

Oil from Ice: Examining the Impact of
Energy Development on Canadian Arctic Sovereignty

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ABSTRACT

The Canadian Arctic is facing new international challenges as global warming melts Arctic ice, opening up new shipping routes and access to untapped, potentially rich resources. As it has in the past, Canada is turning to defense spending to help strengthen its sovereignty in the region. Sovereignty is a multi-dimensional concept which requires a state to demonstrate control over its territory and its citizens. Developing Arctic energy resources is one pathway for Canada to achieve greater control in the region and strengthen its sovereignty claim.

This thesis considers realist and liberal policy approaches to the development of Canada's Arctic energy resources. In the past, Canada has used both approaches to encourage the development of its Arctic energy reserves. From the 1950s to the early 1970s Canada relied solely on private companies to explore and produce Arctic resources. Between 1975 and 1984 Canada took a more interventionist approach. In 1975, Petro-Canada was created to help stimulate the development of Arctic resources. One of Petro-Canada's primary goals was to act as a catalyst for private energy companies operating in the Arctic.

This thesis seeks to expand upon the literature discussing Canadian Arctic sovereignty. By examining the impact of the two energy approaches on state sovereignty, this study draws a series of conclusion about the role of energy development in improving Canada's sovereignty claim. This thesis argues that government intervention is required to develop working partnerships amongst Canadian oil producers in order to bring Arctic energy reserves online in a timely and efficient manner to help bolster Canada's sovereignty claim.

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LIST OF ACRONYMS AND ABBREVIATIONS

BCM	Billion Cubic Meters
BPD	Barrels Per Day
CAPP	Canadian Association of Petroleum Producers
CLCS	Commission on the Limits of the Continental Shelf
ECS	Extended Continental Shelf
EEZ	Extended Economic Zone
EIA	Energy Information Administration
IEA	International Energy Agency
IOC	International Oil Company
IPE	International Political Economy
LNG	Liquefied Natural Gas
NCS	Norwegian Continental Shelf
NOC	National Oil Company
OECD	Organization for Economic Cooperation and Development
OPEC	Organization of the Petroleum Exporting Countries
RCS	Russian Continental Shelf
SDFI	State Direct Financial Interest
SOE	State-Owned Enterprise
STATOIL	Norway's National Oil Company
UNCLOS	United Nations Convention on the Law of the Sea
USGS	United States Geological Survey

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CHAPTER 1: INTRODUCTION

1.1 Background

After many years on the sidelines, the contentious issue of Canadian Arctic sovereignty is returning to the political spotlight. In the last decade, Canada's concern for the region has grown considerably. The need to strengthen Canada's sovereignty claim has taken on a new sense of urgency as the polar ice thaws, creating new shipping routes and allowing access to resources previously unavailable. The receding polar ice is creating new economic opportunities while imposing new security challenges. Other circumpolar nations are actively challenging Canada's sovereignty in the region.

There are a number of factors that help to illustrate why Canada's sovereignty in the Arctic is being challenged. First, Canada's Northern territories are sparsely populated. In 2009, Statistics Canada estimated that only 104,000 people live in the Yukon, Northwest Territories and Nunavut (Statistics Canada, 2009). The low level of population in the Canadian North undermines the Canadian claim to the region.

Second, global warming is opening up new transportation routes in Canada's northern seaways. The opening up of new waters through the Northwest Passage is particularly controversial. Ships that normally pass through the Panama Canal to transfer goods between the Pacific and Atlantic Ocean will soon be able to navigate through the Northwest Passage (Stoicof, 2008: 33). For example, an oil tanker travelling from Europe to Asia using the Panama Canal has to travel a distance of approximately 13,000 nautical miles. If that ship were to use the Northwest Passage it would only have to travel roughly 8,500 nautical miles (Mifflin, 2007: 55). As Arctic ice melts pressure to utilize new shipping routes, such as the Northwest Passage, will increase.

Third, a number of outstanding territorial disputes are undermining Canada's claim to the Arctic including the status of the Northwest Passage, the dispute over Hans Island and the Kennedy Channel, the maritime boundary between Alaska and the Yukon border in the Beaufort Sea, and perhaps most importantly, Canada's Arctic continental shelf boundary. Fourth, the lack of infrastructure for development threatens Canada's future prosperity in the region. For example, the territory of Nunavut, which spans 1,994,000 square kilometers or approximately 20 percent of the total Canadian land mass, has only one government-maintained road running 21 kilometers from Arctic Bay to Nanisivik. Roads are only one aspect of the total infrastructure requirement but they do demonstrate the state of infrastructure in the North. The very limited infrastructure in the region ultimately threatens the governments' ability to control the region. The government is therefore justifiably concerned about sovereignty.

Perhaps the greatest challenge to Canada's sovereignty claim is the commonly held perception that insufficient resources and personnel have been dedicated to the region. The lack of infrastructure coupled with the fact that Canada has "no central institution or forum for the determination of national priorities for the circumpolar North" undermines Canada claim to the region (Griffiths, 2008: 3). Despite these concerns, the Canadian government has largely reinforced the idea of sovereignty by force.

Historically, Canada has turned to the Canadian Forces to reinforce its sovereignty in the Arctic (Lakenbauer, 2008: 1). Canada's major military presence in the North is headquartered in Yellowknife. The Canadian Forces Joint Task Force has over 3,500 military personnel who are changed with the task of patrolling the North. While this military presence in the North certainly helps to bolster Canada's claim to the Arctic, the sole application of military power alone does not suffice to fulfill all of the requirements of sovereignty (Huebert, 2005: 24).

Enhancing sovereignty involves more than simply placing a military presence in the region. Sovereignty is a multi-dimensional concept which requires a state to demonstrate control over its territory (Krasner, 1999: 10). One means of strengthening state sovereignty is through effective occupation which is accomplished by a visible and continuous presence of the state. In many parts of the Canadian North, effective occupation and administration are lacking. Asserting Arctic sovereignty means having the ability to promote economic development, while protecting the environment and health of Canada's Arctic citizens (Mifflin, 2007: 15). Canada's control of the region is directly related to the prosperity of its northern citizens. If Canada is to strengthen its sovereignty claim, it needs to close the standard of living gap between northern and southern Canadians. Energy developments can provide opportunities for economic growth which in turn can raise the standard of living for Northern Canadians and bolster Canada's claim to the region.

The Canadian Arctic has enormous natural resource potential but significant challenges stand in the way of developing these resources. Private investors have been reluctant to invest in energy projects in the Canadian Arctic due to the high cost and high risk associated with non-conventional energy development. In the past, the Canadian government has intervened in the oil industry through a national oil company (NOC) in order to promote the development of Arctic resources. This type of state intervention is not unique to Canada. Of the five Arctic states, three rely on state-run oil companies to explore and produce hydro-carbon resources in the Arctic. Norway, Russia, and Greenland all use NOCs as policy tools to develop off-shore resources on their continental shelves. The use of state-run oil companies has been instrumental in developing non-conventional projects in the Arctic.

Developing non-conventional energy resources offers a number of benefits to the Canadian government and the people of the North and is one means to improve Canada's

sovereignty claim. Since the mid-1980s, Canada has relied on a liberal energy policy to develop its Northern resources. In relying solely on private energy companies, the government has let the market determine what areas are to be explored for energy resources and what projects are to be developed. Over the past two decades private sector developments have been slow, although interest in the region is growing. Private energy companies have been reluctant to invest the large amount of resources and capital needed to develop energy in the Arctic. The question then, is how can the Canadian government encourage the development of these resources? What role should the state play in encouraging the development of these resources?

1.2 Focus, Objectives, and Research Questions

This thesis examines the issue of Canadian sovereignty in the Arctic focusing on energy developments as a means to bolster Canada's claim to the region. In order to do so, this thesis seeks to address the following questions:

- A.) Can Canada sustain/bolster its claim to the Arctic using a liberal approach to energy development?
- B.) To what extent does the state have to be involved in energy development to improve Canada's sovereignty claim?

The objective of this thesis is to examine how energy developments can improve Canada's sovereignty claim in the North. This thesis argues that government intervention is required to develop working partnerships amongst Canadian oil producers in order to bring Arctic energy reserves online in a timely and efficient manner to help bolster Canada's sovereignty claim. Due to the high risk and high cost associated with developing Arctic resources, the Canadian government necessarily has to be involved in the development of these resources. At an absolute minimum, the state will have to provide private companies with large

scale subsidies in order to encourage development in the Canadian Arctic. However, this does not require direct intervention in the form of a national oil company. The government can direct investment through other means to help foster economic development and encourage the creation of new infrastructure in the Canadian North.

1.3 Organization of the Thesis

In addition to the introductory and concluding chapters, this thesis includes four chapters. Each chapter has a specific aim and is used to inform the subsequent chapters.

Chapter Two, *Defining Sovereignty*, examines the issue of state sovereignty using a model proposed by the international relations specialist, Stephen Krasner. Krasner suggests that sovereignty is composed of four separate and distinct meanings. This chapter will examine each type of sovereignty separately. The purpose of this chapter is to identify what can be done to strengthen Canada's sovereignty claim.

Chapter Three, *Approaches to Energy Development*, examines the policy pathways governments adopt towards developing energy. Using two models situated in the literature dealing with International Political Economy, the chapter examines the liberal and realist approaches to developing energy. The main purpose of this chapter is identifying which policy approach is most likely to improve sovereignty by increasing control in the North.

Chapter Four, *Comparing Energy Approaches*, examines the energy approaches adopted by two Arctic states, Norway and Russia, looking for similarities with and alternatives to the Canadian approach. These two cases have been selected based on their ability to shed light on the impact of energy policy on Arctic sovereignty. These countries have unique energy development models with varying degrees of state control, making them ideal for comparison

against the Canadian approach. The purpose of this chapter is to highlight how the policy approach has impacted state sovereignty in the North.

Chapter Five, *Canadian Energy Policy and Sovereignty*, examines Canada's approach to developing energy in the North, focusing on the role of the state in encouraging private sector investment. The purpose of this chapter is to examine Canada's approach to developing energy in the frontier areas. The chapter ends with a discussion how Canada can use energy development to improve its sovereignty claim.

1.4 Contribution of the Thesis

This thesis will contribute to the discourse on the contentious issue of Arctic sovereignty. It will provide an in-depth analysis of Canada's sovereignty claim in the North. It advocates adopting an interventionist approach to energy development in the Canadian Arctic in order to strengthen state sovereignty. The goal of this thesis is to expand the discussion on Arctic sovereignty to include energy development as a means to improve Canada's claim to the region.

1.5 Methodology

The information used in this thesis is derived from both primary and secondary sources. The primary sources include government documents, reports from non-governmental organizations, and think tanks reports. Secondary sources have been used to provide context for analyzing primary sources. This thesis uses the model of state sovereignty proposed by the Dr. Stephen Krasner to analyze Canada's sovereignty claim in the North. It also uses two models prevalent in International Political Economy, in its discussion and analysis on Arctic energy policy.

Many of the documents used in this study were accessed via the internet. The use of web sources was an important component of the research as the majority of primary sources used in the thesis were only available in electronic format on government websites.

CHAPTER 2: DEFINING SOVEREIGNTY

2.1 Introduction

The definition of sovereignty is somewhat ambiguous. Its meaning is complex and has changed over time as multiple definitions have arisen to explain the many approaches states have taken towards sovereignty. It relates to issues of control, authority, and perception (Carnaghan and Goody, 2006: 3). However, there exists no universal agreement on exactly what sovereignty is, or how a state can strengthen its sovereignty. As the international legal scholar Lassa Oppenheim observes, “there exists perhaps no conception the meaning of which is more controversial than that of sovereignty. It is an indisputable fact that this conception, from the moment when it was introduced into political science until the present day, has never had a meaning which was universally agreed upon” (Oppenheim, 1992: 102).

The absence of a clear definition makes any discussion regarding sovereignty difficult but not impossible. In order to understand sovereignty, the varying definitions need to be unpacked and examined to highlight the key components. This chapter examines state sovereignty by using a framework proposed by the international relations specialist, Stephen Krasner. In his book, *Organized Hypocrisy*, Krasner suggests sovereignty is composed of four separate and distinct meanings. The four types of sovereignty are domestic, independence, international legal and Westphalian sovereignty. He argues that “embedded in these four usages of the term is a fundamental distinction between authority and control” (Krasner, 1999: 10). Each type of sovereignty is exercised in a different manner which relates to these two concepts.

The purpose of this chapter is identifying how Canada can strengthen its sovereignty claim. This chapter argues that Canada should focus on improving its control of the region by

fostering economic development and building new infrastructure. The ability to demonstrate control can serve to improve domestic and interdependence sovereignty, which in turn can alter the perception of other states and increase Westphalian and international legal sovereignty. As the state has direct control over domestic sovereignty, this should be the main area in which Canada focuses on in terms of strengthening its sovereignty.

In order to improve its control of the region, Canada needs to adopt a broader approach to sovereignty which centers on improving domestic sovereignty. This approach should include state support for economic development and the building of new infrastructure for commercial use. Much of the current discussion on Canadian sovereignty is concerned primarily with security issues and the need to increase the government's presence in the region via the Armed Forces. However, the sole application of military power serves only to increase interdependence sovereignty and does little in the way of improving domestic sovereignty. While this military presence in the North certainly helps to strengthen Canada's claim to the Arctic, it is not the only means of doing so. In the case of Canada, small improvements, such as the development of oil and gas reserves translate into improved sovereignty in the long run.

2.2 Authority and Control

States exercise sovereignty through control and authority. Control can be gained through coercion and force, while authority must be legitimated. Control can be understood as a government achieving its will through force, whereas authority is something gained over time (Krasner, 1999: 9-10). Krasner defines authority as "a mutually recognized right for an actor to engage in specific activities" (Krasner, 1999: 10). When authority is complete the government may never have to resort to force to demonstrate its control (Krasner, 1999: 10). However, exercising authority requires a small degree of control in order to be effective.

Krasner suggests that “a loss of control over a long period of time could lead to a loss of authority” (Krasner, 1999: 11). If the state is unable to control its territory and population, it could result in a decline in its authority. On the other hand, “the effective exercise of control, or the acceptance of a rule for purely instrumental reasons, could generate new systems of authority” (1999: 11). In other words, if a government is able to control a territory for a long period of time, it could result in the gradual acceptance of its claim to that territory. For Canada, this means if the government can demonstrate control of the region for a lengthy period of time it could result in the gradual recognition of Canada’s sovereignty in the region.

Each of the four types of sovereignty deals with authority and control separately. Both Westphalian and International Legal sovereignty refer to authority as providing legitimacy to the state to act in international affairs. Interdependence sovereignty refers to the ability of public officials to control and regulate the movements of goods, people, capital etc. across state borders while domestic sovereignty refers to both authority and control (Krasner, 1999: 5).

It is important to note that the loss of one type of sovereignty does not necessarily imply a loss of the others. Similarly a loss of control does not necessarily mean a loss of authority. The loss of interdependence sovereignty generally translates into a loss of domestic control but not necessarily mean a loss of domestic authority. Take for example Canada’s 1969 sovereignty crisis, when the U.S oil tanker *Manhattan* traveled through Canada’s internal waters. This incident demonstrated a clear inability to control this water way but did not represent a loss of authority, as the Canadian government responded by passing environmental legislation regulating the passage of marine traffic in the area (Bankes, 1987: 291). This is a good example of the distinction between the two terms. While Canada’s authority to regulate its coastal waters was assumed, its ability to actually control these waters was lacking.

In part, this distinction between authority and control explains why the Canadian government has opted to strengthen its interdependence sovereignty through military exercises and patrols in the region, and why, improvements in this type of control have little or no bearing on Westphalian and International legal sovereignty. More will said on this in the next few pages as the key elements of each type of sovereignty are examined. Table 2.2 provides a summary of how each type of sovereignty deals with authority and control.

Table 2.2

Sovereignty Summary		
Sovereignty Type:	Authority:	Control:
Domestic	Concerned with how public authority is organized. What authority structures are recognized in a state?	Examines the level of effective control by those holding authority. How effective is the level of control?
Interdependence	Not concerned with authority.	Exclusively concerned about the ability of state to control what comes across its borders. Can a state control movement across its own borders?
International Legal	Authority is given to territorial entities with judicial independence. Is the state recognized as having the authority to engage in international agreements?	Not concerned with control.
Westphalian	Concerned with the exclusion of external actors from the affairs of the state. Does the state have the ability to exclude external actors?	Not concerned with control.

2.3 Domestic Sovereignty

Initial definitions of sovereignty attempted to legitimize the idea that rulers had sovereign rights to govern their territories. Early political philosophers, such as Thomas Hobbes, attempted to provide a rationale for one sole and final source of authority within the state (Krasner, 1999: 11). The contemporary definition refers to the effectiveness of political authorities within the borders of a state (Baylis and Smith, 2004: 46). Krasner's definition follows this pattern; he describes domestic sovereignty as "the formal political authority within the state and the ability of political authorities to exercise effective control within the borders of their own polity" (Krasner, 1999: 3-4).

One important component of domestic sovereignty is that the form of political organization or type of political policy it adopts is independent of the other types of sovereignty. Krasner suggests that "polities can be organized in many different ways without raising any issues for either international legal or Westphalian sovereignty" (Krasner, 1999: 11). For example, a country may exercise very limited control over drug use without affecting its ability to exclude external actors from interfering in the domestic political affairs. Several states, such as Portugal, have decriminalized the use of drugs but are still fully recognized as sovereign states. Any impact domestic sovereignty might have on Westphalian or international legal sovereignty depends on the reaction of the international community, which is generally based on how that government treats its own citizens, and more importantly on the self-interest of other more powerful states (Krasner, 1999: 12).

Domestic authority is gained when the population of a state places their trust in the government in return for protection and certain economic and other forms of regulation. Domestic sovereignty can serve to improve the other areas of sovereignty by increasing

government control and authority. For Canada, the more the state is able to provide for its Northern residents, the greater the government's control will be. This is also the primary area in which energy developments can be used to increase the government's control of the region by fostering economic development and building new infrastructure.

2.4 Interdependence Sovereignty

Interdependence sovereignty refers to “the ability of public authorities to control transborder movements” (Krasner, 1999: 9). The ability to control who and what comes across domestic borders is important for governments and has become more difficult to control with improvements in transportation and communications technologies. This had led a number of international relations scholars to assert that sovereignty is being eroded by globalization. Krasner suggests that these analysts are primarily concerned with questions of control but not authority (Krasner, 1999: 12). The increasing interdependence of states has not stopped governments from pursuing national policy agendas, nor has it prevented states from exercising state control where warranted.

As noted above, interdependence sovereignty is primarily concerned with control. In the Canadian context, this means control over what comes in and out of the Canadian border. In order to effectively control what comes into Canada from its Northern seaways, the Canadian government will have to clearly define its borders and put in place a system capable of regulating marine traffic and preventing violations to Canadian interdependence sovereignty. Failure to do so will negatively impact Canada's domestic sovereignty.

In order for Canada to limit its loss of interdependence sovereignty greater control is needed in the North. The infrastructure needed to control the movement of goods and people is currently lacking in the Canadian Arctic. As the Arctic ice melts, ports like the one at Churchill

will likely see an increase in the volume of goods coming through the port (Huebert, 2005: 21). Without proper control over what comes through these ports Canada will see a decline in its interdependence sovereignty and consequently a decline in its domestic sovereignty.

2.5 International Legal Sovereignty

This type of sovereignty generally refers to the authority of a state to act in the international arena as the sole authority. Krasner defines it as “the practices associated with mutual recognition usually between territorial entities that have former jurisdictional interdependence” (Krasner, 1999: 3-4). International legal sovereignty is primarily concerned with “establishing the status of a political entity in the international system” (Krasner, 1999: 14). This type of sovereignty is embedded in international law, which is composed of a series of treaties and norms that attempt to regulate the behavior of states in the international system.

A key consideration is that international law is more malleable than other systems of law (Chomsky, 2003: 201). Take for example the International Court of Justice (ICJ), where rulings are binding only on parties that have submitted their case before the court. Parties that have not agreed to settle an issue in the ICJ are not bound by any ruling made in the court; because of this a country like Canada cannot be taken to court without first agreeing to settle the dispute in court (Aust, 2005: 5).

Arguably, powerful states follow international law only to the extent that it does not threaten their interests. If the law is restrictive to the interests of powerful states, it is of little consequence to simply ignore the law. Consider the international terrorism case taken to the ICJ by Nicaragua against the United States. The ICJ ruled in favor of Nicaragua, stating that the U.S. had violated international law by supporting the Contra guerrillas in their violent struggle against the Nicaraguan government. The U.S. rejected the court’s decision stating the court

lacked the proper jurisdiction to hear the case and later vetoed a United Nations Security Council resolution calling on all states to observe international law, effectively preventing Nicaragua from receiving any compensation (Chomsky, 2003: 121). In other circumstances, states may attempt to support the use of international law as the cost of losing it becomes too high (Slomanson, 2003: 48).

International legal sovereignty is primarily concerned with “establishing the status of a political entity in the international system” including its territorial boundaries (Krasner, 1999: 14). While Canada is recognized as sovereign state at the United Nations, and many other international bodies, its territorial boundaries have not been universally accepted. Canada is currently engaged in a number of territorial disputes with neighboring Arctic states making it difficult to enforce its territorial integrity.

Other states are critical of Canada’s legal claim to the Arctic water ways and have gone as far to suggest Canada is operating outside of the confounds of international law by claiming all of the Arctic waters ways as internal waters (Holmes, 2008: 332). However, if Canada is able to demonstrate control of its Northern territory for a long period of time, it could result in its authority being accepted by the international community. If Canada could demonstrate greater control of the NWP through regulation and policing, as well as offering emergency services, the international community would be more inclined to accept Canada’s authority in the region. In other words, improvements in domestic control can ultimately lead to the strengthening of Westphalian and international legal sovereignty.

2.6 Westphalian Sovereignty

Finally, sovereignty has been understood as the Westphalian model. “Westphalian sovereignty refers to political organization based on the exclusion of external actors from

authority structures within a given territory” (Krasner, 1999: 20). In its simplest form, this type of sovereignty refers to the ability of a state to choose the policies and institutions they regard as optimal without outside interference.

One of the most important aspects of Westphalian sovereignty is the notion that the domestic authority structures of a state should operate without foreign inference both internally and externally. Historically, this conception of sovereignty has been favored by weaker states and opposed by stronger states (Krasner, 1999: 21). This is an important consideration, as powerful states must be cautious regarding the precedents they set, specifically those pertaining to the establishment of territorial boundaries, which may affect their national interests in the future (Waltz, 1979: 82). For example, if the United States recognizes Canada’s claim to the ownership of the Northwest Passage, it could encourage other states to claim important waterways effectively closing them off to international passage.

The next section examines sovereignty issues that pertain to the land versus those that pertain to the water, as they are based on two separate bodies of law and require separate considerations. The legal requirements of sovereignty are closely related to issues of authority and control.

2.7 Control of the Land

Canada’s claim to the Arctic landmass is far less controversial than its claim to the Arctic water ways. Canada inherited its title to the Arctic landmass from Britain in the late 1870s. In 1907, a Canadian senator attempted to expand Canadian jurisdiction in the Arctic by using sector theory to claim all the land, sea, and ice up to the North Pole (Gunitskiy, 2008: 265). During the 1920s, Norway, the United States, and Denmark began exploring the Arctic. One particular area

of interest was Ellesmere Island and the surrounding territory. All three states made claims of ownership which were contested by Canada.

In 1933, a ruling made by the International Court of Justice (ICJ) laid the foundation for Canada to establish its sovereignty over the Arctic. The case in question involved Eastern Greenland, a disputed piece of territory between Denmark and Norway. The court ruling emphasized the role of the state in determining ownership:

These acts, coupled with activities of the Danish hunting expeditions which were supported by the Danish government, the increase in the number of scientific expeditions engaged in mapping and exploring the country with the authorization and encouragement of the government, show to a sufficient extent—even when separated history of the preceding periods—two elements necessary to establish valid title to sovereignty, namely: the intention and will to exercise such sovereignty and the manifestations of state activity (Hyde, 1933: 732).

The court's ruling set a clear precedent by which a country could establish its territorial sovereignty. In order for Canada to bolster its sovereignty, the government must increase its presence in the region. This emphasizes the pivotal role of the Canadian government in improving its sovereignty claim. In short, the Canadian government needs to be directly involved if the country is going to strengthen its claim to the Arctic.

This of course is problematic. In recent years, Canada has neglected its naval patrols of the region and is currently engaged in direct territorial disputes with Denmark and the United States. There is an urgent need to increase the governments' presence in regards to infrastructure and vital services. A greater level of state activity is required if Canada is to improve its sovereignty claim (Huebert, 2005: 21). As part of this effort, the government will have to encourage economic development. One means of doing this is to encourage oil and gas exploration.

Domestic sovereignty can be improved by increasing the government presence in the region and by increasing the level of services provided to the occupants of the region. By exercising a greater level of control in the region, Canada will improve its domestic sovereignty and consequently its international legal and Westphalian sovereignty. However, this applies only to Canada's claim to the land and not its Arctic waterways.

2.8 Control of the Water

Canada's claim to sovereignty over the Arctic waterways is not universally accepted and there are many competing interests in the region. Territorial claims to the Arctic seaways date all the way back to the beginning of the 20th century. In 1909, Canada was the first country to make a claim to the Arctic region, when the Canadian government claimed all the territory from its Arctic shore to the North Pole using the sector principle. The United States made a counter claim in 1924, arguing that the North Pole was an underwater continuation of Alaska. Soon after, the Soviet Union claimed the waters from its Northern shore to the Kola Peninsula and the Bering Strait, extending all the way up the North Pole (Gunitskiy, 2008: 264-265). These conflicting claims were never resolved.

Over the last decade the competing claims to Arctic territorial waters have increased. These competing claims are governed by the United Nations Convention on the Law of the Sea (UNCLOS). The UNLCOS framework was created to govern "nearly every aspect of maritime law, including sovereignty limits, navigation, seabed mining, and environmental protection of the world's oceans" (Holmes, 2008: 331). The UNCLOS framework provides a mechanism for resolving ocean related territorial disputes. According to the convention, a state can claim a 230-mile exclusive economic zone (EEZ) off its coast. In the EEZ, each state is allowed to exploit all natural resources including subsurface oil and gas reserves (Gunitskiy, 2008: 266-267). A state

can extend its territory beyond the EEZ, provided the territory is an extension of its continental shelf.

Canada is currently mapping the outer limits of its continental shelf. The Canadian government has committed over C\$110 million to the mapping of the seabed shelf on Canada's Atlantic and Arctic sea coasts. The government action in this regard will go a long way to increasing its control and authority in the region. When Canada submits its claim to the Commission on the Limits of Continental Shelves (CLCS), it could potentially add up to 1.75 million square kilometers to its Arctic territory (Standing Committee on Fisheries and Oceans, 2009: 18). However, a number of outstanding territorial disputes are likely to threaten Canada's claim to the Arctic, including the status of the Northwest Passage, the dispute over Hans Island and the Kennedy Channel, the maritime boundary between Alaska and the Yukon.

Even with a successful claim to the CLCS, a number of challenges will still threaten Canadian sovereignty in the Arctic. One of the main difficulties Canada will have to overcome is the commonly held perception that Canada lacks control of the region. As the Arctic scholar Andrew Charron observes "insufficient resources and personnel have been dedicated to the Arctic to demonstrate a significant presence, thereby weakening Canada's sovereignty claim" (Charron, 2005: 5).

Despite its lack of control, Canada has taken two important steps to ensure its claim to the Arctic water ways is recognized under international law. The first step is the establishment of straight base lines around the archipelago to determine territorial waters. This is based on 1951 ICJ case that ruled in favor of Norway for its establishment of a straight baseline around its coast (Ngantcha, 1990: 26). Canada followed suit in 1986 by establishing straight baselines through its Arctic archipelago. As part of the process, the Canadian government published official maps and

tables to define the baseline as required by article 16 of UNCLOS (Office of the Judge Advocate, 2005: 263-264). As part of this claim, Canada argued that the internal waters were based on historic title. The second step is the expansion of Canada's costal boundaries from 3 to 12 nautical miles. These two actions effectively closed off the North West passage. At the time there was little in the way of resistance to the Canadian claims as the passage was covered in ice and closed to regular shipping. Now that the ice is beginning to recede, the Canadian claims to the region are being met with intense opposition. The fact that Canada waited over three decades to claim the strait base lines boundaries tends to weaken its case (Franckx, 1993: 108).

Canadian Arctic waters are important to Canada as well as the international community. States dependent on trade want to be able to utilize the Northwest Passage, a seaway that runs through the Canadian Archipelago connecting the Atlantic and Pacific oceans. Currently, no commercial vessel is able to navigate the passage without the assistance of ice breakers to clear the way. In the next two to three decades, the ice could melt enough for these ships to travel through the passage without any assistance (Binkely, 2008: 1).

A number of states have contested the Canadian claim to the passage. These states, led by the United States, have argued that the channels in the Arctic Archipelago form a straight which, under UNCLOS III, can be used for international navigation (Rothwell, 1996: 23). When the Northwest Passage was completely frozen there was no need to determine who controlled it, but now that the ice is melting and a new shipping route may be opening up the issue of control is becoming more important (Binkely, 2008: 1-2).

The Canadian government has suggested it is sovereign over the waters of the NWP based on historical title. However, the government must be able to demonstrate its exclusive control over the territory for a lengthy period of time in order to successfully claim historical

ownership. As discussed previously, if Canada can demonstrate greater control over the NWP it could lead to the gradual acceptance of its sovereignty in the region. In short, Canada needs to increase its control of the North in order to strengthen its sovereignty claim.

2.9 Conclusion

Canada's claim over the Arctic has grown more secure in the last century, from the early territorial challenges in the 1920s regarding Ellesmere Island to the sovereignty crisis of the 1980s concerning the passage of U.S vessels in Canadian territorial waters. The establishment of the archipelagic baseline and creation of legislation to limit pollution are good starting points, but have done very little to increase government control of the region.

Over the past several decades, Canada has taken a number of steps that have helped solidify its claim to the region. However, none of these actions have increased the level of control exercised by the federal government. As discussed previously, the requirements and perception of sovereignty change overtime but the ability to demonstrate control can serve to improve domestic and interdependence sovereignty, which in turn can alter the perception of other states and increase Westphalian and international legal Sovereignty.

The purpose of this chapter was to frame the sovereignty issue in a way that would highlight what aspects are missing from Canada's claim. While there are no serious threats to Canada's control over its land mass, the government must continue to demonstrate its presence and control in the region. This can be achieved by promoting research, facilitating economic development, deploying military personal and technologies, and building new infrastructure. This is based upon the ICJ ruling regarding ownership of Eastern Greenland, which highlighted the need for government involvement if a sovereignty claim is going to be successful.

The Canadian government needs to consider sovereignty from a broad perspective and not narrowly from the confines of a military point of view. Canada needs to go beyond defense based consideration to improve its sovereignty to include economic development plans. In order to improve its control of the region, Canada needs to support economic development and the building of new infrastructure for commercial use.

The remainder of this paper will focus on three elements of sovereignty that can be achieved through energy developments: control, infrastructure, and economic development. The exploration of offshore oil and gas resources is a good starting point. Once these resources are brought online they can foster economic development and bolster Canada's control of the region. This brings up two related questions: How can the government encourage the development of these resources? To what extent does the government have to be directly involved? These questions will be answered in the following chapters.

CHAPTER 3: APPROACHES TO ENERGY POLICY

3.1 Introduction

In 2008, Prime Minister Harper outlined the government's plan to map the Arctic seabed for energy and mineral resources "in order to encourage development and defend Canadian sovereignty in the far North" (Boswell, 2010). Harper summed up the government's position succinctly: "To develop the North we must know the North. To protect the North, we must control the North. And to accomplish all our goals for the North, we must be in the North" (Boswell, 2010). Harper's position corresponds with the previous discussion on sovereignty. In order for Canada to improve its sovereignty claim it must demonstrate greater control over the land and seaways in the North. Energy development is one means to achieve this.

Energy developments provide an opportunity for the Canadian government to increase its control of the region. In order to capitalize on this opportunity the Canadian government will need to ensure new energy projects are used to promote the national interest. As the Canadian Foreign Policy Specialist Rob Huebert observes, "what is needed is a coherent and comprehensive strategy that begins to develop the policy tools now to ensure that Canada's interest are protected in the Canadian North. In this manner, the Canadian Arctic will not be lost by incremental defeats" (Huebert, 2005: 10). The question then, is what type of energy policy will encourage the development of Arctic resources?

The theory regarding energy policy sits within the wider literature that deals with International Political Economy (IPE). In a broad sense, IPE examines the role of states and international institutions in managing conflicts and facilitating cooperation in the global political economy. It focuses on the interrelationship between public and private power in the allocation

of scarce resources. Unlike other social science disciplines, IPE does not have a specific approach to studying the subject. It offers a variety of ideas and theoretical frameworks in which to understand and view the complex global economy.

As a discipline IPE focuses on the interaction of economics and politics at the global, regional, and national level. Robert Gilpin, a noted IPE scholar, defines political economy “as the interaction of markets and powerful actors” (Gilpin and Gilpin, 2001: 45). Gilpin suggests that one cannot comprehend how the global economy functions without an appreciation of how markets operate and how the state and other actors attempt to manipulate the market. There are three theoretical schools that dominate IPE: the Realist, Liberal, and Structuralist schools. Although each school consists of a wide range of beliefs and ideas, the authors generally subscribe to a set of core assumptions (Cohn, 2000: 27).

IPE offers two approaches for understanding energy policy, the realist and liberal models. The focus of liberal scholars is the individual, or entrepreneur, as rational self motivated actors (Cohn, 2003: 91). The liberal model emphasizes the role of the free market in determining what goods should be produced and for whom. Liberals tend to treat politics and economics as separate entities. Realists on the other hand examine economic transactions through a veil of relational power, and assume states are constantly attempting to maximize power and relative gains. The focus of realist thinkers is the state, which is given priority over economics (Frieden and Lake, 1995: 143). Realists are primarily concerned with the redistribution of power in the international arena but share a commitment to global capitalism along with liberals (Cohn, 2003: 72). Energy policy can be pursued through either of these two models. In the past, Canada has used both approaches to encourage the development of its Northern resources.

This chapter considers realist and liberal policy approaches to the development of energy resources. This chapter argues that adopting a realist approach is more likely to improve Canada's sovereignty claim, as developing Arctic resources serves a social benefit function. The main contention here is that the social value of exploration in the Arctic exceeds its private value because these activities will bolster Canada's claim to the region. The social benefits are twofold. First, they will benefit the state by creating new sources of tax revenue and by increasing government presence in the region. Second, they will provide new opportunities for economic growth, including the creation of new jobs, for citizens and communities in the North. Developing these resources provides an opportunity for economic development that would otherwise not exist. Canadian's in the South could also benefit from the development of new energy sources in the North. New sources of energy could provide a cushion for price spikes in the global energy market. The development of Northern reserves could help reduce Canada's dependence on foreign oil imports.

3.2 Energy and the Sovereignty Areas of Interest

The responsible development of Canada's northern resources is important if Canada is to strengthen its sovereignty claim in the Arctic. Recall that there are three areas of sovereignty interest: control, infrastructure, and economic development. These three areas of interest can enhance domestic and interdependence sovereignty and by extension international legal and Westphalian sovereignty. These three aspects are closely linked. One cannot be achieved without the other. Without adequate infrastructure, economic development cannot take place. Similarly, without sustainable economic development, Northern governments will not have the necessary resources to provide essential social services (Griffiths, 2008: 23). If the government is unable to provide its citizens with basic services, it cannot be said it is exercising effective control.

Economic development is required if the state is to provide its northern citizens with a decent standard of living comparable to that enjoyed by Canadians in the south. In this regard, energy developments have a two pronged effect; first, energy projects create new job opportunities and linkages to other industries (Marcel and Mitchell, 2006: 123); second, they provide territorial and federal governments with taxes and rents, from which these governments can increase the level of service being provided to the citizens of the North. As noted in the previous chapter there is an urgent need to increase the governments' presence in regards to infrastructure and vital services.

Developing Arctic resources offers the Canadian government a pathway to achieve economic growth. However, developing these resources involves overcoming a series of obstacles unique to non-conventional resource development. Bringing Canada's Northern energy reserves online will not be cheap, easy or quick. Developing frontier resources is more technically challenging and considerably more expensive than conventional projects. There are long lead times between discoveries and actual production. Consider, for example, the Hibernia project off the coast of Newfoundland. The Hibernia field was discovered in 1979, but actual development did not take place until the 1990s. The field first produced oil in 1997, almost twenty years after its initial discovery. Part of the reason for the long lead time, was the unwillingness of private oil companies to commit the necessary funding for such a risky and expensive project. Development moved forward only after the federal government increased its stake in the project by forming the Canada Hibernia Holding Corporation (Shimpton, 2003: 3). In this case, the government's role was to encourage economic development by investing directly in the development of oil and gas reserves.

By encouraging energy investment the government can also encourage the development of new infrastructure. Petroleum industry activity contributes to a “wide range of construction, fabrication, supply, service, education, training, and research and development infrastructure.” As observed in a study conducted by the Government of Newfoundland and Labrador’s Department of Mines and Energy, the development of oil related infrastructure provides “a major boost to the local construction industry, generating demands for materials and equipment, as well as engineering, project management and construction services” (Shimpton, 2003: 7).

In other words, energy developments can contribute to the creation of vital infrastructure and economic growth but this requires that a minimal amount of infrastructure already exist. Creating new energy infrastructure including roads, seaports and airports reduces the overall cost of non-conventional oil projects. It can also improve Canada’s control of the region, by increasing the Federal and Territorial government’s ability to be involved in construction activities. By reducing the cost of these projects, private investors are more likely to be attracted to the region.

Encouraging the exploration and development of petroleum resources in the Arctic can help Canada improve its control of the region. This in turn can improve its domestic and international legal sovereignty. The question then, is how can the government encourage the development of these resources? What energy policy best serves Canada’s interests in the region? These questions will be examined in the following section.

3.3 Theoretical Applications to Energy

Decisions regarding energy policy take place in the wider context of government intervention in the economic system generally (Stevens, 2002: 1). Hence, to appreciate the connection between energy policy and sovereignty it is necessary first to examine the major

tenets of the two energy approaches, realism and liberalism. A good definition of realism is provided by Balaam and Veseth who suggest realism “accounts for the compulsion of states to use the economy to generate wealth but also to adopt a variety of protectionist trade, investment, and other policies to sustain that wealth and condition the behaviour of other states” (Balaam and Veseth, 1995: 21). Liberalism on the other hand calls for the economic role of government to be limited as the market is considered to be a superior mechanism for allocating scarce resources. The theoretical foundation of both approaches will be examined in the following section.

In the past, Canada has adopted both liberal and realist approaches to the development of its Arctic energy resources. From 1975 to 1985, Canada directly participated in the oil and gas industry through its NOC Petro-Canada. As part of the National Energy Program (NEP), the government was actively involved in exploring and producing resources in the Canadian North. After 1985, the government shifted to a liberal policy encouraging private sector investment and removing Petro-Canada’s role as a tool of public policy.

For a country like Canada, which is both an importer and exporter of non-renewable energy, the goal of any energy policy is to meet two objectives. First, it must ensure the continued availability of energy to satisfy domestic demand. Second, the development of the nation’s energy reserves must be done in a manner which serves to maximize the national interest (Hay, 2009: 143). Obviously the definition of national interest is subjective. Both the realist and liberal perspectives understand the concept of national interest differently. More will be said on this in the next few pages, as the key elements of each policy approach are examined.

3.3.1 Realism & State Intervention

Realism has been the dominant theory of world politics since the beginning of international relations theory. Its roots can be traced back to the works of Thucydides,

Machiavelli, Hobbes, and Rousseau. Realism emphasizes the state as the primary actor in world politics. The purpose of statecraft is national survival in an anarchic environment. The concept of anarchy is the cornerstone of the Realist paradigm. As Kenneth Waltz explains, “anarchy stems from the fact that states answer to no higher authority and so must look to themselves to protect their interests and ensure their survival” (Waltz, 1979: 102). Since all states are subject to the conditions of an anarchic world they seek to maximize their power and consequently their wealth. Therefore the attainment of power is the rational goal of a state’s foreign and economic policy.

For realists international politics can be defined as a continual struggle between power-maximizing states (Gilpin and Gilpin, 2001: 12). Realists primarily concern themselves with the redistribution of power within the capitalist system because they generally assume that wealth is finite, that there is a limited amount of natural resources that can be extracted to create more wealth. Access to energy and the development of domestic energy reserves is a high priority. In such circumstances it is rational for states to compete for power and limited resources.

Realists suggest that the international system is based on a *zero-sum game* in which the gains of one state are the losses of another. In other words if one state gains more resources, it is denying those resources to other states, increasing its relative power. Under this premise each state is expected to manipulate the market in ways that maximize the relative gains (Cohn, 2000: 45).

Realism encourages cooperation as it relates to security, but it is less favorable toward cooperation that leads to economic interdependence. As Waltz observes, “a state also worries lest it become dependent on others through cooperative endeavors and exchanges of goods and services” (Waltz, 1979: 124). Therefore a state must attempt to avoid enhancing its security

through alliances based on economic interdependence. As such, a state's strategic planning is aimed at survival and long-term security.

In regards to energy policy, realists would seek to satisfy energy security issues by reducing dependence on foreign energy producers (Hay, 2009: 143). Consequently, the development of local sources of energy is a high priority. The commercial interests of the private sector are secondary to the objectives of the state. The national interest is achieved through the development of local energy reserves in order to minimize dependence on foreign imports.

Realists favour a strong state role in the economy, viewing state action as necessary to gain wealth and power. As the energy scholar James Hay observes, from the realist standpoint "market intervention is warranted, if necessary, to ensure that domestic industry survives and flourishes." Generally, this intervention comes in the form of a national oil company (NOC). A NOC can be described as "an oil company operating in some part of the oil value chain owned and controlled by government" (Stevens, 2001: 4).

For realists, the rationale for state participation is driven by a belief that national interests are served more effectively through an NOC than through market forces (Noreng, 2002: 197). Through direct intervention the state is able to choose socially beneficial energy projects over more profitable ones. NOCs can be directed to explore and produce oil in areas that are not financially viable for market forces. Consider the example of Statoil, the Norwegian NOC. Statoil invested millions of dollars exploring the Norwegian continental shelf (NCS) at a time when private companies had little interest in the region. The company was successful in exploring for oil which in turn attracted foreign investors (Gordon and Stenvoll, 2007: 24-25).

NOCs often have policy objectives that go beyond simply exploring and producing oil and gas. Oil producing governments have opted to use NOCs for a wide array of policy objectives, including job creation, building social infrastructure and assisting in regional development (Macpherson, 2003: 5). As a World Bank energy study suggests, NOCs “are often the instrument for achieving a broad range of national, social and political objectives that go well beyond their original purpose of maximizing revenues for their governments” (World Bank, 2001: 1).

Establishing an NOC allows a government to gain at least partial control over its oil and gas industry. The close relationship between the government and the company helps to protect the national interest of the state (Falola and Genova, 2005: 57). As mentioned earlier, NOCs will often pursue projects designed to achieve a social goal not solely an economic one. As Falola and Genova observe, “a national oil company has strong incentives to use national personnel and national goods and services” (2005: 57). In doing so, the company contributes to the economic development goals of the state. This is especially true when it comes to building new infrastructure. Oil infrastructure can be built anywhere in a country in order to maximize the social benefit by stimulating regional development. For example, in 1980 the Nigerian National Petroleum Corporation (NNPC) built the Kaduna refinery in the northern part of the country, far away from the oil fields in the south. The company’s reason for doing so was to encourage the economic development of the North (Falola and Genova, 2005: 58).

It is not difficult to see the link between realism and control. Realists argue that state intervention is required to ensure domestic energy reserves are being developed. This is particularly important when market forces are unwilling to invest the needed capital in higher risk projects. These projects include offshore oil and gas developments in the Arctic, which are

far more expensive than conventional projects. By intervening in the oil and gas industry the government can encourage the development of socially beneficial projects that market forces alone are unwilling to do (Marcel and Mitchell, 2006: 21). While there are obvious advantages to using a NOC, it is not the only policy tool that can encourage regional development. An alternative approach to energy development is provided by the liberal school of thought. This approach emphasizes the role of markets in determining what energy sources should be developed.

3.3.2 Liberalism and the Free Market

Liberalism is perhaps the most unified of the three IPE frameworks. While there are several varieties of liberalism, the core principles of open markets and free trade encompass them all. The origin of economic liberalism is often traced back to the work of Adam Smith, who is widely considered the grandfather of classical economics. Smith argued that a division of labour in society creates a natural balance that is governed by an “invisible hand” which translates self-seeking behaviour into socially beneficial outcomes (Ravenhill, 2005: 45-46). In other words, societies will benefit the most when each individual pursues what is in their own best interest. The liberal model places emphasis on individual enterprise, market competition, and a minimalist role for the state, where the state should only intervene in the economy to ensure the successful operation of the markets.

The focal point of liberal scholars is the individual, who possesses “inalienable natural rights and must be protected from collectivise such as labour unions, churches, and the state” (Cohn, 2008: 72). The liberal point of view generally separates the realms of economics and politics. The majority of liberal scholars generally suggest the only role of the state is to ensure an open environment in which market transactions can take place (Ravenhill, 2005: 48). As such, the

main function of the state is to ensure there is adequate infrastructure to support production and transportation.

In regards to energy policy, liberals “would seek to satisfy energy security issues via the interdependence of the international energy market” (Hay, 2009: 143). Liberals argue that a diverse supply of energy, coming from multiple sources, will reduce the chance of supply disruption. Arguably, a liberal policy offers the most economical means to ensuring energy supply is consistent and prices remain relatively stable.

Concerning national interest, liberals argue that the commercial interests of private actors are in sync with the national interest of the state. The goals of the private sector are to maximize profit by developing resources as cheaply and as efficiently as possible. This runs parallel to the interest of the state which is to earn revenue off the development of energy reserves and to ensure a continued and reliable supply of energy. Therefore, market forces should be allowed to develop energy reserves unhindered by government intervention. In the case of Canada, this means Arctic energy reserves should be developed by private investors as is currently the practice. However, because government presence is required to strengthen Canada’s sovereignty claim a purely market approach may not lead to the strengthening of Canada’s sovereignty claim.

Under a liberal energy approach, private companies are free to pursue whichever projects they deem economical. However, developing Arctic projects involves substantial risk and the long lead times between exploration and commercial development means only the largest energy companies will be involved (Rowatt, 2006: 15). This includes the major international oil companies (IOC), Exxon-Mobil, Chevron, BP, Shell, and a handful of smaller independent companies, Devon Energy, Conoco Phillips, Husky, etc. Due to the fact that these private oil companies are primarily concerned with creating shareholder value, new projects have to meet

specific financial benchmarks in order to be financially viable (Jaffe, 2007: 23-24). This is problematic when it comes to developing non-conventional resources in the frontier areas. Developing Arctic resources is more technically and physically challenging than typical conventional projects. The high cost and high risk associated with these projects means new developments will evolve slowly.

When private energy companies look to develop new projects, they do so with the goal of maximizing profit. The projects that ultimately get developed are those that are likely to return a profit in the current time frame as well as in the future (Pirog, 2007: 34). As such, energy companies develop the cheapest and easiest projects first (Jaffe, 2007: 34). For Canada, this means conventional resources in the Western basin. Only after conventional projects have been exhausted, or at least spoken for, have private companies looked to non-conventional projects to replace diminishing reserves. Since the oil industry is global in scale, this leaves a lot of alternatives to be developed first, before real interest in non-conventional projects takes place. Non-conventional projects tend to be the last in line as they are the most expensive to develop. In almost all cases, non-conventional projects have only been launched with large scale government financial support. This will be discussed in greater detail in the following chapters.

In short, Canada's liberal approach to energy development is dependent on oil companies looking for the cheapest possible means to replace diminishing reserves. This makes expensive Arctic projects an unattractive prospect. However, recent changes in the global oil industry may work to the advantage of Canada. Over the last decade the global oil industry has witnessed a resurgence of petro-nationalism. This type of nationalism can be described as the tendency of governments to assert control over oil and gas developments located on their territory (Marcel, 2006: 15). A number of oil producing countries, which previously liberalized their energy sector,

have tightened restrictions on foreign ownership. In some cases, IOCs have been forced out of state-controlled oil patches. A good example is the Kovykta gas field in Eastern Siberia. The Russian government threatened to revoke an environmental license required to proceed with the project if British Petroleum was unwilling to sell its majority stake in the project. Fearing it would lose other projects in Russia, BP reluctantly sold its stake to the Russian NOC Gazprom (Henrich, 2008: 1553).

The increasing presence of state controlled companies in the global oil industry is challenging the role of IOCs. Virtually every IOC is currently producing more oil every year than it is replacing with new discoveries. IOCs are under increased pressure to replace already produced reserves and to increase the recovery rate from mature wells (Marcel, 2006: 9). Between 1996 and 2006, oil production from the five largest IOCs (BP, Chevron, Exxon, Mobil, and Shell) fell from 10.25 million barrels per day (BPD) in 1996 to 9.7 million bpd in 2006 (Jaffe, 2007: 25).

Over the past three decades, IOCs have been able to support long term growth expectations of up to four percent per year. However, current reserve estimates no longer support this rate of growth (Wadood, 2006:1-2). This is evident in a statement made by Chevron's CEO David O'Reilly after Chevron's purchase of Unocal. Speaking to senior associates, O'Reilly suggested "it is no longer possible to assume that global hydrocarbon reserves will grow indefinitely or that Chevron's aging fields will be adequately replaced by new found deposits" (Klare, 2008: 3).

As a result of these changes in the global oil industry, IOCs have started to invest heavily in non-conventional projects. A good example is the Alberta oil sands. In recent years the number of oil companies operating in the oil sands has nearly tripled (Schiell and Loney, 2007:

434). However as noted previously, the creation of the technology needed to develop the oil sands required large scale government support (Jaffe, 2007A: 25). It was only after the government invested heavily in the Alberta oil sands that private sector interest in the projects took off. This highlights one of the main problems in adopting a liberal approach. Non-conventional projects tend to be slow in developing due to the enormous cost of these projects. Without large scale government support these projects often fail to take off. Considering that Arctic projects require the development of specialized technology and are substantially more expensive to develop than conventional projects, it is unlikely Canada will be able to improve its sovereignty claim through market forces alone.

3.4 Conclusion

The issues of Arctic sovereignty and Arctic energy development are closely linked. Energy developments can strengthen a state's claim to sovereignty by increasing state control. This can be achieved through the creation of new infrastructure and by fostering economic development. These three elements are essential for an effective sovereignty claim. All three serve to increase the authority of the state, an essential component in strengthening sovereignty.

Energy development is one pathway to help improve a state's sovereignty claim. States pursue energy policy via one of two approaches. Realist policy approaches call for state control of resources, championing self sufficiency over cooperation with other countries. Liberal policy approaches embody the ideas of free trade, comparative advantage and security through interdependence.

The concept of national interest is perceived differently between these two models. For liberals, the national interest is best served when a country's resources are developed efficiently at minimal cost. This involves allowing private companies to explore and develop energy

reserves in the manner they see most fit. The liberal approach would encourage the government to build new infrastructure that can aid in the development of Arctic resources, but not to directly intervene in the industry. The realist approach on other hand, sees the national interests being served when local sources of energy are being developed to benefit domestic industry. This approach calls for government intervention in the energy industry to ensure local energy reserves are being developed. Most often this is done through an NOC.

Due to the unique circumstances in the Canadian Arctic, including lack of infrastructure, and distance to consumer markets, energy developments have been slow in progressing. The high cost and high risk associated with operating in the area has made private oil companies reluctant to invest the needed capital in Arctic projects. However, the fact that IOCs are spending large amounts of money to explore for oil in unfavorable areas suggests that all the easy oil is gone or spoken for (Guzman, 2006: 12).

For Canada, this means that Arctic resources are becoming more attractive to the large IOCs and independent energy companies. However, this does not mean that private companies are rushing to develop the Arctic. Although interest in the region is certainly growing, there is no guarantee that private companies will invest the needed capital and resources into developing Arctic resources in a timely and efficient manner. Since Canada's sovereignty concerns are growing, these resources need to be brought online sooner rather than later. By intervening in the oil and gas industry the government can encourage the development of these resources. Adopting a realist approach to energy development in Arctic would allow the government to increase its presence in the North and strengthen its sovereignty claim in the process.

CHAPTER 4: COMPARING ARCTIC ENERGY APPROACHES

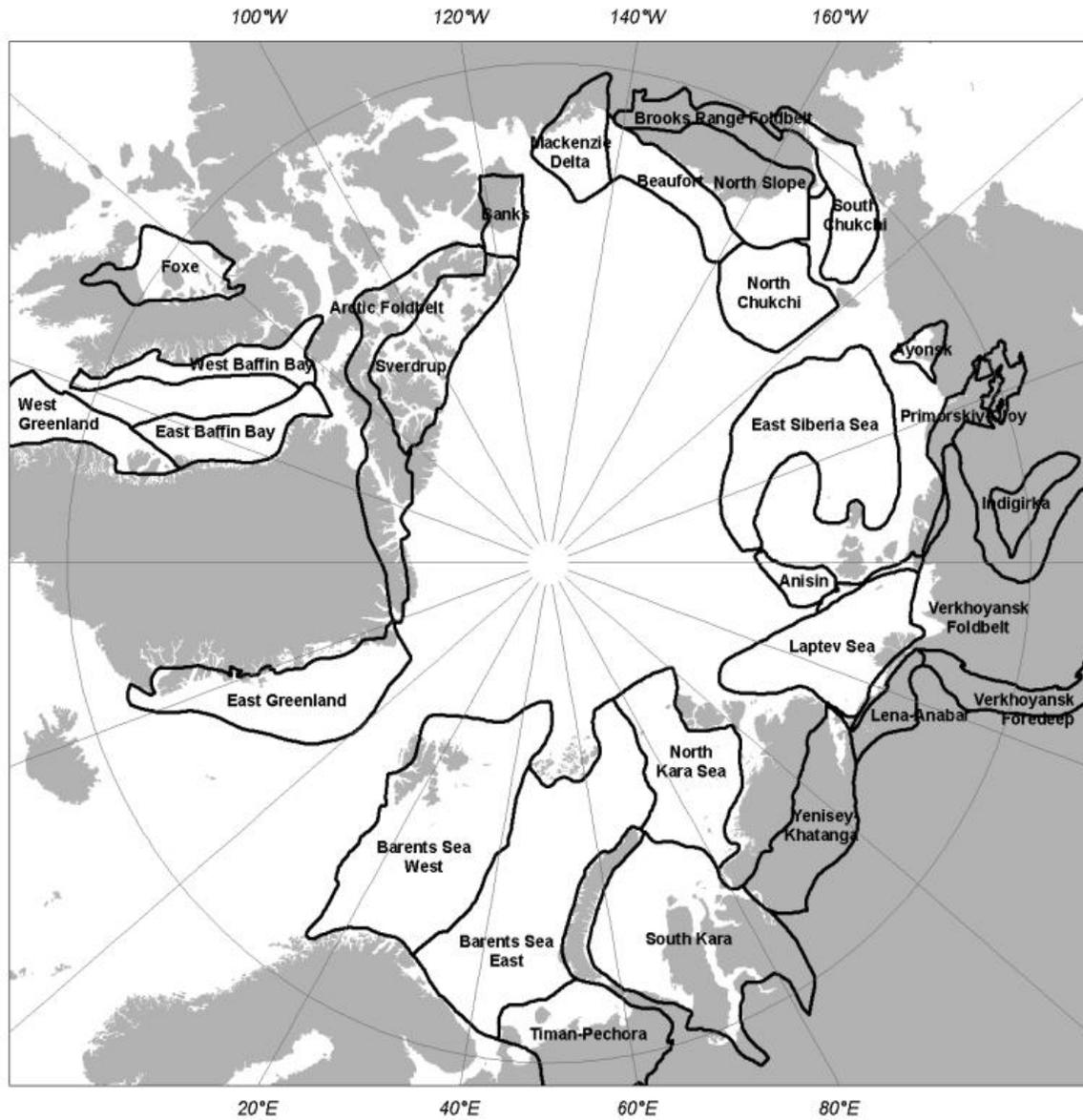
4.1 Introduction

For the last twenty years, Canada has championed the use of market forces in developing its Northern resources. In relying on a liberal policy, Canada has let the market determine what areas are to be explored for energy resources and what projects are to be developed. Russia has taken the opposite approach to developing its Northern energy resources. Russia's energy policy is highly nationalistic and reflects many of the central tenants of the realist model. In the last decade, Russia has taken steps to ensure its Arctic resources will be developed by state controlled companies and not foreign investors. Norway's approach is situated in the middle between the Canadian and Russian models. The Norwegian approach is a mixed model system, incorporating elements of both the liberal and realist approaches. Since 1973, Norway has used the state-controlled company Statoil to develop offshore resources while at the same allowing private companies to compete with its NOC.

Returning to the question posed at the beginning of the previous chapter, what type of energy policy will encourage the development of Arctic resources? We can answer it by examining the energy approaches adopted by other Arctic states. This chapter examines the energy approaches of Norway and Russia, looking for similarities with and alternatives to the Canadian approach. These countries have unique energy models with varying degrees of state control, making them ideal for comparison against the Canadian approach. Energy developments can improve a state's claim to sovereignty by increasing state control in the region, creating new infrastructure and fostering economic development. These three components are essential to demonstrating effective sovereignty. Each will be examined in the following case studies.

Figure 4.1

Arctic Petroleum Territories and Seaways



Source: Krisitn Rønning and Statoil, *Exploring the Basins of the Arctic*, 2007¹

¹ The map shows the approximate boundaries of the major seaways and petroleum territories in the Arctic.

Each case study provides a broad overview of the history of oil and gas development in the Arctic. The purpose of the case studies is to examine how the policy approach has impacted state sovereignty in the North. What effect has energy policy had on the sovereignty areas of interest: control, infrastructure, and economic development? The first case study to be examined is Russia, followed by Norway. These two cases have been selected based on their ability to shed light on the impact of energy policy on Arctic sovereignty. This chapter argues that by directly intervening in the energy industry, both Norway and Russia have strengthened their sovereignty claims in the Arctic through the creation of new infrastructure and by fostering economic development.

4.2 Russia's Energy Approach

The Russian oil industry is substantially different from that of Canada. Similar to Norway, Russia's energy industry contains a mix of private and state-owned energy companies. In the case of Russia, the term state-owned is no longer applicable to describe companies that act in accordance with the state. The term state controlled is more reflective of the current state of energy companies with close ties to the Kremlin and other state bodies (Ziegler, 2008: 142). While the Russian government may no longer outright own these companies, they behave similar to any other state owned company. An example of this is the private oil company Lukoil which has continually operated in a subservient manner to the Kremlin since its founding in 1993.

Over the course of the last decade, the Russian oil industry has undergone substantial changes. The Putin government placed tough restrictions on foreign ownership, while simultaneously enhancing the position of state controlled oil firms. As the political economist Andreas Heinrich observes, Putin forcefully "asserted the primacy of state interests in major decisions about energy and natural resources" (Heinrich, 2008: 1543). Following Putin's

changes, the Russian government gained control of almost 60 percent of oil production and nearly all of natural gas production (Victor, 2004: 51). At the end of his second term, Putin signed a law limiting foreign ownership in strategic sectors. The law dramatically altered the relationship between the Russian oil industry and foreign investors. Under the new law, foreign companies need the approval of a special commission “for any acquisition exceeding 50 percent in a company operating in a strategic branch” (Heinrich, 2008: 1543).

Russia has returned to a realist energy policy after a decade of liberal reforms. In doing so, Russia has given tremendous power to its state controlled energy companies. Russia is relying on its NOCs to develop resources on the Russian Continental Shelf (RCS). These companies play a pivotal role in developing offshore resources and fostering economic development while ensuring the Russian government is the primary benefactor. To this end, the Russian government divided control of the RCS between the two largest state-controlled energy companies, Rosneft and Gazprom (Heinrich, 2008: 1543). This combined with the new laws on foreign ownership make it increasingly unlikely that foreign investors will gain access to new reserves on the RCS.

The privileged role of state controlled companies is not surprising considering the importance of the region. Currently, Russia’s Arctic region accounts for 11 percent of Russia’s GDP (Bochkarev, 2006: 3). Russia’s state controlled energy companies are political tools for Russia in the international arena, especially in the Arctic. As Russia’s energy policy becomes more intertwined with its domestic and foreign policies the importance of its state controlled companies is likely to grow.

4.2.1 History of Arctic Energy Development

Oil developments are not new in the Russian Arctic but have been taking place since the early 1970s. Russia first used seismic surveys to map the Russian Barents Sea shelf in 1972. Initial exploration and drilling began in the 1980s in the shallow part of the western Barents and Pechora Seas (Moe, 1988: 135). Exploration continued throughout the 80s despite the drop in world oil prices. By 1989, several promising deposits were found on the Russian shelf, most notably the Shtokman gas deposit in the Barents Sea (1988) and the Prirazlomnoye oil deposit in the Pechora Sea (1989). Currently, both of these fields are being developed as a joint venture between Russia's biggest NOCs, Gazprom and Rosneft (Åtland, 2009: 378).

By 1992, over 200 exploration wells had been drilled in the Barents, Pechora and Kara Seas (Ter-Srakisov, 2007: 15). In the same year, the Russian government approved the development of a new national energy strategy designed to reflect the changing economic conditions in Russia. To this end, the Russian government created the Interagency Commission. The commission was charged with the task of mobilizing more than a "1,000 leading professionals from central and local organizations as well as representatives of interested ministries and departments, major regions of the country and science centers" to develop a new energy strategy (Basaran, 2003: 16). A large part of this strategy called for the privatization of the oil sector and the removal of state interference in the industry. This marked the beginning of a major shift in Russian energy policy, which largely centered on privatizing state assets.

The process of oil privatization began in November of 1992 when President Yeltsin issued presidential degree 1403 which established three vertically integrated oil companies: Lukoil, Yukos, and Surfneftgas (Poussenkova, 2007: 110). Over the next several years, a total of

11 vertically integrated oil companies were created all combining various aspects of exploration, production, refining, distributing, and marketing (Hill and Fee, 2002: 4).

In the years following, exploration work on the continental shelf slowed considerably. As Russia shifted away from a realist to a liberal energy policy, interest in the Arctic shelf faded (Goldman, 2008: 71). Newly formed private oil companies had little in the interest in Arctic exploration due to the high cost of producing these resources. Similar to Canada, developments on the Arctic shelf were no longer considered economically viable. Without state support, newly privatized energy companies abandoned Arctic exploration.

Interest in the Russian Arctic was renewed in early 2000s by Russia's NOCs. In 2005, Gazprom and Rosneft formed joint ventures in five Arctic oil fields (Poussenkova, 2007: 29). Gazprom is now in the process of developing a program for the exploration of the RCS over the next decade (Ter-Srakisov, 2007: 17). The company plans to invest over US\$500 million on the Arctic shelf in the next ten to fifteen years (Åtland, 2009: 378). Gazprom views the Arctic shelf as "a promising source of gas and liquid hydrocarbons, both new and prospected" (Kliewer, 2006: 36). Gazprom's wholly owned subsidiary, Sevmorneftegaz, is in the process of drilling its seventh exploration well in Shtokman, 550 km off the coast off the Kola Peninsula. These new projects have significantly increased Russian oil production. Since the revival of Arctic developments in 2000, Russia's production rates have increased significantly, so much so, that in February 2002, Russia oil output briefly overtook Saudi Arabia to become the world's largest oil producer (Hill and Fee, 2002: 1).

4.2.2 Russia's Energy Policy & Sovereignty

The realist approach taken by the Russian government reflects the importance of Arctic energy resources. Unlike Canada, whose concerns largely revolve around security and

sovereignty, “Russia’s approach to the region is increasingly governed by national economic interests rather than by national security interests” (Åtland, 2009: 372). This was made evident in September of 2008 when the Security Council of Russia set out the government’s key priorities in a document entitled *The Fundamentals of Public Policy of the Russian Federation in the Arctic up to 2020 and Beyond*. The document reveals much about Russia’s intentions in the region. It outlines Russia’s basic national interests in the Arctic stating “National interests determine the main goals, key objectives, and strategic priorities of state policy of the Russian federation in the Arctic” (The Security Council of the Russian Federation, 2008: 2).

One of the document’s main objectives is to “provide a significant increase in the development of Arctic offshore fields, through the implementation of state programs of study and development of the continental shelf” (The Security Council of the Russian Federation, 2008: 3). In order to achieve this goal, the government pledges support “of economic entities operating in the Arctic Zone of the Russian Federation, particularly in the development of hydro carbon resources” (The Security Council of the Russian Federation, 2008: 2).

Russia is less concerned with security and more concerned with gaining access to new resources. The goal of Russia’s Arctic strategy is to turn the region into a major resource base. The report outlines three separate phases through which to achieve this goal. The first phase running from 2008-10, involves exploring and mapping Russia’s continental shelf. This part of the strategy is already well underway (The Security Council of the Russian Federation, 2008: 6). As discussed previously, both Gazprom and Rosneft are in the process of exploring for energy resources in the Barents, Kara and Laptev Seas (Kliwer, 2006: 36).

The second phase of Russia’s Arctic strategy involves building new infrastructure to ensure “the competitive advantage of Russia on production and transportation of energy

resources.” New infrastructure is required to support the development oil and gas reserves and to ensure that the North Sea route is secured (Bochkarev, 2006: 5). Consequently, the development of new infrastructure is seen as a top priority.

In regards to sovereignty, building new infrastructure can serve a dual purpose: first; it can be used to foster economic development. The building of refineries, pipelines and terminals can be placed in strategic locations to maximize the social benefit and to bring development to areas in need. However, the building of new infrastructure requires that some infrastructure already exist. When Gazprom, Rosneft and other Russian companies are looking for places to construct oil, gas, and LNG export terminals, they base part of their assessment on the state of existing infrastructure including railways, roads and storage facilities (Åtland, 2009: 370) second; the creation of new infrastructure serves to demonstrate Russia’s control of the region.

Russia’s North already has much of the needed infrastructure to develop resources off the continental shelf. In fact many of the best port facilities on the Kola Peninsula are under military control (Åtland, 2009: 372). The Russian petroleum industry is increasingly looking to these ports to act as export terminals for off-shore production. There is a close connection between Russia’s NOCs and the development of new infrastructure in the North. Russia’s state owned companies are investing heavily in building new transport systems, upgrading seaports, and building new ships to develop offshore resources. For example, Rosneft has created plans to build 16 new ice breakers, along with 18 vessels used for seismic mapping on the Arctic Shelf. The company is also in the process of building 10 new stationary platforms used for drilling in ice covered waters (Poussenkova, 2007: 24). Gazprom is also undertaking infrastructure developments. In 2005, Gazprom started construction on a 572 km railway going to the Bovanenkovo gas field.

Beyond creating new infrastructure, Russia has started to convert old infrastructure for use by the energy industry. Russia is turning to its state controlled oil companies to retrofit old military infrastructure for commercial use. The company Rosshelf provides a good illustration. Rosshelf was created for the sole purpose of converting old military installations and technologies for use in offshore oil and gas developments in the Arctic (Moe, 1988: 135). The company has been highly successful in creating oil platforms out of decommissioned military ships.

The resources on the Arctic shelf are seen as a key component in Russia economic revival and close cooperation between the oil industry and the navy will be beneficial to both parties (Åtland, 2009: 388). As Kristian Åtland, Senior Analyst of the Norwegian Defense Institute writes, “the Northern Fleet needs the oil industry, just like the oil industry needs the Northern Fleet” (2009: 389). The resources on the Arctic shelf can only be developed with assistance of the navy’s ice breaker fleet. Nuclear icebreakers will play an important role in developing resources and securing the region (Bukharin, 2006: 25). This is an important consideration for Canada. Cooperation between government departments will be necessary to ensure government resources are being used to maximize benefits. The sharing of resources for both commercial and military use is essential. As noted before, this approach is far more cost effective than simply stationing a military presence in the region and has the added advantage of increasing Westphalian sovereignty.

In short, the work of Russia’s state controlled energy companies has increased commercial activity in the North. The development of offshore oil and gas fields, the construction of new pipelines, terminals, and oil tankers is increasing the government presence both on and offshore. The close connection between the Russian government and its NOCs is

beneficial in improving Russian sovereignty claim by encouraging economic development in strategic areas. Expensive projects are being developed by state controlled companies to ensure the benefits are reaped by the Russian government.

Russia's strategy for the North calls for "the transformation of the Arctic zone of the Russian Federation to become a strategic resource base" (The Security Council of the Russian Federation, 2008: 6). In turning the Arctic into a resource base, Russia is placing a high priority on commercial development and economic growth in the region. This is reflective of its energy approach, which encourages self sufficiency over cooperation with foreign companies. An opposite approach has been applied by Russia's Arctic neighbor Norway. Norway has encouraged foreign investors to compete against the Norwegian NOC Statoil in the development of its Arctic resources.

In regards to sovereignty, Russia has taken a broader approach that goes beyond simply ensuring security in the region. By transforming old military ports into centers for commercial development the Russian government has improved its domestic sovereignty. Through its offshore oil and gas projects, Russia has increased the states presence in the region, a requirement of effective legal sovereignty. Similarly, Russia's attempt to turn the Northeast Passage into a major trading route has increased its Westphalian sovereignty. This policy has been particularly successful in developing the region and bringing new opportunities for economic growth which further serves to improve domestic control. The fusion of commercial and defense goals has went a long way to improving Russia control of the region and consequently its sovereignty claim.

4.3 Norway's Energy Approach

The Norwegian approach to energy development incorporates elements from both the liberal and realist models. It is a mixed model system involving both public and private companies. The government directly participates in all aspects of the petroleum industry through its NOC Statoil. Unlike other oil producing governments, Norway has been successful in balancing state control while allowing foreign oil companies to develop key sectors of the industry (Falola and Genova, 2005: 207). As Falola and Genova observe, Norway recognized from the start that “the key to maximizing its profit control over its new industry included an unwavering commitment to government participation and strict regulation” (Falola and Genova, 2005: 206).

The goal of government participation is to encourage the development of the oil and gas industry without disrupting other segments of the economy. In order to ensure state interests are represented, the government uses Statoil to further policy objectives and to help foster economic growth. At the same time, Norway has allowed foreign oil companies to explore and produce oil in order to gain new technologies and allow private sector growth. This balance between the two models has been extremely successful in fostering economic development. Since the 1970s, Norway has maintained high growth rates, in large part due to oil and gas developments in the region (Noreng, 1986: 393).

4.3.1 History of Arctic Energy Development

Most of Norway's oil and gas activity is located in the Norwegian section of the North Sea. The oil and gas fields in this area account for over 90 percent of Norway's total oil and gas production. Today these fields are showing signs of decline. Initially, North Sea oil was expected to peak around 2010, but the actual peak came in 2000, when the region produced 6.1 million

barrels per day (bpd). Current estimates suggest that by 2015, production in the North Sea will be cut in half to around 3 million bpd (Chen and Jaffe, 2007: 13).

The decline of North Sea resources is placing added pressure on Norway to resolve outstanding territorial disputes with Russia in the Barents Sea and on other parts of the Norwegian Continental Shelf (NCS). The maritime boundary in the Barents Sea has been a hotly contested issue that has spanned five decades. A small portion of this dispute was settled in 1957 in the Varangerfjord Agreement but the majority of the Barents Sea territory is still disputed by both sides (Aust, 2005: 12).

The Barents Sea is expected to become the next major petroleum producing region on the NCS. Unlike the North Sea, most of the Barents region has remained unexplored due to the ongoing territorial dispute with Russia. Currently, Statoil is the only company operating on the Norwegian side of the Barents Seas. The Barents region is becoming increasingly important not just for Russia and Norway but for the global oil industry as well. IOCs are looking to Norway's Arctic region to replace diminishing reserves. As Clifford Krauss suggests, "virtually every large international energy company is studying how eventually to win permission from Norway and Russia to explore in the Barents" (Krauss et al., 2005: 3).

IOCs first took interest of the NCS in the early 1960s. In 1962, a number of IOCs approached the Norwegian government in an attempt to gain drilling rights on the NCS. At the time, Norwegian politicians and industry had very little experience with oil exploration and production (Noreng 1986: 393). The government initial role in the sector was the allocation of exploratory licenses, but soon took the form of direct participation through a state run oil company (Kashani, 2004: 1).

In 1972, Statoil was created after a unanimous vote in the *Storting*. One of Statoil's primary tasks was to promote Norwegian goods and services for use in the petroleum industry (Visher and Svend, 1984: 327). The state awarded Statoil preferential terms, thereby removing the risks associated with exploration, which ensured Statoil would survive in its early years (Gordon and Stenvoll, 2008: 10). Statoil received a minimum 50 percent stake in all new field developments. As Statoil gained technical expertise, it started operating some fields on its own. By the early 1980s Statoil had grown into a major competitor to IOCs on the NCS.

Despite Statoil's success, political support for the NOC declined in the late 1970s. Concerned with the growing power of Statoil in domestic affairs, the Norwegian government set out to limit the company's power through the creation of the State's Direct Financial Interest (SDFI). The SDFI split the ownership of Statoil into two separate parts, with one half being owned by Ministry of Natural Resources and the other half by the SDFI. Additionally, Statoil lost its right to a 50 percent share in new field developments (Gordon and Stenvoll, 2008: 11). By the late 1980s, Statoil no longer enjoying privileged access to the state but instead had to compete with IOCs and domestic producers alike.

In April 2001, the Norwegian parliament agreed to make Statoil a publicly traded company and began the process of partial privatization. Political opinion on Statoil's proposed privatization was mixed. Some politicians were suspicious of the proposed privatization scheme and preferred to have Statoil remain in state hands, while others fully supported the move to remove the state from the oil industry. In June 2001, 19.3 percent of Statoil shares were sold to the public in an initial public offering which raised US\$3 billion dollars (Gordon and Stenvoll, 2008: 17).

In October 2007, the company underwent further restructuring, when Statoil merged with the Norwegian energy company Norsk-Hydro, to become Statoil-Hydro. As a result of the merger, Statoil-Hydro became the largest international energy company operating in water deeper than 100 meters (Gordon and Stenvoll, 2008: 11). After its merger, Statoil-Hydro started an ambitious program to expand operations outside of Norway in order to reduce its dependence on maturing wells in the North Sea.

Statoil-Hydro may not have to look far to replace its diminishing resource base. The expansion of offshore drilling in the Norwegian and Barents Seas is expected to yield major discoveries in the coming years. The Norwegian Petroleum Directorate estimates that these two seas contain more than two thirds of the undiscovered resources on the NCS (Government of Norway, 2007: 14).

The importance of the region is highlighted in a speech from Norway's Foreign Minister stating, "The High North has always been – and will continue to be – an important part of Norwegian foreign policy, for both strategic and economic reasons" (Government of Norway, 2006: 1). In 2005, the petroleum industry accounted for 25 percent of Norway's GNP and over 52 percent of its total exports (Gordon and Stenvoll, 2008: 16). As North Sea oil sets into permanent decline Norway's claim to the Arctic will ensure Norway remains as a major exporter of oil in OECD world.

4.3.2 Norway's Energy Policy & Sovereignty

Over the past four decades, the Norwegian government has created a highly innovative energy policy, encompassing elements of both the realist and liberal approaches to energy development. The Norwegian approach has been highly successful in creating a strong and competitive oil industry on the NCS. As Gordon and Stenvoll observe, the "Norwegian policy

successfully combined the development of a state-owned oil company and extensive participation by the international oil companies (IOCs) as it sought to create an industry and transform the economy” (Gordon and Stenvoll, 2007: 9). The role of Statoil within the Norwegian petroleum industry serves as an important lesson in how a petroleum policy can be structured to maximize the social benefits and serve the economy as a whole (Gordon and Stenvoll, 2007: 10). It also provides a good example of how a NOC can be used to increase state control and encourage economic development.

By directly intervening, the Norwegian government has been able to foster economic development. More importantly, the government has been able to direct investment to specific regions. Consider the Snøhvit gas development located in the Norwegian part of the Barents Sea. As part of this project a terminal was required to process the liquefied natural gas (LNG) produced in the field. A processing plant was constructed on Melkøya Island just off Hammerfest, a small town in Norway’s Far North. The project cost over US\$9 billion to build but has brought unprecedented economic growth to the small town. The development of this project has created an economic boom and new optimism in Hammerfest regarding future economic growth (Coates et al., 2007: 153).

The Norwegian approach has been highly successful in ensuring government interests and goals are achieved. As discussed previously one of Statoil’s main objectives was to ensure the use of Norwegian goods and services in the petroleum industry. By adopting a realist element into its energy policy Norway has enjoyed a number of benefits, including increased revenues in the form of royalties and taxes, increased employment, and the use of local materials and services. Statoil has consistently been used as a tool for wider development plans. Projects such

as Snøhvit gas field are contributing to the industrial development of the Northern region (Gordon and Stenvoll, 2007: 49).

Norway's claim to the Arctic has been strengthened through Statoil's research and development programs on the NCS. As discussed previously, a multi-level approach to state sovereignty involving scientific research and commercial endeavors strengthens a state's international legal claim. Over the course of the last decade Statoil has undertaken specific research projects "aimed at developing technologies for offshore areas with cold climate and ice" (Gumestad et al., 2004: 3). Statoil has been successful in creating new technologies capable of developing fields in the icy waters of the Barents Sea. Major breakthroughs in offshore technology have come from pioneering projects like Statfjord (offshore oil field), Ormen Lange (offshore gas field), and Snøhvit (Government of Norway, 2006: 14). Through these projects, Statoil-hydro has developed the skills and technology necessary to successfully drill in the Arctic (Yenikeeff and Krynick, 2007: 7). Statoil's sub-sea technology developed at Ormen Lange and Snøhvit, including the laying of long-distance sub-sea pipelines, LNG-technology, and other innovations have help strengthen the governments claim to the region (Austvik, 2007: 20). More importantly, Statoil has contributed to the economic development of the Northern region and the creation of new infrastructure both on and offshore.

Norway's sovereignty claim in the North has been successful in large part due to the efforts of Statoil. In 2006 Norway submitted a claim to the CLCS in respect of areas in the Arctic Ocean, the Barents Sea and the Norwegian Sea. Norway's claim was accepted by the CLCS in April 2009 which granted Norway over 235,000 square kilometers of ECS (UNCLOS, 2009: 3). This claim fell short of the North Pole by about 550 kilometers. Norway is now in the process of

writing the new boundaries into national law. Statoil played a key part in making this claim successful by aiding the government in mapping the NCS (Gordon and Stenvoll, 2007: 32).

Norway is preparing for the challenges that oil and gas developments in the High North will bring. These new oil and gas developments differ from previous projects on the NCS as they have a geopolitical and foreign policy dimension (Government of Norway, 2006: 9). This foreign policy dimension is made explicit in the *Barents 2020* report chaired by the former CEO of Statoil Arve Johnson:

The foreign policy aspects of petroleum development have gained importance as energy is increasingly perceived and used as an instrument of power between states, particularly due to the shortage of energy resources. This leads to greater competition and increasing political interest in developing the resources in the High North. In many countries, long-term energy security is considered to be an integral part of security policy (Government of Norway, 2006: 9).

Norway's High North policy, including its plans for oil and gas developments in the region, is articulated in the 2008 report *the Norwegian Government's High North Strategy*. The report highlights the importance of energy resources in the Arctic stating, "The resource potential in the North and the associated opportunities for cooperation have made energy a key dimension of the High North dialogues" (Government of Norway, 2007: 13). The report reiterates the concern that energy in the High North has acquired a foreign policy dimension, and the development of Arctic resources will become an international issue in years to come (Government of Norway, 2007: 14).

The opening of the NCS in the high North will have a major impact on the global petroleum industry. Norway, which is a major oil exporter in the OECD world, will continue to supply Europe and North America with oil and gas supplies long after its reserves in the North Sea are depleted. Norway's successful claim to the CLCS is good news for both Statoil-Hydro

and IOCs alike. New reserves mean new opportunities for oil companies to replace maturing oil fields. Although it is likely that Statoil-Hydro will win many of the new leases in the High North, there will likely be many opportunities for IOCs to participate. Since there is now considerable interest in the Norwegian North from IOCs and other private sector energy companies the need for direct state intervention is questionable. However, because energy in the Arctic has taken on a foreign policy dimension, the Norwegian government may prefer to use Statoil as a tool for public policy and international diplomacy.

In short, Norway's approach to energy is a hybrid between the liberal and realist models. Statoil has played an important role in the Norwegian oil and gas industry as a tool of public policy. The company has been instrumental in increasing government control in the North, encouraging economic development, and bolstering the state's presence by developing new technologies for Arctic oil and gas exploration. Statoil will continue to play an important role improving Norway's Arctic sovereignty, especially now as Arctic energy development has taken on a foreign policy dimension.

In regards to sovereignty, Norway has directly improved both its domestic and international legal sovereignty by encouraging energy development in the North. Similar to Russia, Norway's approach goes well beyond ensuring states security in the North but includes plans for economic development. Norway's domestic sovereignty has been improved through its development efforts in the region which have helped raise the standard of living for its Northern residents. Through new energy projects, such as the Snøhvit gas field, the state has been able to expand its presence in the region, and perhaps more importantly has demonstrated its role as responsible environmental steward. Although this is not a factor in improving a states sovereignty claim, the ability to demonstrate the responsible development of energy resources

certainly helps to demonstrate state control. Since sovereignty is about the perception of other states, the responsible development of reserves goes along way to improving Westphalian sovereignty. Norway's international legal sovereignty has also been improved through energy developments. Statoil played a large part in mapping the boundaries of the NCS which led to a successful claim to the CLCS. Statoil's knowledge of the NCS helped Norway solidify its international boundaries and consequently its international legal sovereignty.

4.4 Conclusion

This chapter examined the energy approaches adopted by Russia and Norway. For Russia, Arctic resources are primarily perceived as an engine for economic growth. The Russian approach reflects the major tenets of the realist model. The Norwegian approach is a mixed model encompassing elements of both the liberal and realist approaches. Norway is similar to Russia, viewing new energy as a means to foster growth and replace diminishing oil fields in the North Sea. In both cases, NOCs are used as instrument of public policy. State controlled companies play an important role in fostering economic development and building new infrastructure.

The purpose of this chapter was to examine the impact of energy policy on state sovereignty. While there is no direct link between a realist energy policy and increased sovereignty there is certainly linkage. A state can increase its international legal claim by encouraging commercial endeavors and supporting regional development. This rationale is based on the ICJ ruling regarding ownership of Eastern Greenland. By incorporating elements of a realist approach both Norway and Russia have successfully encouraged economic development and the creation of new infrastructure in the Far North.

Through direct intervention both countries have taken up socially beneficial projects, encouraged research and development, and fostered economic growth. Russian NOCs have played a key role in converting old military installations and equipment into commercial infrastructure. Similarly, Statoil has been instrumental in solidifying Norway's claim to the North by creating new technologies and developing new infrastructure in the Far North. In both cases, state intervention has been very important in encouraging the development of energy projects in the North.

In regards to Canada, Arctic resources represent new opportunities for growth in a region that is scarcely populated and has little infrastructure. More importantly, the development of these resources will help to bolster Canada's claim to the region. As observed in this chapter, direct participation in the energy industry is one means to strengthen a state sovereignty claim. A realist energy policy can increase state control by developing projects to encourage regional development. But can a state improve its sovereignty claim using strictly a liberal energy policy? Can the government rely solely on market forces to take up the task of building infrastructure and encouraging economic development? Since Canada is now in the process of opening new territories for exploration in its Arctic territories these questions require careful consideration. The next chapter will examine Canada's approach to Arctic energy developments.

CHAPTER 5: CANADIAN ENERGY POLICY AND SOVEREIGNTY

5.1 Introduction

At the time of Confederation, the idea of building a rail line stretching for coast to coast served both commercial and defense purposes. The purpose of implementing a national railway system was to address security concerns and to foster commercial development. Beyond this, the establishment of a national railway served as a tangible symbol of the nation's identity. In much the same way that the Canadian Pacific railway was used to define Canadian identity, Arctic sovereignty is being used to foster Canadian identity. It is this type of grand scale project that is needed in the Canadian North

The fusion of commercial development and defense goals is essential if Canada is to improve its sovereignty claim. As illustrated in the previous chapter, the development of infrastructure that serves both defense and commercial purposes improves both interdependence and domestic sovereignty. Russia's Kola Peninsula is a good case and point. Cooperation between Russia's Northern Fleet and its state controlled energy companies has been instrumental in fostering economic development and increasing Russia's control of the region.

Recall from the first chapter that small incremental steps can improve state control. In the case of Canada, this means something as simple as encouraging the exploration of resources in the region. In order for Canada to encourage Arctic energy development a number of steps must be taken. First, the Canadian government has to assist in the exploration of energy resources in the Arctic. Second, it needs to help create infrastructure for the development of these resources. An immediate investment in energy development will enable Canada to consolidate its claims to the Arctic.

Investing in energy developments has a number of benefits, the most important being the improvement of Canada's sovereignty claim. In order for Canada to increase its control it must foster economic development and the creation of new infrastructure. However, this is dependent on where oil and gas resources are found. This requires that the Canadian Arctic be thoroughly explored for energy resources. The question then, is what policy approach will encourage the optimal development of Arctic resources?

Since 1984, Canada has relied on a liberal energy policy to encourage development of its Northern resources. Using market forces alone has proven to be a slow process. The high cost of developing Arctic resources has made private energy companies reluctant to invest in the region. In the past, the Canadian government has stepped in to assist in the development of these resources. When examining the history of Canadian petroleum developments a notable pattern emerges. Canada has consistently invested in the development of non-conventional resources. The government has done so to help bridge the transition from cheaper conventional oil in the Western Basin to more expensive non-conventional projects.

A good explanation for this is provided by the Canadian political economist Harold Innis. Innis argued that Canadian economy was based on the production of staple goods. A staple good is a commodity which dominates a country's export that is relatively unprocessed (Bradford and Williams, 1992: 59). Canada's staple products include wheat, flour, fish, furs, and timber. Oil and gas could easily be added to this list. In a staple economy, the type of economic activity developed in a particular region is based on the availability of resources. Resources that have a strong export demand are put into production. As markets and technology change, or as resources become exhausted, new staples are put into production (Clement, 1992: 34).

The successful transformation from one staple to the next requires large scale support from the government. Innis argued that this factor is the primary motivation for public enterprise and government intervention in the Canadian economy (Pratt, 1988: 154). The Canadian NOC Petro-Canada provides a good illustration. The company was initially established to help ease the transition from lower cost oil and gas reserves in the Western Basin to the higher cost substitutes in the Canadian Arctic and the Atlantic coast.

Canada's new energy staples tend to be located in remote areas. Developing these projects involves substantial risk. The long lead times between exploration and commercial development means only the largest energy companies will be involved. It also means that the state will have to play a role in fostering the development of these resources. As the Canadian public policy scholar, Larry Pratt observes, concerning frontier energy projects "...the state out of necessity would be involved, if not as a direct partner, then certainly in subsidizing private investment" (Pratt, 1988: 176).

This rationale underscores the main argument of this chapter. Although Canada's energy policy has shifted back and forth between the liberal and realist approaches, the government has consistently invested in the development of non-conventional resources. Regardless of what policy tools were used to invest in energy developments, Canada has supported the transition from conventional energy projects to frontier projects. Further, periods of increased state involvement have resulted in an increase in private sector participation in the development of non-conventional resources.

In regards to sovereignty, Canada needs to encourage the development Arctic of resources by investing in them. The purpose of this chapter is to examine Canada's approach to developing energy in the frontier areas. The chapter offers an analysis of Canada's approach to

Arctic energy focusing on the role of the state in encouraging private sector investment. The chapter begins with the history of petroleum developments in the Canadian Arctic. The second section examines the policy approaches Canada has taken towards developing Northern resources. The conclusion argues that if Canada is to improve its sovereignty claim through energy development, the government will have to act as a catalyst for private investors.

5.2 History of Arctic Development

Canada's earliest Arctic energy developments took place in the North West Territories in the 1920s, but real interest had to wait until the 1960s. By 1968, over 3 million acres were under lease for oil and gas exploration in the northern territories (UNEP, 2006: 79). That same year, a partnership was formed between the Canadian government and the energy industry, resulting in the formation of Panarctic Oils. The goal of the company was to explore the Canadian Arctic islands and in some respects to assert Canadian sovereignty in the region (UNEP, 2006: 25). When Panarctic discovered the Drake Point gas field on Melville Island, other energy companies recognized the potential of the Canadian Arctic (McCracken et al., 2008: 1).

Most of the significant discoveries were made in the 1970s and early 1980s. During this time, the Canadian government invested heavily in Arctic oil and gas exploration. Arctic exploration was made financially viable due to high energy prices and generous financial and tax incentives offered to oil companies exploring in the Mackenzie Delta–Beaufort Sea area via the Canadian government's National Energy Program (NEP) (Voutier et al., 2008: 104).

Between the late 1960s and the late 1980s, more than 400 wells were drilled in the Canadian Arctic. This led to the discovery of 18 petroleum fields in the Arctic Islands and 47 in the Beaufort-Mackenzie area (McCracken et al., 2008: 2). During this time, Canada directly intervened in the oil and gas industry through a NOC. Petro-Canada was created in 1975 as

precursor to Trudeau government's National Energy Program (UNEP, 2006: 80). Petro-Canada was created at relatively the same time Statoil was created in Norway, but served a much different purpose. One of the main reasons for the creation of an NOC was to encourage the development of resources outside of the Western Basin in the frontier areas (Stanford, 1990: 5).

After the collapse in the price of oil in the mid 1980s, the Canadian Arctic was no "longer competitive with other investment opportunities in Canada or around the world" (Voutier et al., 2008: 105). The high cost of developing fields and transporting oil and gas to markets was huge and with low oil prices new developments were not financially viable (McCracken et al., 2008: 1). As a result, private companies invested in other parts of Canada. By the mid-1980s virtually all oil and gas activities came to a halt in the Canadian Arctic as oil prices returned to pre-shock price levels. With the end of the National Energy Program, government incentives to explore for oil in the Arctic were terminated (Voutier et al., 2008: 104). After the National Energy Program (NEP) was dismantled, Petro-Canada was instructed to act as a commercial oil company and to forgo its public policy goals. This resulted in a decline in Arctic exploration in the mid-1980s which turned into a complete abandonment by the early 1990s.

Throughout the 1990s, there was minimal petroleum activity in the Canadian Arctic. The regions infrastructure, including icebreakers, drilling platforms, and supply ships, were moved to other exploration frontiers (Clarke, 2000: 102). As IOCs restructured and acquired new reserves through acquisitions and mergers, exploration in the Canadian Arctic was largely abandoned.

In the late 1990s, rising oil prices created renewed exploration in the region. In August of 2000, the Canadian government announced plans to make new lands available for exploration. The oil industry responded by bidding approximately C\$400 million for new licenses and committed more than C\$1 billion for new projects in the region (Beauregard-Tellier, 2008: 3-4).

The renewed interest of IOCs in the Canadian Arctic stems from changes in the global oil and gas industry. Over the course of the last decade, a number of oil producing countries have adopted tighter regulations on foreign participation. As discussed previously, the role of IOCs is being restricted in state controlled oil fields. As seen in the Russian case, IOCs are playing only a minor role in the development of the country's petroleum reserves.

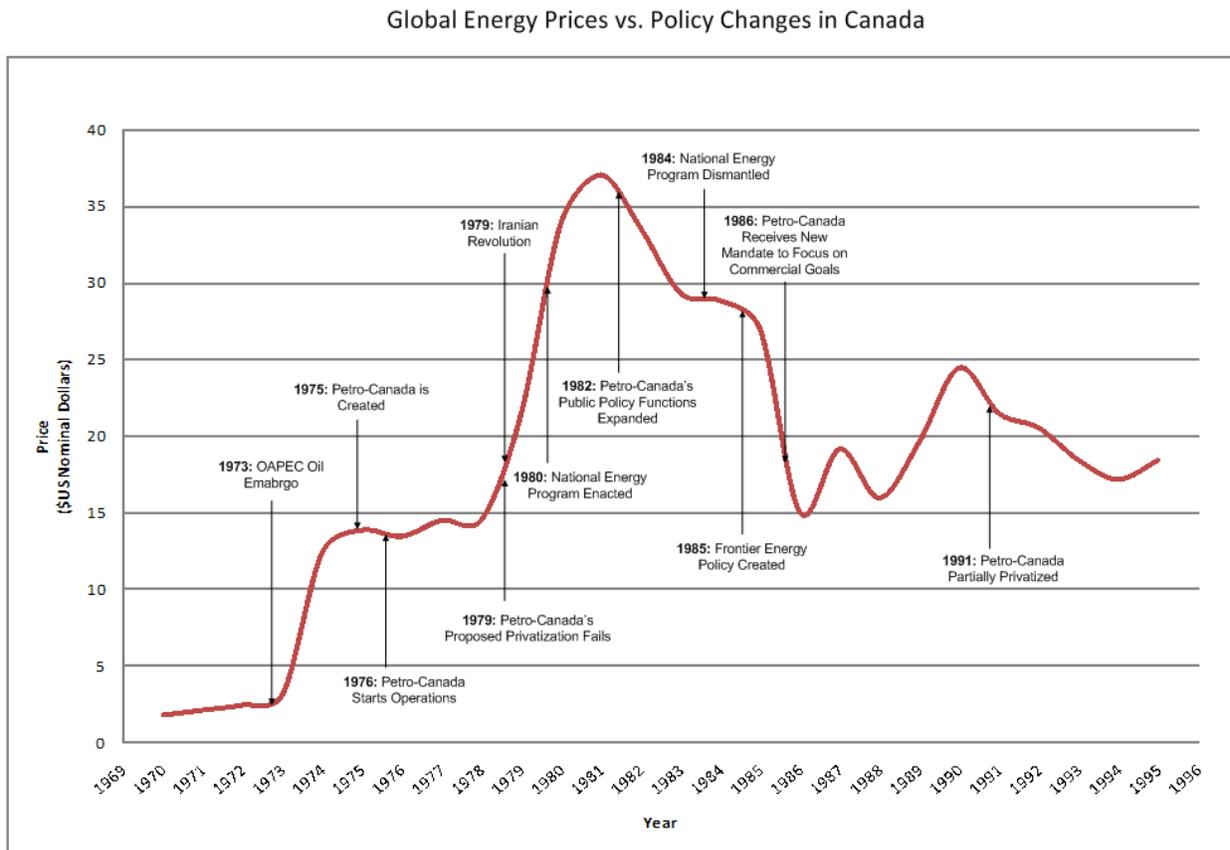
For Canada this is good news. As opportunities for IOCs to gain new reserves diminish, investment in Arctic projects becomes more attractive. As mentioned previously, due to the high cost and long lead times from exploration to development only the largest companies have the capital and resources needed to operate in the Arctic. New Arctic reserves are likely to help IOCs replace diminishing reserves. However, while private energy companies may be looking to the Arctic to replace diminishing reserves, there is no guarantee they will invest the huge amount of resources needed to develop these projects. The lack of infrastructure in the Canadian North is a major barrier to project development. Projects that have been successful have done so with government support.

5.3 Sovereignty, the State, and Energy Policy

Canada's approach to developing Northern resources has shifted between the liberal and realist models. From the 1950s to late 1960s Canada relied solely on private companies to explore and produce Arctic resources. Between 1975 and 1984 Canada took a more interventionist approach. In 1975, Petro-Canada was created to help stimulate the development of non-conventional oil reserves. After 1985, while still retaining an NOC, Canada reverted back to a liberal energy policy. As a part of this change the Canadian government removed incentives to develop Arctic resources. Without added incentives and state subsidies IOCs abandoned

Arctic projects in the early 90s. Graph one shows Canada's shifts in energy policy as compared to global oil prices.

Figure 5.3



Source: BP Statistical Review of World Energy, 2008

In reviewing the history of petroleum developments in the Canadian Arctic a notable pattern emerges. The greatest strides were made during periods of increased state involvement. The most significant progress in Arctic exploration was made between 1975 and 1984, the years in which Canada directly intervened in the oil and gas industry through its NOC Petro-Canada. Petro-Canada was created as a policy tool for the Federal government in 1975. The Company was created in the atmosphere of crisis which accompanied the first great oil shock, when the

Arab member states of OPEC cut off oil exports to the West, effectively tripling the price of oil within a three week period (Stanford, 1990: 3). Within Canada, this was also the time of energy disputes between the federal government and petroleum producing provinces, led by Alberta. The Federal government wanted to preserve lower domestic petroleum prices, while the oil producing provinces wanted to receive the OPEC-set world price (Stanford, 1990: 6). This ongoing feud between the federal and provincial governments served to increase the government's perceived energy insecurity.

Although Canada had not been directly embargoed by OPEC, the government was pessimistic about the reliability of imported oil. Recognizing the need for a secure supply of oil, the government decided to place a greater reliance on domestic production. In order to achieve this, the government argued that direct participation in the oil industry was required (Hays, 1991: 21).

Through direct participation, the Canadian government hoped to accelerate the development of non-conventional resources in frontier areas. This included areas in the North West Territories, the Arctic Islands, and offshore on the East Coast (Hays, 1990: 23). As a part of the company's mandate, Petro-Canada was meant to invest in areas outside of the Western Basin in order to encourage private firms to explore the Arctic region and the Scotian shelf. A report from the Canadian Centre for Policy Alternatives emphasizes this role: "Petro-Canada's original mandate stressed responsibility to protect long term Canadian energy security through the development of expensive, alternative sources of oil and gas – even if this responsibility was exercised at the expense of the corporation's profitability" (Stanford, 1990: 16).

In fulfilling its role as instrument of public policy, Petro-Canada disproportionately invested a large amount of its expenditures on frontier exploration. Beginning in 1976, Petro-

Canada launched an aggressive frontier exploration program in partnership with the international companies. The goal of this program was to determine whether the Northern Basins and the East Coast contained significant quantities of hydrocarbons (Pratt, 1988: 176). Petro-Canada quickly became the most ambitious explorer in the frontier regions of the Beaufort Sea, Mackenzie Delta, the Arctic Islands, and the East Coast (Stanford, 1990: 5-6). Petro-Canada contributed large sums of money to project feasibility studies, and research and development on frontier technologies (Peach, 1981: 49). An analysis of Petro-Canada's capital expenditures on exploration after 1980 confirms the disproportionate emphasis given to frontier exploration (See Table 5.3).

Table 5.3

Petro-Canada Canadian Exploration Expenditures, 1981-88 (C\$ million)				
	Western Canada		Frontier Region	
Year:	Total Exploration Costs	Percent of Total Exploration Budget	Total Exploration Costs	Percent of Total Exploration Budget
1981	108	34.3	207	65.7
1982	143	27.8	371	72.2
1983	123	17.5	581	82.5
1984	128	17.6	601	82.4
1985	145	24.7	442	75.3
1986	62	20.2	245	79.8
1987	101	71.1	41	28.9
1988	134	81.2	31	18.8

Source Data: Petro-Canada, *1989 Annual Report*

In 1980, the Canadian government created the National Energy Program (NEP). The goals of the program were twofold, to achieve energy self-sufficiency and to increase Canadian ownership in the oil and gas industry. The program called for a steep regulated rise in domestic

oil prices, though they were still kept well below world levels. It instituted a generous package for oil and gas companies exploring in the frontier regions. In some cases private firms were receiving reimbursements of 100 percent of their exploration expenses (Stanford, 1990: 6). At first the NEP was tremendously successful in encouraging new exploration outside of the Western Basin as Canadian firms rushed to take advantage of these new incentives.

While, the NEP won support from Eastern Canadian business interests attempting to enter into the energy industry, it was despised by the energy producing provinces and the established energy companies. With the collapse of energy prices in the early 1980s, a number of energy firms which borrowed heavily in the 1970s went bankrupt. Consequently, thousands of Westerners employed in the petroleum industry lost their jobs (Pratt, 1988: 43). An ironic result of the NEP was that it helped forge a consensus, from both business and government, in favor of energy market deregulation (Stanford, 1990: 6). This was part of a broader trend in Western democracies away from interventionist economic policies towards neoliberal policies which empathized removing the state from the economy as well as downsizing the public sector.

Partly due to resentment against the NEP from the West, the Mulroney government was elected with a strong mandate to dismantle the NEP. The Conservatives returned to power in 1984 pledging to remove government from the oil and gas industry. In 1984, the Canadian government terminated the NEP. This marked a major shift in Canadian energy policy. The government reverted back to a market based approach to developing Canada's energy resources. As part of this move Petro-Canada's role was substantially revised.

The Company's mandate was altered by the Conservative government to focus on commercial success rather than public policy goals (Pratt, 1981: 152). Petro-Canada's initial mandate stressed its responsibility to ensure long-term energy security for Canadians through the

development of expensive non-conventional oil and gas resources. After 1985, Petro-Canada acted and operated like any other private oil company. Almost immediately the company began shifting exploration efforts from the frontier areas to the Western Basin (Stanford, 1990: 6). At the time, the Government argued that the company's public policy goals had been satisfactorily achieved (Government of Canada. 1990: 7).

Petro-Canada's new mandate to perform as a commercial company allowed the company to shift exploration efforts to Western Canada. Its exploration budget for Western Canada rose from C\$62 million in 1986 to C\$134 million by 1988. It wasn't until after Petro-Canada began to focus on commercial gains at the expense of its public policy goals, did its interest in the Arctic region wane (See Table 5.3). The company went from spending 79.8 percent of its total exploration budget on frontier exploration in 1985, to just 18.8 percent in 1988.

After 1985, Petro-Canada along with most of the other international oil companies substantially reduced Arctic exploration expenditures (Hays, 1990: 23). The high cost of exploration coupled with the high risk environment proved too much for these companies looking to make bigger profits during a period of lower oil prices. After Petro-Canada's partial privatization, the Company almost completely abandoned Arctic exploration along with its old mandate to stimulate private sector investment in non-conventional oil developments. These mega projects required too much time and capital to attract companies looking for profitable returns on their investments.

Petro-Canada's commercialization provides a good illustration of the problems with a liberal energy policy concerning non-conventional developments. The goal for private oil companies is to maximize profit and to minimize risk. After 1985, Petro-Canada's operations reflected this priority. As the table illustrates, Petro-Canada's exploration expenditures in the

frontier regions began to wind down in 1985, the same year it received a new mandate from the Conservative government to focus on commercial objectives rather than its public policy functions.

The problem with relying solely on market forces to develop energy resources is that the logic of the market dictates that cheaper conventional projects will be brought online first, while more expensive non-conventional projects are likely to develop slowly. A report by the Congressional Research Service outlines this problem, “If the combination of price uncertainty, cost exposure, and technical risk are too great for private investors and lenders to absorb, developments of nonconventional projects will be delayed” (Pirog, 2007: 123). When these delays impede progress towards energy and sovereignty goals, the government is required to step in and assume of the risk involved in these projects.

In the case of Canada, there is merit to this argument. Petro-Canada fostered a number of partnerships that encouraged private companies to invest in projects with significant risk. Although Petro-Canada stopped exploring the Arctic in the early 1990s, it was initially quite successful in stimulating investment in the region. From 1976 to 1984, Petro-Canada’s role as catalyst centered on arranging public-private ventures to pursue non-conventional projects which were too expensive or too risky for private firms to carry out alone. Petro-Canada was able to lower the costs and risks to its private sector partners by assuming a considerable portion of them (Government of Canada, 1990: 4).

Between 1972 and 1978, there was a sharp decline in the amount of Arctic exploration undertaken by international companies. One reason for this decline was the inability of the private firms to share information (Peach, 1981: 52). Companies exploring the Arctic operated alone or in small groups in isolation from one another. These groups had an obvious incentive to

hold off on drilling until others had drilled first. If one group drilled a dry well, it provided valuable information to other groups exploring in the area. This prevented companies from coming up empty on expensive exploratory wells. While this process was beneficial to the private companies operating in the Arctic, it substantially slowed exploration efforts in the region (Pratt, 1988: 179). Petro-Canada attempted to counter this trend by forming partnerships with the international companies operating in the frontier regions.

Several examples illustrate the company's success as a catalyst for frontier developments. In the early 1970s, the Panarctic Oil Company was actively exploring in the Arctic islands. By 1974 its total gas discoveries amounted to approximately 15 trillion cubic feet of gas (Peach, 1981: 51). However, after 1975 the company's success in drilling exploratory wells declined dramatically. Support for the company began to dwindle amongst the private sector partners. The major international companies involved in the project, including Shell and Mobil Oil, began to pull money out (Hnatyshyn, 1979: 39).

Petro-Canada stepped in to prop the company up and keep frontier exploration going. According to an interview with company officials "only the active participation of Petro-Canada kept the project going" (Hnatyshyn, 1979: 37). By 1979, Panarctic was the only company drilling in the Arctic islands. That year, the company successfully completed nine wells which led to the discovery of the White Fish gas field.

Petro-Canada's disproportionately large share of the project was due to a lack of commitment from the private sector partners in the company. At the beginning of the 1980, Petro-Canada was financing over 80 percent of Panarctic's exploration budget. This continued until 1984, when Petro-Canada received a new mandate from the Federal government. Without Petro-Canada's substantial investment in the company it is likely the exploration in the Arctic

islands would have sharply declined or disappeared all together. Petro-Canada's large scale investments in the late 1970s brought a number of international companies back to the table in the 1980s after significant discoveries were made.

This trend is not unique to the Arctic Islands. As discussed previously, the development of non-conventional resources requires large scale government financial support and sometimes government participation. In the case of Panarctic, a number of IOCs pulled money out of the company due to the high risk and high cost environment it operated in. Only through the support of Petro-Canada was the company able to continue exploring the Arctic.

Another example of Petro-Canada's contribution to frontier development is on the Scotian Shelf. On Canada's East Coast, exploration activities reached a peak in 1973. Between 1971 and 1973, the oil industry had spent in excess of C\$100 million dollars exploring the region. Due to meager success, and the high cost of exploring the area, exploration efforts began to decline. As a result, most of the international companies moved their exploration efforts away from the East Coast and back into the Western Basin. By 1975, oil exploration activities on the Scotian Shelf had ceased because of discouraging results. A number of IOCs decided to farm out their interests in the area (Peach, 1981: 26).

Although only in its infancy, Petro-Canada picked up where the IOCs had left off. In staying true to the company mandate to increase non-conventional oil supplies, the company bought out a number of leases owned by the international companies leaving the area. Petro-Canada along with independent producer Kaiser Resources Inc. bought in on leases near Sable Island held by Shell and Mobil Oil. Petro-Canada paid 75 percent of the C\$55 million cost of the program and held a 35 percent interest in the lease. Ultimately this led to a major gas discovery at the Venture well in 1979. Referring to this discovery, Petro-Canada's Chairman

Bill Hooper told the Standing Committee on Natural Resources in November 1979, “I have no qualms in stating unequivocally that, without the presence of Petro-Canada in the Sable Island area from 1976 onward, Canada would not be so close to having an economic source of natural gas to supply this critical energy shortage” (Peach, 1981: 27).

By the end of 1979, the Company had invested C\$130 million in exploration funds and participated in over 65 percent of wells drilled. In 1979 alone, Petro-Canada spent over C\$65 million exploring the Scotian shelf, accounting for 70 percent of the total industry expenditures in this area (Peach, 1981: 51). In the same year, it spent another C\$65 million exploring off the coast of Newfoundland and Labrador, amounting to 30 percent of the industry total (Peach, 1981: 52). Petro-Canada’s exploration efforts in the region resulted in a number of significant discoveries. By 1979, the international companies returned to the region. Petro-Canada officials believe that the upswing in exploration after 1979 can be attributed to two factors: The Frontier Exploration allowance awarded by the Federal government, which allowed companies to write-off 65 percent of exploration costs, and the active participation of Petro-Canada in the region (Hays, 1991: 203).

One of Petro-Canada’s most significant discoveries in the frontier regions was the Hibernia well off the Grand Banks. Exploration on the North Grand Banks started in 1972. After eleven unsuccessful drilling attempts, the major international companies moved exploration out of the region (Peach, 1981: 52). By 1975 exploration in the area came to a complete halt and remained idle until 1978. Petro-Canada’s exploration efforts between 1978 and 1980 resulted in a number of important discoveries in the Newfoundland and Labrador offshore areas. After these discoveries the international companies returned to the region, investing C\$250 million to drill ten wells in 1980 of which Petro-Canada directly participated in nine (Petro-Canada Product ion

Report, 1983: 23). Only through direct participation was the government able to keep exploration activity going between 1975 and 1980. After significant discoveries were made by Petro-Canada, the international companies returned to the region.

Based on the above examples, it seems evident that due to the expensive nature of non-conventional activities, private companies alone could not be counted on to invest in these areas on a large enough scale. Before Petro-Canada became active in the frontier regions, exploration by private firms had begun to decline due to the low success rates. Certainly Petro-Canada actions lowered the cost and risk associated with the uncoordinated exploration efforts that took place in the region prior to its participation.

While Petro-Canada was successful in stimulating Arctic exploration, arguably the government could have used financial incentives to achieve the same objective. This suggests that while an NOC can perform this function, it is not the only tool that could achieve this end. As noted previously, in a number of cases Petro-Canada's contribution was purely financial. As such, the government could have just as easily directly invested in non-conventional projects without resulting in the need for an NOC (Peach, 1981: 49-51). This was the case before Petro-Canada was established. The government directly invested in the Syncrude Oil Sands project, the Norman Wells oilfield, the Polar Gas Project, etc. It was also the case after the privatization of Petro-Canada when the government invested millions into the development of the Hibernia oil platform through the Hibernia Holding Corporation (Desrochers and Fisher, 2002: 12).

While direct government participation may not be required to encourage Arctic energy developments, government financial support certainly is. After the commercialization of Petro-Canada and the removal of tax incentives for frontier exploration, major northern development proposals came to halt. Without government support exploration programs in the Mackenzie

Delta and Beaufort Sea were abandoned. The last offshore well was drilled in 1989, followed by the last onshore well in 1991 (UNEP, 2006: 88). Without federal incentive programs, energy developments in the Canadian Arctic are not economically viable. The oil and gas industry was forced to fund new exploration entirely out of its own cash resources.

Canada's turn to a liberal energy policy resulted in the complete abandonment of Arctic exploration. In 1985, the NEP was replaced by the market orientated Frontier Energy Policy. This policy created a new framework for offshore and northern exploration and development. Private companies could now obtain market value for their products, but lost major subsidies for northern and frontier exploration (Pratt, 1988: 205). The 1985 Western Accords effectively ended any incentives to explore for energy in the Arctic. After the commercialization of Petro-Canada no new policy tools were created to fill the void left when the NOCs public policy function were dismantled (Hays, 1991: 24).

A report from the Standing Committee on Energy and Natural Resources outlines this problem. The report suggests "there needs to be some other agency of government that can serve as a vehicle for Petro-Canada's policy functions" (Hays, 1990: 15). The report recommends that the government should create a new agency "whose primary function is to facilitate the development of Canada's petroleum resources, working cooperatively with the private sector. This Crown agency should not have an operational role in competition with the private sector" (Hays, 1990: 16). Despite the committee's recommendations, Canada has not created any new agency or policy to aid private companies exploring in the Arctic. As noted previously, this resulted in the complete abandonment of Arctic energy developments over the past two decades.

The creation of a new agency charged with the task of encouraging energy development in the North would go along way towards improving Canada's control of the region. A new

agency could take many forms. Perhaps the easiest to implement would be an agency charged with the task of creating partnerships between oil producers. In this case, the government's role would be to foster partnerships and reduce the risk for private sector participants by investing in new projects. This was the model used for the Panarctic Oil Company. However, as noted previously, the Canadian government had to invest substantially more than its private sector partners to keep Panarctic afloat. As a result, this approach may be less effective in stimulating new developments.

Another approach is to create a new NOC charged with the task of exploring for oil and gas reserves in the Arctic. With this approach the government would be able to direct exploration efforts to specific areas. However, this would be substantially different from Canada's previous NOC Petro-Canada. Petro-Canada was a fully integrated oil company, meaning it was involved in every aspects of the oil business from exploration and production to refining, transporting and marketing. A new NOC would only need to be involved in the exploration process. By directly intervening, the government could act as a catalyst for private investors. The goal of this new agency should be to support the development of projects that are likely to encourage regional development. As a part of this effort, the company could create a training program for Northern residents to ensure they benefit directly from these projects.

5.4 Conclusion

Going back to the discussion at the beginning of the chapter, investments in energy developments are investments in improving Canada's sovereignty claim. The Norman Wells project provides a good illustration. Norman Wells is Canada's second largest oil field. The oil field was developed through a public private partnership between the Government of Canada and Imperial Oil. Through the creation of new infrastructure the oil development brought new job

opportunities to the small northern community. The development of these energy resources has served to increase the government control of the region through the expansion of social services. More importantly, the government has been able to increase its presence in the region, a vital component in demonstrating effective sovereignty. In other words, by investing in energy projects Canada is helping to foster economic development and creation of new infrastructure.

The justification for government involvement in Arctic exploration and development centers on the argument that it is necessary to speed the development of Arctic resources. Arguably Canada cannot afford to wait for private companies to become sufficiently interested in the area. Canada's interest in the area requires these resources be brought on line sooner rather than later. Cooperation between the Canadian government and the petroleum industry is required if Canada can improve its sovereignty claim. However, it does not necessarily follow that Canada needs to adopt a realist approach to developing arctic energy.

By intervening in the oil and gas industry the government could act as a catalyst in the frontier areas by stimulating private sector investments. This intervention does not necessarily require the government to be a direct participant as is the case in Norway and Russia. In the past Canada has used an NOC as a policy vehicle to stimulate Arctic energy developments, however, since Petro-Canada's contribution was primarily financial the government could have just as easily invested in new developments with private sector participants without having to rely on an NOC. In short, the success of a liberal energy policy in improving Canadian Arctic sovereignty is dependent upon the level of financial support private energy companies receive for Arctic projects.

In order to improve Canada's sovereignty claim Canada needs to assist private companies in developing Arctic resources. Direct intervention may not be required but the

government will have to support new developments either by directly investing in or through some other form of state subsidy. In doing so, Canada can improve its sovereignty claim in the Arctic. Given Canada's modest financial means, the creation of a new agency charged with the task of encouraging petroleum developments seems well suited. Avoiding assigning an operational role to a new agency would avoid conflicting with Canada's commitment to free market principles (Hays, 1990: 16). This approach would have the added advantage of increasing the states presence in the region while encouraging private sector participation in energy development.

CHAPTER 6: CONCLUSION

Canadian Arctic sovereignty has become once again a matter of political importance. Over the past several decades, Canada has taken a number of steps that have helped solidify its claim to the region. However, none of these actions have increased the level of control exercised by the Federal government in the region. As discussed previously, the requirements and perception of sovereignty change over time but the ability to demonstrate control can serve to improve domestic and interdependence sovereignty, which in turn can alter the perception of other states and increase Westphalian and international legal sovereignty.

As it has in the past, Canada is turning to defense spending to help improve its sovereignty in the region. Over the past several years, Prime Minister Harper has announced a series of new military expenditures in order to respond to the anticipated sovereignty challenges (Lakenbauer, 2008: 2). These measures include the development of a high Arctic base, funding for naval ice breakers, and the strengthening of the Canadian Rangers. While these measures certainly help to strengthen Canada's sovereignty claim, they are not likely to fulfill all of the necessary requirements of sovereignty.

This thesis identified three areas of sovereignty interest: control, infrastructure, and economic development. These three areas are closely related to one another. By building infrastructure and encouraging economic development the Canadian government can increase both its control and authority in the North. This in turn, will enhance Canada's ability to assert its sovereignty in the Arctic. In order to improve its control of the region, Canada needs to adopt a broader approach to sovereignty which centers on improving domestic sovereignty. This approach should include state support for economic development and the building of new

infrastructure for commercial use. Energy development offers the Canadian government one way to improve the three areas of sovereignty interest. However, improving these areas will require large scale investment from both levels of government in the Canadian North, and the private sector.

Money spent on improving Canada's control of the North should be considered an investment. The United States Geological Survey (USGS) estimates that 25 percent of the world's remaining oil reserves are located in the Arctic (USGS, 2008: 2-3). Not all of this is located in the Canadian Arctic but it demonstrates the potential of the region. Over the next decade demand for oil is expected to surge. The International Energy Agency (IEA) estimates that the demand for oil will continue to grow between 0.5 to 2 percent per year over the 10 years (IEA Oil Supply Security 2007). What this means for Canada is that money spent on protecting Canadian sovereignty is likely be returned and thus should be considered as an investment. Energy developments will not only assist in economic development but will provide new sources of revenue for the federal and territorial governments.

This thesis argued that government intervention is required to develop working partnerships amongst Canadian oil producers in order to bolster Canada's claim to the region. The social value of exploration in the Arctic exceeds its private value because these activities will bolster Canada's claim to the region. In other words, investing in Arctic energy will not only help solidify Canada's claim to the region, it will also contribute to the economic development of the region. Whatever pathway the government takes, either realist or liberal, the government will have to provide financial support in order to foster Arctic energy development. Canada has consistently invested in the development of non-conventional resources. The government has

done so to help bridge the transition from cheaper conventional oil in the Western Basin to more expensive non-conventional projects.

In the past, Canada has used a wide range of financial incentives and policy tools to aid in the development of Arctic energy sources. Returning to the question of whether a liberal energy policy can improve Canada's sovereignty claim, there is no direct answer. Perhaps the strongest argument supporting a liberal energy policy is that the private companies are very effective, in terms of efficiency and productivity, in finding and developing new oil resources (Pirog, 2007: 16). However, because these companies are ultimately responsible to shareholders they generally pursue projects which have a potential to earn profit in a shorter time frame. As previously discussed, non-conventional projects have long lead times and are substantially more expensive to develop. When the risk becomes too great for private investors, these projects are ultimately delayed or simply abandoned.

This is reflective of developments in the Canadian Arctic. After the dismantling of the NEP and commercialization of Petro-Canada the government no longer offered support for Northern energy developments. Consequently, private companies lost interest in the region. Without state support Arctic energy development was no longer economical. As previously discussed, periods of increased state involvement resulted in an increase in private sector participation in non-conventional energy projects. Even before Petro-Canada was created, the government supported the private companies operating in the region by investing in them.

Any form of economic development, whether undertaken by the state or private companies, can ultimately increase the government's control of the region. However, since one of the main requirements of effective legal sovereignty is increasing the states presence in the region, private developments are not able to improve Canada's claim in this regard. Private

sector developments are more likely to improve Canada's domestic sovereignty by increasing the government's control of the region. Here again, the Norman Wells development provides a good example. Although the Norman Wells oil field is operated solely by Imperial Oil, a portion of it is owned by the Federal government. The development of this project has resulted in considerable economic growth in this small community. Both the federal and territorial governments have collected tax revenues from this project, of which a part has been used to expand social services in the community. Additionally, new infrastructure has been built to accommodate the operation of this field. All of these actions combined have served to increase the government's control of the region and ultimately have improved Canada's domestic sovereignty. However, there are not enough of these developments in the Canadian Arctic to make a significant contribution to improving Canada's sovereignty claim. In other words, while private energy developments can help improve Canada's control, they are not done on a large enough scale to significantly improve Canada's claim to the region. This is perhaps the strongest argument as to why Canada should adopt a realist approach to Arctic energy development.

While there is no direct link between a realist energy policy and increased sovereignty there is certainly linkage. A state can increase its international legal claim by encouraging commercial endeavors and supporting regional development. This rationale is based on the ICJ ruling regarding ownership of Eastern Greenland. By incorporating elements of a realist approach both Norway and Russia have successfully encouraged economic development and the creation of new infrastructure in the Far North.

Through direct intervention both countries have taken up socially beneficial projects, encouraged research and development, and fostered economic growth. Russian NOCs have

played a key role in converting old military installations and equipment into commercial infrastructure. They have also played an important role in mapping the RCS for new resources. Similarly, Statoil has been instrumental in solidifying Norway's claim to the North by creating new technologies and developing new infrastructure in the Far North. In both cases state intervention has been very important in encouraging the development of energy projects in the North. Table 6.1 outlines how the policy approaches have impacted state sovereignty. As the table demonstrates, the use of NOCs has been instrumental in improving domestic and international legal sovereignty in Russia and Norway. Canada should create a similar policy tool for encouraging the development of its Arctic resources.

In order to improve its sovereignty claim Canada needs to assist private companies in developing Arctic resources. Direct intervention may not be required but the government will have to support new developments either by directly investing in them or through some other form of state subsidy. However, by directly participating in the Arctic energy developments the government is able to direct spending in specific areas and regions much more effectively than fiscal measures alone. Additionally, the government and the public learn about the risks and opportunities involved in Arctic exploration from its practical experience as a direct partner. Perhaps most importantly, direct government intervention can create new investment opportunities for private oil companies in Arctic projects. Especially in the case of small independent producers which might otherwise be excluded from Arctic projects due to their small size relative to foreign controlled companies. None of these goals could be guaranteed by the activities of private firms and government financial support alone.

Table 6.1

Comparing Energy Approaches			
Sovereignty	Canada: Liberal	Norway: Mixed	Russia: Realist
Domestic	Improved through small projects such as Norman Wells. Not on a large enough scale to substantially improve domestic control or increase the government's presence in the region.	Strengthened through regional development in the North. I.e. Hammerfest. Energy developments have provided new opportunities for economic growth.	Improved through the conversion of military ports into commercial centers used for energy development. State control has increased through the development of resources on RCS.
Interdependence	No impact on this type of sovereignty.	No impact on this type of sovereignty.	No impact on this type of sovereignty.
International Legal	Very little impact on the perception of other states. No new developments have taken place since the late 1980s. Projects too expensive to develop without state support.	Improved through Statoil's research and development programs in the Barents Sea as well as its role as a responsible steward of the environment. The state has been able to expand its presence through projects like Snøhvit.	Strengthened through energy projects on the RCS that have increased the state's presence in the region. New infrastructure has been built to accommodate these projects.
Westphalian	No impact on this type of sovereignty.	No impact on this type of sovereignty.	No impact on this type of sovereignty.

Canada needs to create a new agency to pick up where Petro-Canada left off. One of Petro-Canada's primary goals was to act as a catalyst for private investors. However, after the

privatization of Petro-Canada, no new institutions were created to take on the public policy functions formally performed by the Company. The loss of government support coupled with a decline in world energy prices resulted in a loss of private sector interest in the region.

By directly intervening in the oil and gas industry the government could act as a catalyst in the frontier areas by stimulating private sector investments. The Japanese National Oil Corporation provides a good illustration. The role of the company is to initiate offshore projects before there is economic justification to do so. In doing so, the government encourages the development of energy projects when private investors are unwilling to take the risk.

Adopting a realist policy would represent a significant departure from the last two decades of Canadian energy policy which has centered on privatization and deregulation. However, this is not such a radical change as to be politically impossible to implement. The policy approach advocated in this thesis is far more benign than it would appear on the surface. The style of intervention advocated in this paper would be substantially different from Canada's previous excursion into the oil and gas business. The government's role would be extremely limited. The government would only act as a facilitator between private investors to support the development of resources in the North. This would only require the temporary participation of the government. The adoption of an interventionist energy policy would be transitional in nature. Once the private sector becomes sufficiently interested in the region the government could gradually cease supporting exploration efforts in the region.

There are, however, other considerations that may affect the implementation of this strategy. For one, supporting Northern energy developments could stir regional resentment in Canada. Providing subsidies and other types of government support for Northern energy development could potentially encourage companies to move money out of other non-

conventional projects such as the Alberta oil sands. A second consideration is how government intervention in the energy industry would affect relations with the United States. It's possible the United States may not look favorably upon direct state intervention. These issues are beyond the scope of this thesis but would require thorough examination before Canada could adopt the policy advocated in this paper.

In short, Canada's Arctic resources are high cost and high risk. A government organization could take the lead in promoting their development. The government could limit the role of a new organization solely to stimulating industry, moving on when stimulation is no longer required. In other words, the government should start developing energy projects in the North that the private sector is unwilling to take up alone. Once the private sector is sufficiently interested, the government could then move on to other areas. In doing so both the government and the private sector will benefit. The creation of a new agency charged with the task of encouraging petroleum developments in the Arctic would help Canada improve its sovereignty claim.

Energy developments offer a cost effective way to bring economic development to the region. By encouraging the exploration and development of Canada's Arctic resources the government can improve its control of the region. This control would strengthen domestic sovereignty and overtime could improve Canada's standing on international legal sovereignty. While energy developments cannot fulfill all of the requirements of sovereignty, it offers a good starting point for the government to increase its presence in the region, a vital component in demonstrating sovereignty.

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