therefore at the whim of those who can influence the global energy market such as OPEC. With the outlook of developing more efficient methods of extracting the crude oil from the sand and coupling this with the improved ability to transport the product to market, the economic potential is significant once these factors are resolved. Even though skeptics are fearful that the high processing cost per barrel may render the Oil Sands unprofitable in the long run, overall trends indicate that the global oil prices will continue to rise[19]. Therefore, the economic rationale for exploiting the Oil Sands is sound, there is economic growth to be had and job creation alongside it. The rationale for continued exploitation has traditionally been limited to these three factors while overlooking the broader question of costs and benefits in environmental terms.

Perhaps the most public and emotional matter in regards to the Oils Sands is that of concern for the environment. Caught in a 'he said/she said' situation, the myriad of reports results in a very complex situation. On the government and industry side, the overall theme appears to suggest that there is no crisis with the Oil Sands and associated activities. On the other hand, independent organizations such as the Pembina Institute have highlighted the key issues from the Aboriginals perspective. Factually, the production of "one barrel of oil from the Oil Sands is a water and energy intensive process which emits three times more greenhouse gases than the production of conventional crude oil"[20]. Broken down into its individual segments of water, geography and emissions, the negative impacts should surely be included when weighing

[18] "Canadian Energy Security: What Does Energy Security Mean for Canada," University of Ottawa and Canadian Security Intelligence Service, 7.

[19] *Ibid.,* 7.

[20] Am Johal, "Canada-Report: Mining oil sands has not aided energy security," *Global Information Network l*ast accessed 24 April 2015, http://search ,proquest.com/docview/457560416?accountid=9867.

up the impacts and thus affect the current appetite to exploit the Oil Sands. When viewing watershed issues, a multitude of problems surface. The first concerns water pollution. Increased levels of lead and mercury have risen in the Athabasca River according to University of Alberta water scientist, Dr. David Schindler. Countered by the industry sponsored Regional Aquatic Monitoring Program (RAMP) who declared that the pollution levels are normal due to the natural erosion, concerns about the scientific leadership of the RAMP has instilled a certain level of doubt[21]. Considering the tailing ponds which house the toxic water waste are directly adjacent to the river system, there is but a berm between containment and disaster. The second issue with water is diversion. Although regulated and licensed which would appear to be good at first glance, the amount of water which is diverted from the Athabasca River is enough to annually supply a city of 3 million people. During the low flow periods, this draw on the river system threatens fish livestock[22]. From a biogeographical point of view, the scraping of the surface through open pit mining and the general presence of humans has threatened the ecosystem, and in particular the caribou herd within the Oil Sands area. Acknowledged as a potential issue by North American Oil Sands Company/Statoil, research has been carried out on the impact on caribou where it was identified that a solution needs to be sought but that there is still time remaining based on higher than expected population counts[23]. Finally, the greenhouse gas emissions remain unchecked. Based on the significant burning of natural gas, environmental damage and the cancellation of costly and ineffective carbon capture and storage experiments[24],

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[21] Danielle Droitsch and Tera Simieritsch, "Canadian Aboriginal Concerns With Oil Sands: A compilation of key issues, resolutions and legal activities," The Pembina Institute (2010).

[22] *Ibid.,* n.d.

[23] "Oil Sands Activity Blamed for Caribou Decline," *CBC News* last accessed 10 May 2015. http://www.cbc.ca/news/technology/oilsands-activity-blamed-for-caribou-decline-1.1080268

[24] Richard Blackwell, "Alberta NDP's rise to power raises hopes for renewable energy," *The Globe and Mail* last accessed 05 May 2015, http://www.theglobeandmail.com/report-on-business/industry-

Canada was never on track to hit Kyoto Protocol targets even if it continued to be a participant in the program. Overall, one could argue that there are always two sides to any story, but few would disagree that the environmental effects need to be given more consideration.

With a comprehension of the individual aspects of security as framed by the IEA definition and the Copenhagen model, we can go on to ask how the regional complexities between Canada and the U.S.A. influence the Oil sands debate.

REGIONAL COMPLEXITIES

Reviewing several sources dating back to 2008, the general theme from our neighbours to the south has been portrayed as "Canada's Oil Sands help US energy security"[25]. As the main exporter of oil to the U.S.A., Canada has long been viewed as a stable and reliable provider of oil. By relying on Canada, the U.S.A. is able to partially pull away from OPEC nations[26]. Based on the current concept of the Keystone Pipeline, support for this project is in the U.S.A.'s best interest considering that the crude oil would be transported to the Gulf Coast for processing, with knock on benefits. As a secondary benefit, the Keystone project also has the potential of clearing bottlenecks of U.S. Bakken crude oil[27]. With all this talk of mutually beneficial outcomes for both Canada and the U.S.A., why hasn't the Keystone Pipeline been approved yet? As stated by Jeffry Kuper, Deputy Secretary of the US Department of Energy, "the biggest challenge lies in making sure this vast resource is developed in an economically efficient and environmentally

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news/energy-and-resources/alberta-ndps-rise-to-power-raises-hopes-for-renewable-energy/article24359711.

[25] "Canada Oil Sands Help US Energy Security," *Oil & Gas New* last accessed 24 April 2015, http://search.proquest.com/docview/1440144222?accountid=9867.

[26] *Ibid.*, n.d.

[27] Kenneth P. Greenand and Stephen Eule, "Risk to Canada's Energy Sector," *Fraser Institute Alert*, May 2013, 6.

responsible way"[28]. While this may have been considered a one-off comment back in 2008, the current lack of support for the project by President Obama reinforces initial environmental concerns by our neighbours[29]. Based on his inaugural speech and stated commitment to reducing carbon producing products, environmental concerns and a powerful lobby might potentially be a show stopper for the Keystone Pipeline. Harper hasn't convinced the Canadian people, nor the U.S.A.

WHAT IS THE GOVERNMENT TO DO

Traditionally, the realist view of energy security and economic prosperity, when applied to the Oil Sands, would be understandably appealing, given its more narrow and simple focus on the benefits. With the vast reserves of oil waiting to be exploited, the potential advantage for those in North America and other state-actors abroad is significant. Unable to gain traction on the three elements; the Oil Sands themselves, the Keystone Pipeline and the East Energy Project, an increasing wall of opposition appears to be building. The inability to process the raw crude oil in Canada, otherwise known as the "rip it and ship it" approach, combined with the lack of long-term employment and misrepresented benefits of pipe versus rail[30] safety, is not only pushing Canadians away from the Oil Sands but Americans as well. The only way to get through this road block, from a critical security studies perspective, is to open the debate and to have a

[28] "Canada's Oil Sands Valuable to US Energy Security: Top US Energy Official Tells C.D. Howe Institute," *Canada NewsWire* last accessed 24 April 2015, http://www.cdhowe.org/pdf/Verbatium_Kupfer.pdy.

[29] Coral Davenport, "Senate Fails to Override Obama's Keystone Pipeline Veto," *The New York Times* last accessed 12 May 2015, http://www.nytimes.com/2015/03/05/us/senate-fails-to-override-obamas-keystone-pipeline-veto.html?_r=0.

[30] Alberta Federation of Labour, "Energy East the wrong type of petroleum infrastructure," last accessed 01 May 2015, http://www.afl.org/tags/oil_sands_and_energy.

meaningful discussion of the pros and cons of the Oil Sands as it pertains to ALL aspects of security.

CONCLUSION

This paper set out to use an exploration of the security factors involved in the exploitation of the Oil Sands in order to assess the validity and wisdom of basing the decision to exploit the resource based solely on a traditional approach of analysis. The approach utilized thus far has focused on economic benefits and a lack of political and military risk but at the expense of other considerations including societal and environmental impacts.

Lacking a Canadian definition for energy security, the IEAs was chosen as a suitable replacement in order to bracket the aspects of availability, affordability, economics, environment and supply-demand. Exploring the influence of geopolitics on oil, the supply-demand nexus was quickly sketched. Armed with a definition for energy security and appreciation of the global affairs of oil, the 5 factors for security encompassing military, politics, society, economics and environment where explored. From a traditional security perspective, the military and political aspects of energy albeit important, could be considered benign in this circumstance. The more significant issues relate to the public outcries for societal and environmental sustainability and security. Even with the security and economic benefits for the U.S.A. to receive Albertan crude oil, the Regional dynamics are not as clear cut as one would think considering the fact that the Keystone Pipeline has yet to be accepted and approved in the south. Lastly, if the Canadian government is unable to satisfy the questions and concerns not only of the Canadian population

but those of our neighbors to the south, the Oil Sands will continue to be an uphill battle for the years to come. Based on these observations, this paper argues that only logical way ahead is for governments and stakeholders to hold more open discussions on all aspects of energy security while attempting to make the Oil Sands more efficient.

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