

A Sustainable Outlook in an Era of Uncertainty:
A Case Study of Manitoba Hydro

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ABSTRACT

The historical record of Manitoba Hydro, Manitoba's largest crown corporation, is a rich case study that contextualizes and affirms the numerous public policy challenges confronting Manitoba's polity in the twenty-first century. Manitoba Hydro's contemporary history is mired in ongoing political interference, severe financial mismanagement, poor indigenous relations and technical failures. Examining the historical record offers an opportunity to probe Manitoba Hydro's history which is inextricably linked to Manitoba's social, economic and environmental landscape.

This thesis provides a historic overview of hydroelectric production in the province of Manitoba, highlighting specific themes that are essential to understanding Manitoba Hydro's modern incarnation. This includes insights into the utility's electrical advantage, environmental record, and its relationship with indigenous Manitobans. Contemporary fiscal decisions such as the expansion of productive and transmission capacity, irrespective of demand and market fluctuations, have undoubtedly placed the crown corporation in a precarious position. As a result, Manitoba Hydro and the province of Manitoba need develop effective public policy for the future sustainability of the crown corporation.

This thesis recommends various actions that will ensure the utility remains strong, stable and secure now, and in the future. This includes increasing domestic demand and efficiencies, acquiring monetary advances from the province of Manitoba to temporarily balance fiscal challenges, reform the social license model with amendments for indigenous Manitobans and commission an inquiry as a result of recent mismanagement.

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Thank you.

DEDICATION

For my ancestors, who persevered in the face of “harsh climate, poor land, woefully inadequate communications, social prejudice, economic exploitation, and a provincial government largely indifferent to their plight.”¹ Their endless pursuit of greater unity, prosperity and freedom has influenced my deep appreciation for community and my unrivalled passion for our province, our dominion and all its peoples.

¹ Ewanchuk, Michael. *Spruce, Swamp and Stone: A History of the Pioneer Ukrainian Settlements in the Gimli Area*. Winnipeg: Michael Ewanchuk, 1977.

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GLOSSARY

CRD – Churchill River Diversion

EV – Electric Vehicle

EVIP – Electric Vehicle Incentive Program of Ontario

HVDV – High-Voltage Direct Current

FPR – Final Preferred Route (Bipole III)

kWh – Kilowatt Hour – Unit of Electrical Energy

LWR – Lake Winnipeg Regulation Project

MCEC – Manitoba Clean Environment Commission

MHEB – Manitoba Hydro Electric Board

MISO – Midcontinent Independent Systems Operator

MPC – Manitoba Power Commission

MW – Megawatt (1000 kW)

NDP – New Democratic Party of Manitoba

NFA – Northern Flood Agreement

NFC – Northern Flood Committee

PC – Progressive Conservative Party of Manitoba

PDP – Preferred Development Plan

PUB – Public Utilities Board Manitoba

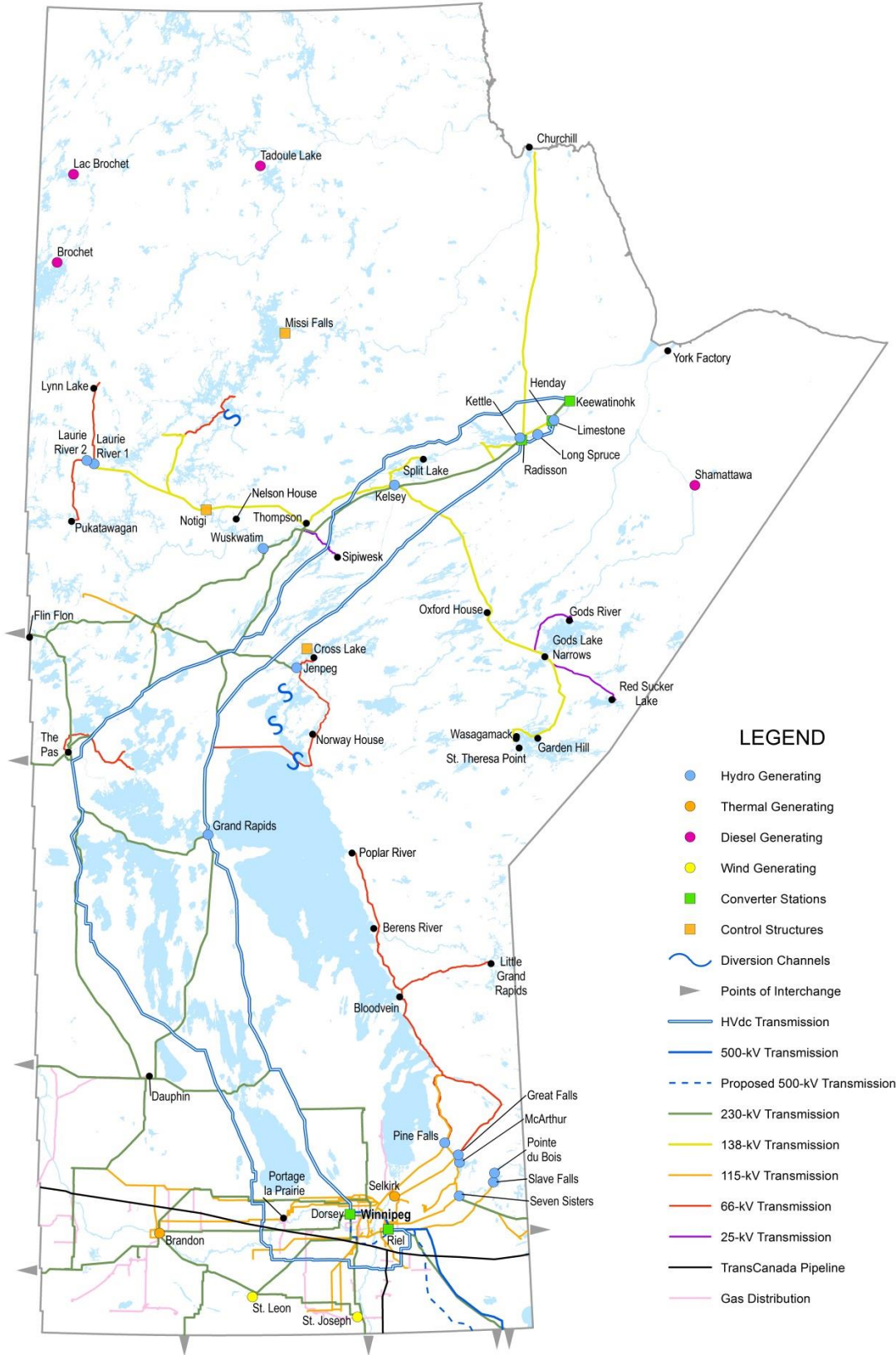


Figure 1 - Source: Manitoba Hydro Corporate Communications

CHAPTER 1: INTRODUCTION – THE CONTEMPORARY REALITIES

In October 2016, Sanford Riley, newly appointed chair of the Manitoba Hydro-Electric Board, and Kevin Shepherd, Chief Executive Officer of Manitoba Hydro, held four public information sessions which communicated the results of an in-depth provincial review of Manitoba Hydro. This review was initiated shortly after Manitoba's Progressive Conservatives (PCs) were victorious in the province's 41st general election and arose from a campaign commitment.² Both Riley and Shepherd exposed a litany of problems confronting Manitoba Hydro including growing financial concerns that have the potential to severely threaten the public utility's financial strength, stability, and investment. According to Shepherd, Manitoba Hydro's cumulative debt is projected to increase from 13 to 25 billion dollars in the next three to four years.³ Manitoba Hydro attributes this debt to the numerous ongoing and completed projects, such as Bipole III, the Riel/Keewatinok Converter Stations, the Manitoba-Minnesota Transmission Line and the construction of the Keeyask Generating Station. Shepherd noted that "there is going to be pain, relative to where we are today, suffered by everybody. Clearly, Hydro's operations are going to require a significant restructuring and that will not be pleasant for the people at Hydro."⁴ This corporate rhetoric typically refers to reductions in employment through consolidations, wage freezes, hiring freeze and attritions. To satisfy budgetary and consolidated debt targets, Manitoba Hydro has been directed to reduce management by 30 percent. Shepherd also noted that Manitoba ratepayers should anticipate annual rate increases of 3.5-4 percent over the course of the next two decades including, annual 7.9 percent increases

² CBC News. 'Manitoba Hydro Faces Tough Choices to Battle Massive Debt.' *CBC News – Manitoba*: October 18, 2016. <http://www.cbc.ca/news/canada/manitoba/manitoba-hydro-bipole-transmission-line-1.3811316>

³ *Ibid.* October 18, 2016

⁴ *Ibid.* October 18, 2016

until 2024 to help alleviate and stabilize the utility's fiscal challenges.⁵ Consequently, this request was denied in May 2018 and the Public Utilities Board (PUB) – Manitoba's "independent, quasi-judicial administrative tribunal that has broad oversight and supervisory powers over public utilities and designated monopolies" granted the utility only a 3.6 percent increase.⁶

These actions will not only affect Manitoba Hydro's employees, but it will also affect the citizenry as ratepayers/taxpayers in addition to the direct and indirect economic linkages associated with their operations. Manitoba Hydro is an important revenue generator and therefore, a significant contributor to the province's economic activity and future development. Consequently, it has established a critical position within Manitoba's polity. This position is consistently evolving and will continue to do so. Recent history would suggest however, this evolution is coming to a climax or crisis of sorts. At the very least, the present era represents uncharted waters and/or a level of unprecedented uncertainty in this history of Manitoba's largest crown corporation.

By November 2016, Manitoba's Minister of Crown Services stated that Manitoba Hydro is in fact bankrupt.⁷ These comments were followed by Premier Brian Pallister noting that "we know that there is a debt that is significant and has grown enormously under the previous administration. We know that money lenders are concerned about that debt. We know that they are concerned about the combined debt of [Manitoba] Hydro and the province."⁸ A historical

⁵ CBC News. 'Manitoba Hydro Faces Tough Choices to Battle Massive Debt.' *CBC News – Manitoba*: October 18, 2016. <http://www.cbc.ca/news/canada/manitoba/manitoba-hydro-bipole-transmission-line-1.3811316>

⁶ CBC News. 'Manitoba Hydro electricity price will go up 3.6% in 2018-19.' *CBC News – Manitoba*: May 1, 2018. <https://www.cbc.ca/news/canada/manitoba/pub-hydro-electricity-rate-pallister-manitoba-board-1.4643083>

⁷ Kavanagh, Sean. 'Minister suggests Manitoba Hydro bankrupt'. *CBC News – Manitoba*. November 7, 2016. <http://www.cbc.ca/news/canada/manitoba/manitoba-hydro-schuler-debt-sandy-riley-1.3840805>

⁸ *Ibid.* November 7, 2016.

analysis would suggest that the utility and the province of Manitoba have always lacked accountability, foresight, and transparency with respect to its decision making. Therefore, it is not the first time the utility has been in a precarious position, and it certainly will not be the last.

This thesis provides a historic overview of hydroelectric production in the province of Manitoba, highlighting specific themes that are essential to understanding Manitoba Hydro's modern incarnation. It will include insights into the utility's comparative electrical advantage, environmental record, and its relations with indigenous Manitobans. Recent fiscal decisions such as the expansion of productive and transmission capacity, irrespective of demand and market fluctuations, have undoubtedly placed the crown corporation in a precarious position. These contemporary challenges are framed and outlined from an economic and political perspective in chapter one, where the text emphasizes the immediate need for Manitoba Hydro and the province of Manitoba to develop effective public policy for the future sustainability of the crown corporation.

Chapter two conducts an overview of the utility's history, particularly outlining its corporate evolution and the means by which it acquired its assets and productive capacity. Summarizing the key themes that intersect Manitoba Hydro's historical record allows for a modern understanding of today's current and ongoing issues. The text segues to chapter three which will highlight key findings from the 1979 Tritschler Commission which reviewed the economy and efficiency of Manitoba Hydro's development/investment decisions during the expansionist era of 1970s. This chapter discusses the recommendations implemented in the succeeding decades and those recommendations that were not fully implemented or ignored completely. The argument will highlight the dichotomy of those recommendations which were ignored or partially implemented, and how they have contributed to Manitoba Hydro's current

challenges. Chapter four outlines what one might call Manitoba's electrical advantage which arises from the means of production, transmission, and distribution of hydroelectricity which directly and indirectly subsidizes the provincial budget. This economic advantage supports public and private investment which is crucial for the long-term growth of the Manitoba economy and its ability to administer social welfare. The following chapter highlights the history and relationship between Manitoba Hydro, the province of Manitoba and its indigenous peoples. This section will synthesize the historical injustices forced upon indigenous Manitobans as a result of hydro development. How this history is recorded and accounted has been communicated through numerous theoretical lenses which will be outlined. In recent history however, Manitoba Hydro has approached relations and development with indigenous Manitobans through a model described as 'benefit-sharing' and/or 'social license'. This model ensures interested parties which seek to develop various resources obtain "free, prior and informed consent of the local communities and stakeholders" in order to initiate or commence any development.⁹ The thesis argues that this model is beneficial based on its conception of the social contract, opportunities for stakeholder profitability and the benefits of temporary and permanent employment. However, imperfections exist, particularly in relation to treaty recognition and monetary arrangements, which requires an overall in current and future partnerships. The relationship between Manitoba Hydro, the province of Manitoba and indigenous and northern Manitobans remains an area of contention both historically and at the present however, an improved 'social license' model provides an opportunity for partnership, inclusion and reconciliation.

Chapter six demonstrates that the concept that Manitoba Hydro is a 'green' or environmentally neutral utility is a misconception. From permanently flooded forest lands, non-

⁹ Dipple, Joseph. 'Implications of hydroelectric partnerships in northern Manitoba: do partnership agreements provide social license?' Faculty of Graduate Studies: University of Manitoba, 2015. pp. 31

fluctuating riparian zones, clear cutting and altering entire ecosystems through diversion and controls has not improved the environment or a favourable action to watersheds. Furthermore, while there may be a perception that Manitoba Hydro is 'green' or carbon neutral, the utility's top industrial customers include TransCanada Keystone Pipeline, Enbridge Pipeline Inc. and Koch Fertilizer who are directly or indirectly connected to some of the largest carbon emitters in Canada. Additionally, this case study of Manitoba Hydro confers an interconnection between environmental and indigenous injustice and therefore is detailed accordingly.

At the turn of the twenty-first century, Manitoba Hydro developed a corporate strategy which proposed numerous infrastructure investments to incentivize greater hydroelectric capacity, including export opportunities and increasing domestic reliability for Manitoban consumers. This strategy included a four-dam expansion, a new bipole/converter stations and the construction of an additional export transmission link between Manitoba and Minnesota. Most projects received approval, though some, such as Conawapa, have been suspended indefinitely. Nonetheless, while these projects were criticized from numerous perspectives, no project in Manitoba Hydro's recent history was more contentious than Bipole III. Bipole III is a HVDC (High-Voltage Direct Current) power line that transmits electrical current from Keewatinow converter station, northeast of Gillam, to the Riel converter station, southeast of Winnipeg. Its conception was realized through providing greater demand via domestic and export opportunities, noting that Bipole I and II would potentially be outstripped given market, climatic and infrastructure projections including their proximity. While Manitoba's polity was receptive to a third bipole which was needed to service additional electrical capacity, the issue that remains divisive is where it should have been located, either to the east or west of Lake Winnipeg. Chapter eight argues that Bipole III should have been built along the eastern shores of Lake

Winnipeg. This argument is based on environmental and economic evidence which highlights that the eastern route was superior regarding cost effectiveness, environmental considerations, safety and electrical load loss. This chapter will further argue that Bipole III was and remains unnecessary. Further electrical growth and market expansion could be achieved through efficiency savings and alternative electrical technologies in the domestic market. If further capacity is warranted however, smaller projects such as the generation facilities located on the Winnipeg River are feasible options throughout the province. Expansion of productive capacity does not need to be confined to Manitoba's north.

When governments are presented with mounting debt and deficits, the succeeding course of action is commonly defined by austere budgetary policies and therefore, government assets such as crown corporations may be privatized. Chapter eight tests this hypothesis and the potential for privatization of Manitoba Hydro. This section will emphasize Manitoba Hydro's financial record, and while that record may appear bleak, there is no evidence to suggest privatization is a superior option to its current model of public ownership. Furthermore, political considerations based on party ideologies and historic accounts will be argued to better understand recent events and anticipate future actions between government and the crown corporation. As a result, chapter nine recommends various policies which, if implemented, will ensure the utility remains strong, stable and secure now, and in the future. This includes increasing domestic demand, improving efficiencies and acquiring a monetary advance from the province to temporarily stabilize fiscal challenges. Furthermore, the utility should advance opportunities for environmental protections, infrastructure renewal initiatives and improve the social license model with indigenous Manitobans. Lastly, commissioning an inquiry as a result of contemporary mismanagement is beneficial to inform future policy and corporate strategy,

and therefore recommended. The thesis concludes by reviewing policy considerations including the rapid advancement of electrical technologies and the opportunities that exist for future research and analysis.

CHAPTER 2: HISTORICAL OVERVIEW

Manitoba Hydro, a provincial crown corporation of over five thousand employees¹⁰ and the seventh largest electricity provider in Canada, is headquartered in Winnipeg.¹¹ Next to the provincial crown corporations in Canada's most populated provinces, Ontario, Quebec and British Columbia; Manitoba Hydro (by revenue metrics) is the largest provider of electricity and natural gas.¹² According to Manitoba Hydro, the history of electrical generation in Manitoba "tells the story of expediency, foresight and public responsibility."¹³ In the late nineteenth century, shortly after Manitoba's entry into confederation, advancements in electrical technologies were elementary in nature. However, at the turn of the twentieth century, initial hydroelectric production began with the construction of the Minnedosa generating station on the Little Saskatchewan River. "This station helped power the city of Brandon and was only in operation 8 months during the year."¹⁴ During the same period, the city of Winnipeg was experiencing exponential growth due to a variety of factors and during that era, was the third largest city in Canada.¹⁵ This led to the expansion of multiple private electrical firms looking to capture market share as electrification grew. Through investments, amalgamations, and government appointments, three major electrical utilities emerged by the end of the Second World War; the Winnipeg Electric Company, City of Winnipeg Hydro Electric System (City

¹⁰ Manitoba Hydro. *Careers*. <https://www.hydro.mb.ca/careers/index.shtml>

¹¹ The Globe and Mail. 'Canada's Top Companies By Industry'. *Published July 3 2013*.
<http://www.theglobeandmail.com/report-on-business/rob-magazine/top-1000/rankings-by-industry/article12870820/>

¹² *Ibid.* July 3 2013.

¹³ Manitoba Hydro. *A History of Electric Power in Manitoba*. 2010, pp. 1
https://www.hydro.mb.ca/corporate/history/history_of_electric_power_book.pdf

¹⁴ Dipple, Joseph. 'Implications of hydroelectric partnerships in northern Manitoba: do partnership agreements provide social license?' Faculty of Graduate Studies: University of Manitoba, 2015, pp. 5

¹⁵ Levine, Allan. 'The Panama Canal and Decline of Winnipeg.' *Winnipeg Free Press*: August 22 2014.
<http://www.winnipegfreepress.com/opinion/analysis/the-panama-canal-and-the-decline-of-winnipeg-272262601.html>

Hydro), and the Manitoba Power Commission (MPC).¹⁶ These three utilities built a series of generation facilities on the Winnipeg River between 1916 and 1928. Stations such as Pointe Du Bois, Great Falls, Seven Sisters, and Slave Falls, were built during this era, all of which remain in-service within Manitoba Hydro's network (Figure 2).



Figure 2 - Source: Manitoba Wildlands

In 1949, the provincial government formed the Manitoba Hydro Electric Board (MHEB), with the intent of centrally coordinating electricity policy. Like the Rural Electrification Administration in the United States, the MHEB was tasked with completing rural electrification, an objective achieved by 1956.¹⁷ However, two crucial developments prior to the completion of rural electrification occurred that impacted the development of Manitoba Hydro. In 1952, the MHEB absorbed the Winnipeg Electric Company, and in 1955, an agreement was reached between MHEB, MPC, and City Hydro which became the foundation of the *Manitoba Hydro Act*

¹⁶ Manitoba Hydro. *A History of Electric Power in Manitoba*. 2010, pp. 20
https://www.hydro.mb.ca/corporate/history/history_of_electric_power_book.pdf

¹⁷ *Ibid.* 2010, pp. 21

which was formally established in 1961.¹⁸ As a result, MHEB and MPC amalgamated under one entity. Under the agreement “all distribution properties in [Winnipeg’s] suburbs owned by City Hydro were sold to MPC”¹⁹, prior to Winnipeg’s unified municipal amalgamation in 1971.²⁰ It also stated that “all distribution properties in the city of Winnipeg owned by the former Winnipeg Electric Company were sold to City Hydro.”²¹ Therefore, City Hydro was solely responsible for electrification in Winnipeg’s central core. This agreement remained unchanged until Manitoba Hydro purchased City Hydro in 2002 to become the province’s sole provider.²²

In 1956, hydro development arrived in northern Manitoba with the construction of the Kelsey generating station on the Nelson River. The station was built in response to the electrical needs of the International Nickel Company whose operations were located near the city of Thompson.²³ Numerous studies were conducted in the late 1950s and early 1960s that noted northern Manitoba’s hydroelectric potential via the Churchill and Nelson rivers. Furthermore, the advancement and application of high-voltage direct current (HVDC) transmission, which allowed for electrical power to be transported over much longer distances, presented opportunities to further exploit northern Manitoba’s hydroelectric potential and allowed for construction of ever-growing generating facilities. In order to address the lack of deep reservoirs in Manitoba’s north, the federal government and the province of Manitoba via Manitoba Hydro introduced a ‘high level diversion scheme’ in 1966; the scheme outlined a plan to divert the

¹⁸ Government of Manitoba. *The Manitoba Hydro Act*. 1961 – Last amended May 1, 2014. <http://web2.gov.mb.ca/laws/statutes/ccsm/h190e.php#>

¹⁹ Manitoba Hydro. *A History of Electric Power in Manitoba*. 2010, pp. 25 https://www.hydro.mb.ca/corporate/history/history_of_electric_power_book.pdf

²⁰ Lennon, Richard. ‘Winnipeg: A City of Contradictions’. In *Canadian Dimension*. Volume 38, Number 5 September/October 2004. <https://canadiandimension.com/articles/view/winnipeg-city-of-contradictions>

²¹ *Ibid.* 2010, pp. 25

²² *Ibid.* 2010, pp. 66

²³ Hultin, David A. *Building New Relations: Nisichawayasihk Cree Nation, Manitoba Hydro, and the Proposed Wuskwatim Project*. Department of Native Studies: University of Manitoba, 2005. pp. 4

waters of Southern Indian Lake, on the Churchill River system, south into the Nelson River via the Rat and Burntwood Rivers. According to James Waldram, “the construction of a control structure at Missi Falls, where Southern Indian Lake drains into the lower Churchill River on its way to Hudson Bay, would reverse the current in part of the lake and raise the level thirty feet. In this manner, Southern Indian Lake would act as a giant reservoir, feeding varying amounts of water into the Nelson River as electrical demands required.”²⁴ Therefore, all generation facilities in Manitoba’s north would be primarily targeted on the Burntwood and Nelson Rivers (Figure 3).

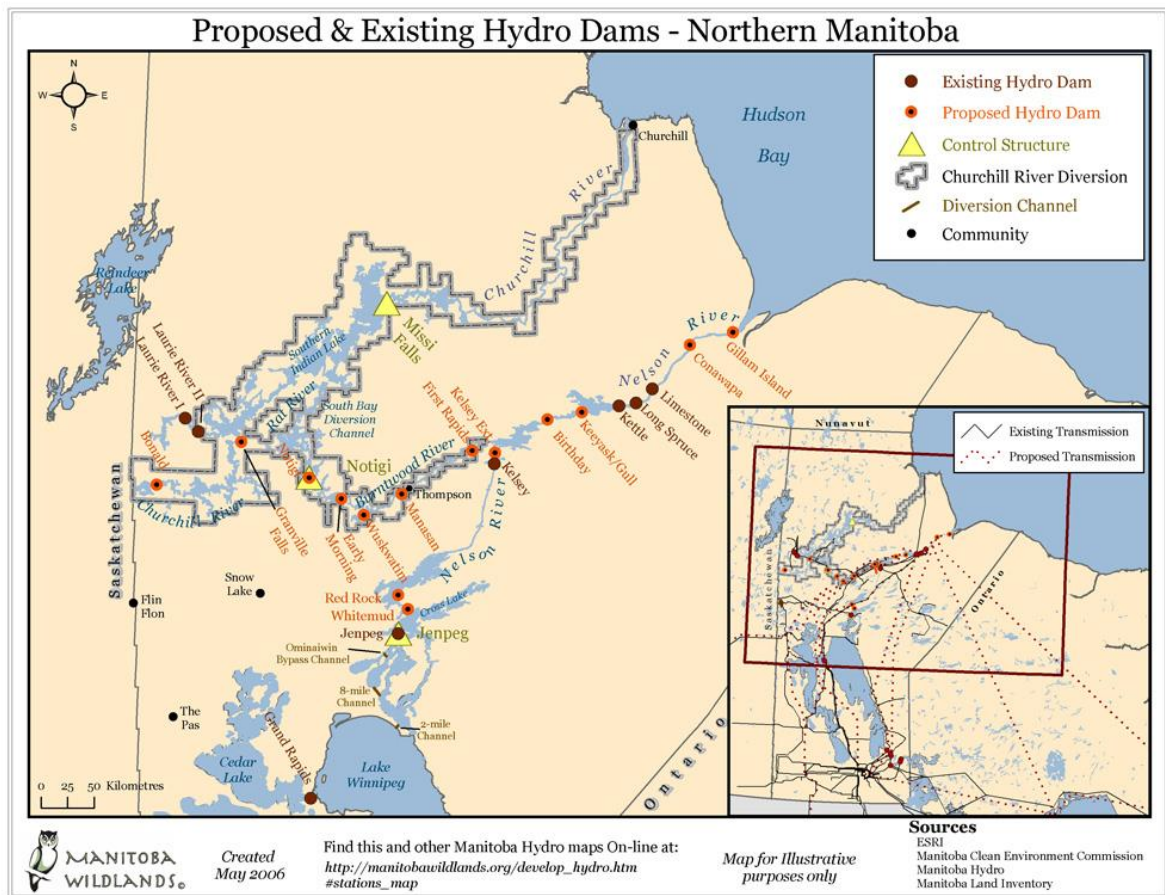


Figure 3 - Source: Manitoba Wildlands (2006)

²⁴ Waldram, James. ‘Hydro-Electric Development and the Process of Negotiation in Northern Manitoba, 1960 -1977’. *The Canadian Journal of Native Studies*, Jan 1, 1984, Vol.4(2). pp. 208

As electrical demand continued to increase in southern Manitoba, it became evident that the electrical output from its generating facilities on the Winnipeg River would not suffice to meet the needs of ever-growing demand. Between 1958 and 1969 Manitoba's revenue had quadrupled which resulted in substantial government expenditures.²⁵ Premier Duff Roblin targeted hydro development as a top priority which also included "increased education grants, crop insurance and road construction."²⁶ During his tenure, Roblin oversaw an aggressive expansion of hydro development in Manitoba's north. In particular, he directed the full construction and implementation of the Grand Rapids generating station which caused extensive environmental damage and resulted in the relocation of the area's indigenous population. This process created an environment and culture which was the precursor for the creation of the Churchill River Diversion (CRD), and subsequently allowed for the approval of the Kettle generating station. After Roblin stepped down from provincial politics to seek the leadership of the federal conservatives, his successor Premier Walter Weir tabled *The Water Power Act* (1969) which "gave the province authority to grant a licence to Manitoba Hydro without mandatory public hearings or a review by the Manitoba Water Commission."²⁷ The bill was strongly opposed not only by Manitoba's New Democrats and Liberals, but also by citizens, academia and activists. Shortly thereafter, the writ was dropped by Weir's government and therefore, the act did not proceed to second reading. "While northern hydroelectric development was not necessarily the major issue at stake in the 1969 Manitoba election, it was a significant factor in the downfall of Weir's government. Both opposition parties promised that they would review the

²⁵ Adams, Christopher. *Politics in Manitoba: Parties, Leaders, and Voters*. University of Manitoba Press: Winnipeg, 2008. pp. 36

²⁶ *Ibid.* 2008. pp. 36

²⁷ Manitoba Clean Environment Commission. *Hydroelectric Development in Northern Manitoba: A History of the Development of the Churchill, Burntwood and Nelson Rivers, 1960–2015*. Winnipeg: 2016, pp. 23

planned high-level diversion if elected, and either modify the plan or scrap it entirely.”²⁸

Although hydro development was temporarily suspended by Ed Schreyer’s New Democrats (NDP) during the governmental transition, Schreyer’s “government directed hydro to usher in an era of more intensive northern development” that was unprecedented in the province’s history.²⁹ The newly installed premier sought to balance social justice objectives with economic growth arguing that the “government of Manitoba is committed to developing the northern part of this province in such a way that the people now living in this region get maximum benefit. The people’s progress to economic independence is our chief objective.”³⁰ Furthermore, Schreyer also recognized Manitoba Hydro was a critical revenue generator for domestic commercial investment and for potential export opportunities.

The 1970s expansionist era saw the coordinated implementation of the Churchill River Diversion (CRD) and the Lake Winnipeg Regulation (LWR) projects via numerous channels and control structures that impounded numerous rivers, lakes and streams. Consequently, this era saw the Kettle, Long Spruce and Jenpeg (also control structure) generating facilities enter Manitoba Hydro’s network by 1979. “These projects were constructed despite a fundamental lack of understanding, on the part of Manitoba Hydro and the province, of the real size and requirements of the projects—and, consequently, the potential impacts. This lack of knowledge in turn led to a lack of communication with northern communities that drove a wedge between the government of Manitoba and its constituents, particularly indigenous people.”³¹ Hydro development had flooded “vast tracts of land and eroded heritage sites, destabilized commercial fishing and

²⁸ *Ibid*, 2016. pp. 23

²⁹ Manitoba Clean Environment Commission. *Hydroelectric Development in Northern Manitoba: A History of the Development of the Churchill, Burntwood and Nelson Rivers, 1960–2015*. Winnipeg: 2016, pp. 23

³⁰ Schreyer, Edward. *Ed Schreyer: A Social Democrat in Power. Selected Speeches and Interviews of Premier Schreyer of Manitoba*, (ed.) Paul Beaulieu. Winnipeg: Queenston House Publishing, 1977. pp. 156

³¹ *Ibid*. 2016, pp. 55

hunting areas, forced people to move from their homes and disrupted traditional practices.”³² In response to these adverse effects, the Northern Flood Committee (NFC) was formed in 1974 which represented the collective interests of seven First Nations predominantly affected by development including Nelson House, Norway House, Cross Lake, Split Lake, York Factory, Fox Lake and South Indian Lake. Their main objective was to halt hydro development on the foundation of Treaty 5 (1875) obligations. However, by 1975 this approach was unsuccessful, and the primary objectives were changed; additionally, the NFC was reduced to five members with the loss of Fox Lake and South Indian Lake First Nations. Nevertheless, the NFC was tasked with negotiating a settlement “which will ensure to the Native People in the North that they and the generations succeeding them, will be fully and adequately compensated for all effects and damages arising out of the project.”³³ Consequently, the NFC forcefully arranged the federal government and Manitoba sign the Northern Flood Agreement (NFA) in 1977 and later ratified by all partners in 1978. Successive governments under Premier’s Sterling Lyon, Howard Pawley and Gary Filmon oversaw static negotiations throughout the late 1970s and 1980s. While there were various developments “communities expressed their discontent through the formal arbitration process” and the federal government had to intervene in the mid-1980s to implement the NFA from a global perspective rather than a case-by-case basis.³⁴ Substantial compensation did not flow until 1992. By this date, Manitoba Hydro had eight northern generating facilities producing nearly five thousand megawatts of electricity.³⁵ This included the *Grand Rapids* (1965

³² Ibid. 2016, pp. 55

³³ Letter from D.C.H. McCaffrey to Aikins, MacAuley and Thorvaldson, April 25, 1975. [PAM, File “Sidney Green – 6. Mitigation (G) Government,” 1972-1975, Records of the Commission of Inquiry into Manitoba Hydro, A0064, GR2022, B-13-1-13].

³⁴ Manitoba Clean Environment Commission. *Hydroelectric Development in Northern Manitoba: A History of the Development of the Churchill, Burntwood and Nelson Rivers, 1960–2015*. Winnipeg: 2016. pp. 42

³⁵ Hultin, David A. *Building New Relations: Nisichawayasihk Cree Nation, Manitoba Hydro, and the Proposed Wuskwatim Project*. Department of Native Studies: University of Manitoba, 2005. pp. 6

– 472 MW) generating station on the Saskatchewan River, in addition to five facilities on the Nelson River; *Kelsey* (1956 – 211 MW), *Kettle* (1970 – 1, 220 MW), *Long Spruce* (1977 – 1,110 MW), *Jenpeg* (1979 – 97 MW – primary function is control structure for Lake Winnipeg Regulation), and *Limestone* (1990 – 1, 340 MW).

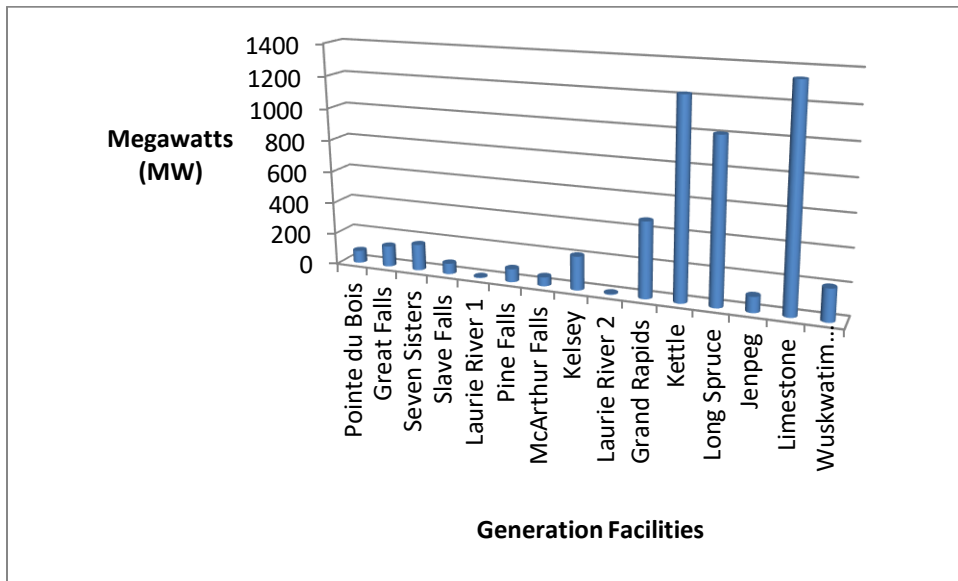


Figure 4 - Source: Manitoba Hydro (2019)

With domestic capacity firmly established, Manitoba Hydro developed a corporate strategy in the 1990s which included expanding export contracts, as a result of additional capacity via the Limestone generation facility. The strategy also focused on conservation and renewal initiatives such as the Churchill River Diversion Archaeological Program, the Debris Management Program and the Lake Sturgeon Stewardship and Enhancement Program. Furthermore, Manitoba Hydro sought opportunities to address, mitigate and compensate the damages caused by their development.³⁶ This included over \$400 million dollars in compensation agreements either through NFA implementation and/or non-NFA supplementary

³⁶ Manitoba Hydro. *A History of Electric Power in Manitoba*. 2010, pp. 51
https://www.hydro.mb.ca/corporate/history/history_of_electric_power_book.pdf 010

agreements. However, aside from monetary compensation, the utility also mandated greater indigenous participation in their operations and subsequently engaged in advancing various labour and business initiatives such as the Aboriginal Pre-Placement (APP) program in addition to increasing the amount of services it purchases from companies that are indigenous owned. To date, nearly one in five employees report indigenous ancestry with almost 45% identifying as indigenous in Manitoba's north. Additionally, Manitoba Hydro has awarded over \$1.2 billion in contracts to indigenous owned companies.³⁷

Approximately 75% of Manitoba's hydroelectric generating capacity is delivered to southern Manitoba via the Bipole I and II. A series of weather events including a 1996 wind storm, 1997 tornado and the 1998 Quebec ice storm prompted the utility's engineers to study the prospects of implementing a third bipole to reduce system vulnerability. However, the engineers deemed the events a climatic anomaly and therefore disregarded the need for additional transmission capacity. In 1999, Manitoba Hydro purchased Centra Gas Manitoba Inc. the province's primary natural gas delivery company, officially marking the utility's entrance into the natural gas market.³⁸ Average revenue generated from natural gas sales accounts for ten percent of Manitoba Hydro's consolidated net income.³⁹ With the nominal price of natural gas remaining static during the twenty-first century, Manitoba Hydro's focus and therefore investment into natural gas has been limited in comparison to hydroelectric expansion/usage.

By the early twenty-first century, Manitoba Hydro renewed their corporate strategy under Premier Gary Doer's NDP government that included a proposed four-dam expansion

³⁷ Manitoba Hydro. *Indigenous Agreements*. Accessed February 9 2017.
https://www.hydro.mb.ca/community/indigenous_relations/indigenous_agreements.shtml

³⁸ Manitoba Hydro. *A History of Electric Power in Manitoba*. 2010, pp. 62
https://www.hydro.mb.ca/corporate/history/history_of_electric_power_book.pdf 010

³⁹ Manitoba Hydro. *The 64th Annual Report of the Manitoba Hydro-Electric Board*. March 31, 2015. pp. 33
https://www.hydro.mb.ca/corporate/ar/pdf/annual_report_2014_15.pdf

(Wuskwatim, Notigi [addition to control structure], Keeyask, and Conawapa) along with a new high-voltage direct current (HDVC) transmission line (Bipole III) to accommodate the exponential capacity. While accommodating this capacity was the catalyst and justification for Bipole III, the September 11th terrorist attacks on the United States also renewed arguments for system security and reliability. However, unlike previous development that negated knowledge of human rights and environmental stewardship, Manitoba Hydro would approach development based on a social and environmental contract where the utility and the province would engage in partnership with the various communities affected by their activities (i.e. social licence). This process allows communities to approve or deny development; if approved, a social licence provided a platform for the community to engage in processes such as environmental assessment, preferential contract obligations and labour/training initiatives. For example, Nisichawayasihk Cree Nation owns a third equity interest share in the recently constructed Wuskwatim generating station which came online in 2012.⁴⁰

Gary Doer's NDP anticipated numerous benefits from the renewed strategy.⁴¹ However, during Doer's first term in office, Manitoba was in the midst of a severe drought which subsequently resulted in Manitoba Hydro's largest losses on record (2004 - \$428 million dollars). Furthermore, two years after construction commenced on the Wuskwatim generation facility, an important factor had changed related to electrical export capabilities. The value of natural gas was reduced by 75% in response to the 2008 global financial crisis. According to the *U.S. Energy Information Administration*, natural gas declined to levels and valuations not seen in two

⁴⁰ Manitoba Hydro. 'Wuskwatim Generating Station Facts.'
https://www.hydro.mb.ca/corporate/facilities/gs_wuskwatim.shtml

⁴¹ Lane, Graham and Tom Adams. 'How Manitoba's 'green' power dream became a nightmare of runaway costs.'
Financial Post. April 14 2016. <http://business.financialpost.com/fp-comment/how-manitobas-green-power-dream-became-a-nightmare-of-runaway-costs>

decades which have since remained static in 2019.⁴² As a result, Manitoba Hydro's exports to the United States have stabilized, due to the country's increased efforts in hydraulic fracturing and inflated inventory of natural gas. Combined with rising domestic conservation efforts via solar, wind, the *PowerSmart* program in conjunction with climatic anomalies, demand for Manitoba's hydroelectricity is static. This information was either discredited by Manitoba Hydro, or ignored, and as such, construction moved forward on the Keeyask generation project, as well as Bipole III, which was put into service in July 2018.⁴³ Other projects such as Conawapa, were suspended indefinitely in 2012.

With the Pallister PCs forming government in 2016 after seventeen years of NDP rule, their platform committed to “keep Manitoba Hydro publicly owned, develop a demand side management agency (Efficiency Manitoba – the successor to *PowerSmart*), and commission an inquiry into Bipole III.⁴⁴” Assessing the comparative impacts of transitioning to *Efficiency Manitoba* from *PowerSmart* and analyzing the results of the Campbell Commission (Bipole III and Keeyask Inquiry) should be available for future research at a later date. However, as per Manitoba Hydro's 2018/2019 business plan, the utility remains intent on completing ongoing projects such as the Keeyask generating facility and the Manitoba-Minnesota transmission line. Manitoba Hydro's strategic priorities commit to “restoring fiscal sustainability, deliver excellent customer service, engage employees in transformation and respect and support indigenous peoples in all aspects of our business.”⁴⁵

⁴² U.S. Energy Information Administration. 'U.S. Natural Gas Electric Power Price.' 2002-2016.
<http://www.eia.gov/dnav/ng/hist/n3045us3m.htm>.

⁴³ Laliberte, Garland. 'Abandon Bipole III's West-side Project.' *Winnipeg Sun*: August 19 2016.
<http://www.winnipeg.sun.com/2016/08/19/abandon-bipole-iiis-west-side-project>

⁴⁴ Progressive Conservative Party of Manitoba. *Better Plan for a Better Manitoba*. Winnipeg: 2016, pp. 15

⁴⁵ Manitoba Hydro. *Manitoba Hydro Annual Business Plan 2018-19*. Winnipeg: 2018, pp. 8.
https://www.hydro.mb.ca/corporate/news_media/pdf/manitoba_hydro_annual_business_plan.pdf

CHAPTER 3: TRISCHLER COMMISSION REVIEW

In the planning stages of the Churchill River Diversion (CRD), the Long Spruce generation facility and the Lake Winnipeg Regulation Project (LWR), approximate combined expenditures for all three projects was estimated at \$365 million dollars. By the end of the 1970s, the combined expenditures rose to \$1.3 billion.⁴⁶ Consequently, Manitoba Hydro increased its rates accordingly to address this debt “by 17.7% in 1974, another 17.1% in 1975, 28.3% in 1976, 14.5% in 1977 and 16.3% in 1978.”⁴⁷ These consecutive increases created public discontent towards Ed Schreyer’s NDP, and as a result, was partially responsible for their 1977 electoral defeat against Sterling Lyons’s PCs. The new government immediately announced the ‘Commission of Inquiry into Manitoba Hydro’ to “examine Lake Winnipeg Regulation project and the Churchill River Diversion, as well as Manitoba Hydro’s activities.”⁴⁸ Lyon appointed George E. Tritschler, a recently retired chief justice of the Manitoba Court of Queen’s Bench with commissioning the report.⁴⁹ The review was to assess that the crown corporation “carried out the intent, purpose, and objective of the *Manitoba Hydro Act* in all aspects of the development of the Nelson-Churchill River Systems for the generation of hydroelectric power and in projects associated therewith, and to make finding and recommendations in respect of the policies, plans, procedures, operations and activities of Manitoba Hydro or the government, or both, relating to the present and future development of Manitoba Hydro for the generation of

⁴⁶ Government of Manitoba. Commission of Inquiry into Manitoba Hydro. Commissioner George E. Trischler: Final Report, December 1979. pp. 177

⁴⁷ Manitoba Clean Environment Commission. *Hydroelectric Development in Northern Manitoba: A History of the Development of the Churchill, Burntwood and Nelson Rivers, 1960–2015*. Winnipeg: 2016. pp. 35

⁴⁸ Ibid, 2016. pp. 36

⁴⁹ Energy Manitoba. ‘Summary of 1979 Trischler Report’. Paskanake Project Management: November 2002. Accessed May 24, 2017.
http://www.energymanitoba.org/wusk_archives/documents/Tritschler2002_BHSummary.pdf

hydroelectric power, and transmission of that power and any projects association therewith.”⁵⁰

According to Energy Manitoba, the main intent of Trischler Commission was to “complete a review of the economy and efficiency of Manitoba Hydro’s development/investment decisions” relating to its contemporary operations.⁵¹

Nevertheless, reviewing the Trischler Commission provides useful insight into Manitoba Hydro’s contemporary challenges; particularly analyzing what was implemented post-commission, was it effective, and how has it contributed to Manitoba Hydro’s current challenges. As anticipated, the final report noted that “Manitoba Hydro did not follow its mandate to promote economy and efficiency in supply of electrical power, and that the province’s decision to restrict the elevation of Southern Indian Lake to 850 feet was arbitrary and not based on economic considerations. Manitoba Hydro’s decision to construct the diversion without knowledge of its downstream effects led to substantial claims for cost overruns and financial penalties in addition to costly confrontations with communities.”⁵²

The commission made nine recommendations on system design, project design and implementation, generation expansion plan, socioeconomic/environment considerations, financial planning, system operations, accounting and financial aspects, hydro management, and on the relationship between the government of Manitoba and Manitoba Hydro.⁵³ The commission influenced Manitoba Hydro to initiate various changes which has benefitted the utility from a macroeconomic perspective. For example, in terms of recommendations made for socioeconomic and environmental considerations, the commission noted that “as the largest

⁵⁰Government of Manitoba. Commission of Inquiry into Manitoba Hydro. Commissioner George E. Trischler: Final Report, December 1979. pp. V

⁵¹ *Ibid*, 2002.

⁵² *Ibid*, 1979. pp. 18

⁵³ *Ibid*, 1979. pp. 439

crown corporation in Manitoba, and the one most likely to be subject to criticism over potentially contentious environmental issues, ensure that it retains competence in environmental assessment and management and that it is seen to be adopting a positive attitude towards this vitally important aspect of development.”⁵⁴ Consequently, Manitoba established various checks and balances via the provincial government, or through the creation of independent agencies. For example, the Manitoba Clean Environment Commission was established in 1988 under *The Environment Act* which provided “an avenue through which the public can participate in the decision-making process regarding the environment in Manitoba.”⁵⁵ The independent commission “provides advice and recommendations to the Minister of Sustainable Development with respect to environmental issues and licensing.”⁵⁶

Within the context of financial management, the commission recommended that “the scope of financial planning in Hydro should be expanded, considerably.”⁵⁷ Consequently, the utility submitted its first corporate strategic plan in 1993 which outlined the goals and objectives of the utility for the follow year. By the 1980s, Manitoba Hydro’s consolidated network capacity exceeded its domestic market and therefore, the commission recommended the utility “establish a special marketing group to provide for, in cooperation with Government, the systematic assessment and implementation of energy transactions.”⁵⁸ While Manitoba Hydro has been engaged in some form of export capacity since 1970, today, the department is entitled Export Power Marketing. This department is responsible for direct marketing, and subsequently hydro

⁵⁴ Government of Manitoba. Commission of Inquiry into Manitoba Hydro. Commissioner George E. Trischler: Final Report, December 1979. pp. 470

⁵⁵ Manitoba Clean Environment Commission. ‘The Responsibilities of the CEC’. Accessed June 17 2017, http://www.cecmanitoba.ca/mandate_mission_statement/

⁵⁶ *Ibid*, 2017.

⁵⁷ *Ibid*, 1979. pp. 472

⁵⁸ *Ibid*, 1979. pp. 475

related transactions are deciphered into two categories; long-term contracts and opportunity sales. Long-term contracts are those that “provide a firm supply of electricity at a negotiated, fixed price that will not change due to market conditions. These contracts are set at prices considerably higher than what we charge to our largest industrial customers in Manitoba, and in some cases, even residential customers [...] Opportunity sales are made from short-term surpluses of electricity, usually due to good water conditions. Since the amount of energy available for these spot sales can change in relatively short periods of time, it cannot be sold as firm or guaranteed energy.”⁵⁹

According to Manitoba Hydro between 2006 and 2017, the utility exported over \$400 billion dollars’ worth of electricity which accounts for nearly a quarter of Manitoba Hydro’s total revenue (Figure 5).⁶⁰

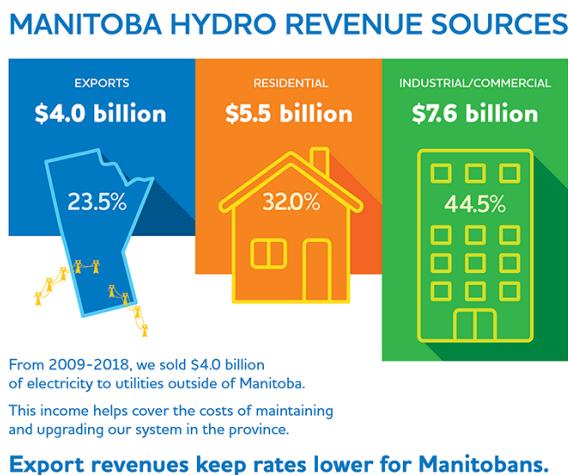


Figure 5 - Source: Manitoba Hydro (2018)

The recommendations submitted by the Triteschler Commission were advantageous for the utility and therefore, it is not necessarily the positives changes that need greater scrutiny

⁵⁹ Manitoba Hydro. ‘Value of Electricity Exports’. Accessed June 17, 2017. https://www.hydro.mb.ca/corporate/electricity_exports.shtml

⁶⁰ *Ibid.* June 17, 2017.

however, but the recognition of recommendations that were negated and/or neglected since the release of the final report, which deserves detailed consideration. For example, under recommendations highlighting generation expansion planning, the commission argues that Manitoba Hydro should “concentrate econometric load forecasting efforts on the identification of variables that affect significantly the consumption of electric power to provide for better insights into the range of expectations to be considered in generation expansion planning and rate design.”⁶¹ While Manitoba Hydro did establish a department that forecasts energy market fluctuations, these findings were certainly ignored by then, Gary Doer’s NDP government, and subsequently Greg Selinger’s NDP government. The evidence is clear; the collapse in natural gas prices and increased subsidization of alternative electrical technologies in the United States, would certainly lessen demand for hydro exports, which remain static today.⁶² Therefore, why would the public utility engage in such risk?

In the concluding statements of the Tritschler commission, the most important recommendation which continues to be ignored and constitutes political interference states that “hydro employees, civil servants and members of the legislative assembly not be members of the Manitoba Hydro-Electric Board.”⁶³ While hydro employees and civil servants are not permitted to be appointed for a board position, the government appoints one MLA as a representative of the government. The Lieutenant Governor in Council, on recommendation of the governing party appoints the remaining director positions. Therefore, it is not difficult to recognize the partisan environment in which the Manitoba Hydro-Electrical Board functions. This environment and

⁶¹ Government of Manitoba. Commission of Inquiry into Manitoba Hydro. Commissioner George E. Trischler: Final Report, December 1979. pp. 468

⁶² CBC News. ‘Manitoba Hydro’s Keeyask dam was ‘risky investment strategy,’ says U.S. energy expert’. *CBC News Manitoba* - September 26 2016. Accessed June 17 2017.
<http://www.cbc.ca/news/canada/manitoba/manitoba-hydro-keeyask-bipole-ian-goodman-1.3778796>

⁶³ *Ibid*, 1979. pp. 482

relationship between the government and the board was established by the Sterling Lyon PC government and that structure has remained in place since. Lyon's government proposed that the role of "Manitoba Hydro's chair, the government appointee Member of the Legislative Assembly, should officially be separated from that of chief operating officer. The chair would now be a liaison between Manitoba Hydro and the government, keeping the utility informed of government policy, and the province informed about Manitoba Hydro budgets and research; while the chief operating officer would be in charge of day-to-day administration and business decisions."⁶⁴ While one could argue that this structure promotes public transparency, accountability and foresight; this thesis as per the Tritschler Commission argues that this relationship has in fact contributed to Manitoba Hydro's contemporary challenges (i.e. political interference). Therefore, while the government has authority to provide direction to its crown corporations, it should not have authority to supersede decisions related to major issues of economic, environmental, social and technical importance to Manitobans. Political foresight is commonly defined by short term planning, rather decisions related to multibillion-dollar infrastructure investments should be deemed for a structural long-term business plan that works in partnership with government.

According to the Manitoba Historical Society, the commission found that "improper planning, coupled with government interference, had cost the public millions of dollars."⁶⁵ Therefore, the Tritschler Commission could not be more clear, the relationship between the provincial government and Manitoba Hydro must be completely reviewed, or the future of the

⁶⁴ Manitoba Clean Environment Commission. *Hydroelectric Development in Northern Manitoba: A History of the Development of the Churchill, Burntwood and Nelson Rivers, 1960–2015*. Winnipeg: 2016, pp. 36

⁶⁵ Goldsborough, Gordon. 'Memorable Manitobans: George Eric Tritschler (1901-1993)'. *The Manitoba Historical Society*: September 10 2016. Accessed May 24 2017.
http://www.mhs.mb.ca/docs/people/tritschler_ge.shtml

crown corporation will continue to face interference from government. As the historical record suggests, this is not compatible with the future objectives of Manitoba Hydro, and therefore threatens future prosperity for the utility, and the province of Manitoba.

CHAPTER 4: THE MANITOBA ADVANTAGE

By harnessing the electrical potential of the Saskatchewan, Churchill, Rat, Burntwood and Nelson Rivers in the 1970s and 1980s, Manitoba Hydro's total capacity exceeded its domestic market. In fact, from 1961 to 1991 *Statistics Canada* contends that the provincial population grew modestly, while economic growth remained limited.⁶⁶ However, during that same period, Manitoba Hydro added over four thousand megawatts in total capacity.⁶⁷ Therefore, excess electrical capacity was exported which permitted the subsidization of domestic rates (Figure 6). Today, ninety-three percent of Manitoba Hydro's extraprovincial revenue is obtained through American buyers, predominantly within the states of Minnesota, North Dakota, and Wisconsin. Through the MISO network (Midcontinent Independent Systems Operator), Manitoba is linked to a system comprising of fifteen American states. The remaining seven percent is sold to Saskatchewan and northern Ontario, with the remaining one percent accounting for wholesale contracts.⁶⁸

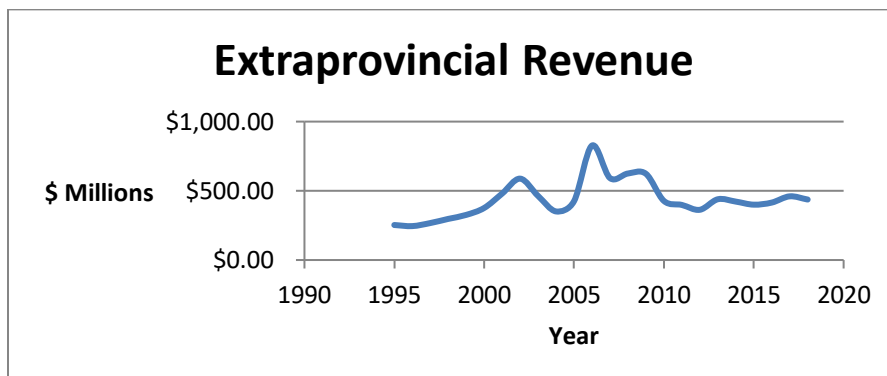


Figure 6 - Source: Manitoba Hydro (2018)

⁶⁶ Statistics Canada. 2012. *Visual Census*. 2011 Census. Ottawa. Released October 24, 2012. <http://www12.statcan.gc.ca/censusrecensement/2011/>

⁶⁷ Hultin, David A. *Building New Relations: Nisichawayasihk Cree Nation, Manitoba Hydro, and the Proposed Wuskwatim Project*. Department of Native Studies: University of Manitoba, 2005. pp. 6

⁶⁸ Manitoba Hydro. *The 65th Annual Report of the Manitoba Hydro-Electric Board*. March 31, 2016. pp. 28 https://www.hydro.mb.ca/corporate/ar/pdf/annual_report_2015_16.pdf

The Manitoba Hydro network administered holistically under the *Manitoba Hydro Act*, has resulted in Manitoba’s residential, commercial, and industrial consumers being afforded some of the most inexpensive electricity in North America (Figure 7).⁶⁹ Low-cost electricity is a catalyst for growth, enterprise and investment, especially if the commercial and industrial inputs are highly dependent on electrification. Additionally, low-cost electricity also acts as an indirect taxation subsidy.

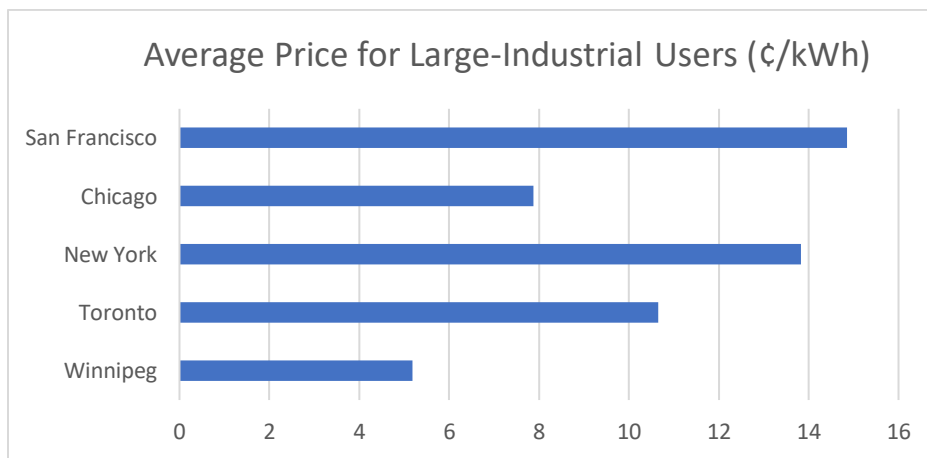


Figure 7 - Source: Hydro Quebec (2018)

According to Lynn Fernandez and John Ryan of the *Canadian Centre for Policy Alternatives – Manitoba*, Manitoba Hydro’s low rates “offset the marginally lower tax rates paid in Saskatchewan and Alberta, who keep taxes low through resource royalties.”⁷⁰ Therefore, Manitoba’s advantage is obtained through the means of production, transmission, and distribution of hydroelectricity. This economic linkage remains vital for the continued promotion of economic growth in Manitoba. It is also advantageous for Manitoba as a ‘have-not province’, one which is a recipient of federal transfers, to maintain and strengthen this advantage, as it adds

⁶⁹ Manitoba Hydro. ‘Utility Rate Comparisons’. May 1 2016.

https://www.hydro.mb.ca/regulatory_affairs/energy_rates/electricity/utility_rate_comp.shtml

⁷⁰ Fernandez, Lynn and John Ryan. ‘Power Struggle: Manitoba Hydro and the Spectre of Privatization’. In *Canadian Centre for Policy Alternatives – Manitoba*: June, 2011. pp. 2

to Manitoba's general revenues that impact essential social services provincially delivered, such as health and education. This is instituted by the province of Manitoba assessing Manitoba Hydro various taxes and fees including water rental fees which dictates an agreed value on the water that filters through its network of dams. According to Manitoba Hydro's annual report for the 2016-2017 fiscal year, "water rentals and assessments includes water rentals paid to the province of Manitoba for the use of water resources in the operation of the corporation's hydraulic generating stations and assessments paid to various regulatory and market organizations."⁷¹ The report states Manitoba Hydro transferred one hundred thirty-one million in water rentals and assessments for the fiscal year.⁷² However, the province of Manitoba collected an additional two-hundred fifty million via debt guarantee charges, as well as capital, payroll, property, and other taxes. This revenue is crucial for the province and emphasizes the need for Manitoba Hydro to resolve its fiscal challenges.

By the mid-1990s, Gary Filmon's PCs recognized the importance of increasing revenue generated through water rental fees, debt loan guarantees, and additional taxation, especially in an era that saw reduction in provincial spending and federal transfers. In 1996, Manitoba Hydro recorded profits in excess of \$70 million dollars which at that time, was the single most profitable fiscal year recorded by the utility and included a record quarter billion in export

⁷¹ Manitoba Hydro. *The 66th Annual Report of the Manitoba Hydro-Electric Board*. March 31, 2017. pp.35
https://www.hydro.mb.ca/corporate/ar/pdf/annual_report_2016_17.pdf 017. pp. 30

⁷² *Ibid*, 2017. pp. 30

revenue.⁷³ By the turn of the twenty-first century, profits exceeded \$150 million dollars, and export revenue totaled \$376 million dollars (Figure 8).⁷⁴

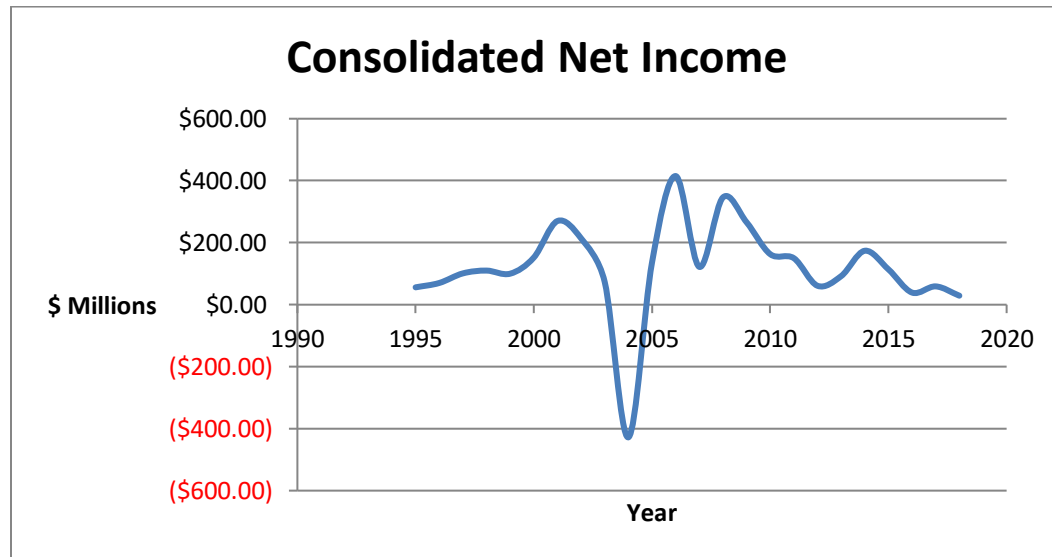


Figure 8 - Source: Manitoba Hydro (2018)

These statistics remained unchanged until 2004 due to a climatic drought which began in 1999 and concluded in 2004.⁷⁵ In 2006, Manitoba Hydro sold a record \$881 million of electricity to foreign buyers which subsequently set a record of \$412 million dollars in the utility’s history, with reference to consolidated net income.⁷⁶ Since then, export revenues have continually declined. Today, they are half of what was achieved in 2006 and have been static since. Filmon’s PC government granted Manitoba Hydro the authority via legislation “to construct new

⁷³ Manitoba Hydro. *The 59th Annual Report of the Manitoba Hydro-Electric Board*. March 31, 2010. pp.51 https://www.hydro.mb.ca/corporate/ar/pdf/annual_report_2016_17.pdf 010.

⁷⁴ Manitoba Hydro. *The 49th Annual Report of the Manitoba Hydro-Electric Board*. March 31, 2000. pp.3 <https://digitalcollection.gov.mb.ca/awweb/pdfopener?smd=1&did=10349&md=1>

⁷⁵ Government of Manitoba. ‘Manitoba’s Drought Management Strategy’. Accessed January 30 2018. https://www.gov.mb.ca/waterstewardship/water_info/drought/pdf/drought_management_strategy.pdf

⁷⁶ Manitoba Hydro. *The 55th Annual Report of the Manitoba Hydro-Electric Board*. March 31, 2006. pp.9 <https://digitalcollection.gov.mb.ca/awweb/pdfopener?smd=1&did=10349&md=1>

generation to create export revenue should the opportunity arise.”⁷⁷ Previous legislation required domestic justification for creating new projects related to expanding electrical generation. These key amendments to the act created conditions for Gary Doer’s NDP to explore and ultimately propose projects such as Wuskwatim and Keeyask to supplement generation capacity. With pending increased capacity, the construction of these generation facilities was the partial argument and catalyst for a third bipole in order to transmit the added capacity to Manitoba Hydro’s network.

In 2018, lower export and domestic revenues combined with rising debt attributed to ongoing projects justified for export purposes, resulted in a net income of only \$29 million dollars.⁷⁸ However, like the 1970s, what is currently threatening the Manitoba’s electrical advantage is the utility’s inability to service its debt which, according to CEO Sanford Riley, will result in immediate rate increases.⁷⁹ According to Manitoba Hydro’s 2018 annual report, the utility has always strived to maintain a minimum twenty-five percent debt-to-equity ratio, regardless of debt servicing.⁸⁰ This goal is set as a “measure of the portion of assets that are financed by internally generated funds rather than debt.”⁸¹ The reports states that current equity to debt ratio sits at sixteen percent, and declining.⁸² The weakening economic position is “primarily due to higher debt levels to fund significant investment in major new generation and transmission facilities.”⁸³ By 2021, Manitoba Hydro’s equity is expected to fall to twelve

⁷⁷ Hultin, David A. ‘Building New Relations: Nisichawayasihk Cree Nation, Manitoba Hydro, and the Proposed Wuskwatim Project.’ Department of Native Studies: University of Manitoba, 2005. pp. 28

⁷⁸ Manitoba Hydro. *The 67th Annual Report of the Manitoba Hydro-Electric Board*. March 31, 2018. pp. 35
https://www.hydro.mb.ca/corporate/ar/pdf/annual_report_2017_18.pdf

⁷⁹ Annable, Kristin. ‘What Manitoba Hydro’s gamble means for your rates’. *CBC News – Manitoba*: February 19 2017. Accessed February 23 2017. <http://www.cbc.ca/news/canada/manitoba/hydro-gamble-means-double-digit-rate-increases-1.3985783>

⁸⁰ *Ibid*, 2018. pp. 28

⁸¹ *Ibid*, 2018. pp. 28

⁸² *Ibid*, 2018. pp. 28

⁸³ *Ibid*, 2018. pp. 28

percent.⁸⁴

Advocates of traditional debt financing such as John Loxley argue that the debt-to-equity ratio decline should be no cause for concern since Manitoba Hydro has proceeded with the same model, as in 1970s. During that era, Manitoba Hydro initiated many capital intensive projects and firmly secured their capacity needed to serve both the domestic and export markets.⁸⁵ According to Kristin Annable, rate increases run parallel to expansion projects. She notes that “six years of double-digit rate increases followed, beginning with a 20.6 per cent increase in 1974, the highest increase in Manitoba Hydro's history [...] In the subsequent years, double-digit increases between 19.8 and 14.4 per cent continued until 1979.”⁸⁶ Therefore, Loxley concluded that the debt-to-equity ratio will recover once Manitoba Hydro’s expansion projects are completed.⁸⁷ This argument is indeed correct with respect to historical evidence. Additionally, the Public Utilities Board (PUB) confirms this assessment. However, the optimal ratio of 75:25 will not return according to the PUB, until 2033 at the earliest.⁸⁸ However, three key elements that are present today are not factored in calculations when compared to the 1970s era, and subsequently the succeeding decades.

Firstly, the nominal price of electricity was increasing, especially in the United States. According to Tyler Hodge of the *U.S. Energy Information Administration*, between 1970 and

⁸⁴ Annable, Kristin. ‘Manitoba Hydro's walking on a tightrope — or is it?’ *CBC News – Manitoba*: February 18 2017. Accessed February 23 2017. <http://www.cbc.ca/news/canada/manitoba/manitoba-hydro-s-walking-on-a-tightrope-or-is-it-1.3985649>

⁸⁵ Annable, Kristin. ‘Manitoba Hydro's walking on a tightrope — or is it?’ *CBC News – Manitoba*: February 18 2017. Accessed February 23 2017. <http://www.cbc.ca/news/canada/manitoba/manitoba-hydro-s-walking-on-a-tightrope-or-is-it-1.3985649017>.

⁸⁶ Annable, Kristin. ‘What Manitoba Hydro's gamble means for your rates’. *CBC News – Manitoba*: February 19 2017. Accessed February 23 2017. <http://www.cbc.ca/news/canada/manitoba/hydro-gamble-means-double-digit-rate-increases-1.3985783>

⁸⁷ *Ibid*, 2017.

⁸⁸ The Public Utilities Board. ‘The Report on the Need For and Alternatives To’. 2014, http://www.pub.gov.mb.ca/nfat/pdf/finalreport_pdp.pdf

1980, the nominal price of electricity nearly tripled (Figure 9), citing differential waves of rising demand.⁸⁹ In the 2010s, electricity has remained more or less static in regards to domestic and export demand.⁹⁰

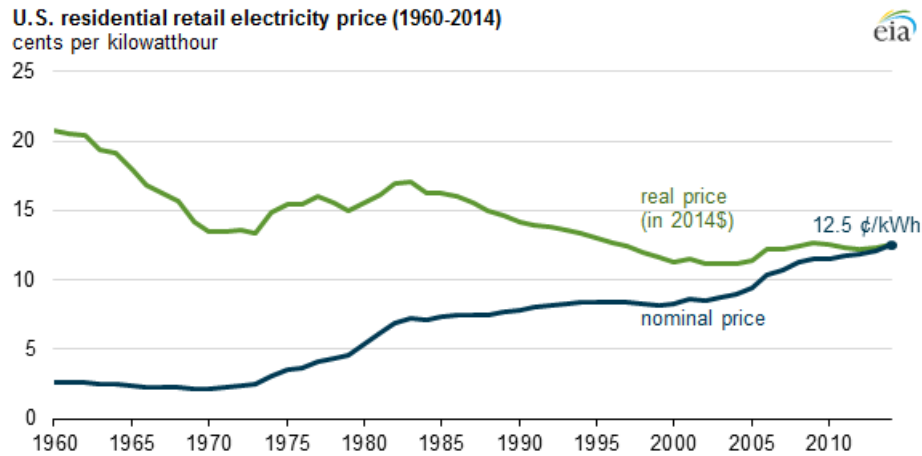


Figure 9 - Source: US EIA

Secondly, Fernandez and Ryan argue that Manitoba Hydro’s “three main power stations on the Nelson River — Kettle, Long Spruce and Limestone — were all built ahead of schedule.”⁹¹ However, according to Graham Lane and Tom Adams, Manitoba Hydro’s Wuskwatim generation facility which recently was put into service in 2012 was neither on schedule, nor on budget. Each argue that the “capital cost including necessary transmission, came in at \$2 billion”, which was originally estimated at \$900 million. “After all that, the cost of generating and conveying power came in at roughly 13 cents per kilowatt-hour, but buyers are

⁸⁹ Hodge, Tyler. ‘Growth in residential electricity prices highest in 6 years, but expected to slow in 2015.’ *U.S. Energy Information Administration*: March 16 2015. Accessed February 23 2017. <http://www.eia.gov/todayinenergy/detail.php?id=20372>

⁹⁰ Manitoba Hydro. *The 65th Annual Report of the Manitoba Hydro-Electric Board*. March 31, 2016. pp. 22 https://www.hydro.mb.ca/corporate/ar/pdf/annual_report_2015_16.pdf 016

⁹¹ Fernandez, Lynn and John Ryan. ‘Power Struggle: Manitoba Hydro and the Spectre of Privatization’. In *Canadian Centre for Policy Alternatives – Manitoba*: June, 2011. pp. 7-8

now willing to pay only around three cents per kilowatt-hour.”⁹²

Thirdly, with 1997 amendments to section 16 of the *Manitoba Hydro Act*, Manitoba Hydro acquired the “power to develop hydro-electric sites dedicated to serve export markets, without meeting any test that these are surplus to the future needs of Manitoba consumers.”⁹³ According to Fernandez and Ryan, in the 1970s “new hydro-electric capacity development was only permitted if it was required to meet the needs of Manitoba consumers.”⁹⁴ Therefore, although the expansion projects of the 1970s reveal a similar financial position of Manitoba Hydro today, the investments were justified for the purposes of Manitoba’s future electrical needs, rather than ‘potential markets’.

As the history of Manitoba Hydro continues to be analyzed what is understood, is that Manitoba Hydro must remain diligent in its plans for the utility’s future. Otherwise there is much cause for concern Manitoba’s electrical advantage will become a historical artifact. The advantage of low-electricity rates must be secured and strengthened. Furthermore, the direct and indirect economic linkages of low-cost electricity not only attract investment and private capital, but also support social services that are delivered by the province. Without this advantage, Manitoba Hydro and the province’s fiscal environment will continue to be a challenge.

⁹² Lane, Graham and Tom Adams. ‘How Manitoba’s ‘green’ power dream became a nightmare of runaway costs.’ *Financial Post*. April 14 2016. <http://business.financialpost.com/fp-comment/how-manitobas-green-power-dream-became-a-nightmare-of-runaway-costs>

⁹³ *Ibid.* 2011, pp. 9

⁹⁴ Fernandez, Lynn and John Ryan. ‘Power Struggle: Manitoba Hydro and the Spectre of Privatization’. *In Canadian Centre for Policy Alternatives – Manitoba: June, 2011. pp. 14*

CHAPTER 5: EXTENSION OF COLONIZATION

In many depictions, Manitoba Hydro is commonly described as a utility which prescribes an inferior model of public ownership, and conversely as an exemplary illustration of a successful crown corporation.⁹⁵ However, very few within Manitoba, and need no one outside the province relate Manitoba Hydro's historical record to the social, economic, and environmental devastation caused by the utility's development in Manitoba's north. Nor does the utility's brand relate to solely serving the settler population in southern Manitoba in addition to the United States. The cumulative impact of hydro development on indigenous peoples in Manitoba's north first emerged in the 1960s and 1970s when the utility began to harness the hydroelectric potential of the Saskatchewan, Churchill, Rat, Burntwood and Nelson Rivers. The impacts on Manitoba's southern indigenous peoples were first felt nearly a century ago, as the powers of the Winnipeg River were harnessed to fuel an ever-expanding province. The consequences of this development were and continue to be nothing short of catastrophic for Manitoba's indigenous population. However, despite this considerable evidence, media coverage of Manitoba Hydro's actions was limited in scope and therefore, failed to fully communicate the utility's actions.⁹⁶ This tainted, and at times forgotten history, has shaped the utility's reputation, and forever altered the social, economic and environmental landscape of Manitoba's north. Many first nations, such as Misipawistik Cree Nation, regard hydro development "as the single most destructive event in the history of the community."⁹⁷ This historical process has created and

⁹⁵ National Energy Board. 'Manitoba to boost electricity exports to provinces and U.S. as hydro capacity rises.' Government of Canada: May 11 2016. <http://news.gc.ca/web/article-en.do?nid=1063469>

⁹⁶ Kulchyski, Peter. 'Manitoba Hydro: How to Build a Legacy of Hatred'. In *Canadian Dimension* - Volume 38, Number 3: May/June: 2004. <https://canadiandimension.com/articles/view/manitoba-hydro-how-to-build-a-legacy-of-hatred-peter-kulchyski004>.

⁹⁷ Misipawistik Cree Nation. 'History – Grand Rapids Dam'. Accessed February 16 2017. <http://misipawistik.com/history.html>

perpetuated what one might call a ‘legacy of hatred’ towards Manitoba Hydro, the province of Manitoba and the federal government among Manitoba’s indigenous communities.⁹⁸

Northern development has been researched and analyzed through many theoretical lenses including colonial, post-colonial and imperial perspectives. For example, Todd Gordon argues the development of Canada’s capitalist economy has come at the expense of its indigenous peoples.⁹⁹ He notes that “Canada must continuously push deeper into, and politically, economically, and culturally subordinate, its very own Third World colonies.”¹⁰⁰ Therefore, Gordon is arguing that the actions of Manitoba Hydro is *vis-à-vis* with Canada’s imperial record in the ‘Global South’.

Thibault Martin argues that most “hydro agreements in Canada are colonial in nature, because they ask the First Nations people to give control or title to the land in exchange for the promises of economic prosperity.”¹⁰¹ As the historical record will indicate, rather than a large economic dividend and ensuing prosperity, quite the opposite has occurred which is reflected in the current geographic, socio-economic, and environmental conditions in Manitoba’s north. Peter Kulchyski argues that First Nations are not being compensated for the access to the resources in their territory.¹⁰² He notes that while all Manitobans share economic risk, it is the indigenous communities that absorb the environmental risk regardless if the project fails, which is permanent, not temporary.

Martin Loney argues that hydro development represented a form of ‘forced

⁹⁸ Kulchyski, Peter. ‘Manitoba Hydro: How to Build a Legacy of Hatred’. In *Canadian Dimension* - Volume 38, Number 3: May/June: 2004. <https://canadiandimension.com/articles/view/manitoba-hydro-how-to-build-a-legacy-of-hatred-peter-kulchyski>

⁹⁹ Gordon, Todd. *Imperialist Canada*. Arbeiter Ring Publishing: Winnipeg, MB. 2010, pp. 122

¹⁰⁰ *Ibid*, 2010. pp. 122

¹⁰¹ Hultin, David A. *Building New Relations: Nisichawayasihk Cree Nation, Manitoba Hydro, and the Proposed Wuskwatim Project*. Department of Native Studies: University of Manitoba, 2005. pp. 33

¹⁰² *Ibid*, 2005. pp. 31

modernization'. He cited negative outcomes based on social and health determinants such as declining incomes and food insecurity, as well as rising rates of substance abuse.¹⁰³ Furthermore, he noted that in “some cases it may be possible to argue that a new development has had an almost immediate traumatic effect, sending a community into a spiral of decline from which there seems no prospect of recovery.”¹⁰⁴ The forced modernization argument is also echoed by Steve Hoffman who argues that hydro agreements and/or partnerships such as the Northern Flood Agreement or the Wuskwatim Power Partnership are defective documents.¹⁰⁵ He explains that it “assumes the modern economy is superior to the traditional economy [...] It fails to realize that the traditional economy is inter-connected with traditional socio-cultural and religious activities.” According to his analysis it completely disregards the socio-cultural dimension.¹⁰⁶

Whichever perspective and/or viewpoint one may take, hydro development in Manitoba's north continues to be an extension of colonialism that has precipitated destruction and division both from a socio-economic and environmental perspective. Aside from the physical consequences which “flooded vast tracts of land and eroded heritage sites, destabilized commercial fishing and hunting areas, forced people to move from their homes and disrupted traditional practices,”¹⁰⁷ numerous indigenous elders spoke of the mental consequences of a community that has fostered “inequality, racism, discrimination, substance abuse and sexual

¹⁰³ Buckland, Jerry and Melanie O’Gorman. ‘Re-envisioning the North? A Critical Socio-economic Assessment of Manitoba Hydro’s 2012/13 to 2047/48 Preferred Development Plan’. *Public Utilities Board: Winnipeg, MB*. 17 March 2014. Accessed February 14 2017. pp. 19
http://www.pub.gov.mb.ca/nfat_hearing/NFAT%20Exhibits/CAC-48.pdf

¹⁰⁴ Loney, Martin. ‘Social problems, community trauma and hydro project impacts’. *Canadian Journal of Native Studies*, 15(2), 1995. pp. 235

¹⁰⁵ Hoffman, Steve M. ‘Engineering Poverty: Colonialism and Hydroelectric Development in Northern Manitoba’. Thibault, Martin and Steven M. Hoffman (eds.) *Power Struggles: Hydro development and First Nations in Manitoba and Québec*. Winnipeg: University of Manitoba Press, 2008.

¹⁰⁶ *Ibid*, 2008. pp. 18

¹⁰⁷ Manitoba Clean Environment Commission. *Hydroelectric Development in Northern Manitoba: A History of the Development of the Churchill, Burntwood and Nelson Rivers, 1960–2015*. Winnipeg: 2016, pp. 55

violence” which was cyclically and historically perpetuated by the impacts of residential schools and the loss of cultural identity.¹⁰⁸ As a result, James Waldram concludes that “surely development projects which cost in the hundreds of millions of dollars would include the provision of mitigation and compensation measures. Surely the people to be affected would receive the benefits of a development designed to benefit all. Surely these people would be better off after construction of the dams than they were before. Unfortunately, such is not the case.”¹⁰⁹

Several First Nations attempted to recognize these existential concerns by collectively organizing via the Northern Flood Committee (NFC), which forced the provincial and federal government to negotiate compensation *vis-à-vis* the Northern Flood Agreement (NFA). The NFA was established due to the “modification of water regime, adverse effects have occurred, and may continue to occur, on the lands, pursuits, activities, and lifestyles, of the residents, individually, and collectively, of the Reserves of Cross Lake, Nelson House, Norway House, Split Lake and York Landing.”¹¹⁰ According to David Hultin, the Northern Flood Agreement was intended to “improve social and economic conditions for northern Aboriginal residents affected by the Churchill River Diversion (CRD) in 1976”, and subsequently the regulation of “Lake Winnipeg (LWR) as a hydroelectric reservoir in 1979.”¹¹¹

Manitoba Hydro argued that the Northern Flood Agreement “ensured discussions about the cause or extent of adverse effects, and facilitated the implementation of appropriate response measures. The Northern Flood Agreement permits parties to seek resolution through an arbitrator

¹⁰⁸ Manitoba Clean Environment Commission. ‘A Review of the Regional Cumulative Effects Assessment: For Hydroelectric Developments on the Nelson, Burntwood, and Churchill River Systems’. May 2018: pp. 35-39. cecm Manitoba.ca/resource/hearings/42/RCEA%20Design%20Web%20Accessible%20May24

¹⁰⁹ Waldram, James B. *As Long as the Rivers Run: Hydroelectric Development and Native Communities in Western Canada*. Winnipeg, MB: University of Manitoba Press, 1988. Preface

¹¹⁰ Manitoba Hydro. ‘The Northern Flood Agreement’. December 1977, pg. 3. https://www.hydro.mb.ca/community/indigenous_relations/pdf/northern-flood-agreement-1977.pdf

¹¹¹ Hultin, David A. *Building New Relations: Nisichawayasihk Cree Nation, Manitoba Hydro, and the Proposed Wuskwatim Project*. Department of Native Studies: University of Manitoba, 2005. pp. 22

when required.”¹¹² However, according to the Northern Flood Committee, discussions between Manitoba Hydro, the province, the federal government and the committee remained static for over a decade since ratification, as the committee noted the NFA lacked a “clear and concise working definition.”¹¹³ According to Colin Gillespie, the NFA was constructed with the intent of failure. He argued that when the NFA was submitted for ratification in 1978, “Canada set aside no funds for its implementation and later budgeted funds that were conditional on extinguishment of agreement obligations.”¹¹⁴ Furthermore, “the federal government had purposefully set out to engage in a systematic under-funding of normal programs for the five communities as a method of a ‘starve them out’ strategy of extinguishment.”¹¹⁵ By the early 1990s a definition was established, and various implementation agreements were signed by the representatives of the Northern Flood Committee, with the exception of Cross Lake First Nation (*Pimicikamak* – self-governing body) which signed two decades thereafter in 2012 and 2014 respectively. According to Gillespie, the other “four communities were ultimately forced to abandon the flood agreement and sign implementation or comprehensive agreements in order to access desperately needed cash to meet the crushing economic and social needs of their people (Figure 10).”¹¹⁶ These implementation agreements extinguished NFA rights within the ratified framework.

¹¹² Manitoba Hydro. ‘The Northern Flood Agreement’. December 1977, pg. 39
https://www.hydro.mb.ca/community/indigenous_relations/pdf/northern-flood-agreement-1977.pdf

¹¹³ Northern Flood Committee. *Northern Flood Agreement: 25 years after the historic signing and ratification*. Norway House, MB: 2003. pp. 3

¹¹⁴ Gillespie, Collin. In *Windspeaker, Canadian Periodicals Index Quarterly*. Kruzenga, Len. "Inquiry focuses on Cross Lake NFA (Northern Flood Agreement) dispute." Aug. 1999, p. 2

¹¹⁵ *Ibid.* 1999, pp. 2

¹¹⁶ *Ibid.* 1999, pp.2

NFA IMPLEMENTATION AGREEMENTS, 1992–1997

Community Date Settlement Land Component

Split Lake	June	1992	\$47.4 million	34,100 acres
York Factory	December	1995	\$25.2 million	19,000 acres
Nelson House	January	1996	\$64.9 million	60,000 acres
Norway House	December	1997	\$78.9 million	55,000 acres
Totals \$216.4 million 168,100 acres				

Figure 10 - Source: Know History

Numerous settlement agreements outside the Northern Flood Agreement framework (i.e. non-NFA agreements, NFA supplementary agreements) were also signed by communities affected by Manitoba Hydro’s actions.¹¹⁷ According to Manitoba Hydro, between 1990 and 2000, compensation agreements within or outside the Northern Flood Agreement totaled nearly \$400 million.¹¹⁸ Additional settlement agreements continue to be signed, with the latest being ratified in 2015.¹¹⁹

Ron Kustra argues that these monies permitted the opportunity for future development (Ex. Wuskwatim, Keeyask), fundamentally providing a “foundation to build more positive relations for the future.”¹²⁰ However, according to Jerry Buckland and Melanie O’Gorman, at the turn of twenty-first century Manitoba Hydro recognized that “that monetary compensation alone is not enough to ensure that local communities are not harmed by hydro projects.”¹²¹ The utility found in some cases, monetary compensation was either not delivered or accounted for whereby, Manitoba Hydro was reluctant to administer monies, or there was internal corruption within the

¹¹⁷ Manitoba Hydro. *Indigenous Agreements*. Accessed February 9 2017.

https://www.hydro.mb.ca/community/indigenous_relations/indigenous_agreements.shtml

¹¹⁸ Manitoba Hydro. *A History of Electric Power in Manitoba*. 2010, pp. 64

https://www.hydro.mb.ca/corporate/history/history_of_electric_power_book.pdf 010010.

¹¹⁹ *Ibid*, 2017.

¹²⁰ Hultin, David A. *Building New Relations: Nisichawayasihk Cree Nation, Manitoba Hydro, and the Proposed Wuskwatim Project*. Department of Native Studies: University of Manitoba, 2005. pp. 28

¹²¹ Buckland, Jerry and Melanie O’Gorman. ‘Re-envisioning the North? A Critical Socio-economic Assessment of Manitoba Hydro’s 2012/13 to 2047/48 Preferred Development Plan’. *Public Utilities Board: Winnipeg*, MB. 17 March 2014. Accessed February 14 2017. pp. 19

http://www.pub.gov.mb.ca/nfat_hearing/NFAT%20Exhibits/CAC-48.pdf

First Nations themselves.¹²² However, regardless of who, what or how much, increasing compensation or monetary transfers to First Nations will not solve the social, economic and environmental challenges. The evidence that precipitated this concept emerged when First Nations in the province of Alberta received resource royalties as a result of the oil and gas sector. The evidence suggested that the inflow of money in fact exasperated social problems, rather than extinguish them. For example, Alberta's Sampson First Nation saw an increase in substance abuse, violence, and suicides.¹²³ Today, many First Nations across the province of Alberta still face the same challenges which were present two decades prior.¹²⁴ Therefore, if Manitoba Hydro were to further expand its operations in Manitoba's north, the utility understood that they would need to further engage opportunities of development from an entirely different approach. It was clear that in addition to monetary compensation, those affected by hydro development sought greater economic opportunities for their communities in addition to the respect, inclusion and recognition of their treaty rights.

Buckland and O'Gorman argued that Manitoba Hydro adopted the World Bank's 'Best Practices' formula of 'Benefit-Sharing', outlined via their corporate strategy of Manitoba Hydro's Preferred Development Plan (PDP).¹²⁵ The PDP involved a major investment in new generation, transmission, and export contracts as precipitated by Gary Doer's NDP

¹²² Owen, Bruce. 'Where's the Money? Hydro Asked'. *Winnipeg Free Press*. September 13 2016. Accessed February 14 2017. <http://www.winnipegfreepress.com/local/wheres-the-money-hydro-asked-220149321.html>

¹²³ Stolte, Elise. 'Oil brought money to Hobbema, Alta. reserve, along with alcohol, drugs, and murder'. *Postmedia News*: January 28 2012.

¹²⁴ Morin, Brandi. "We are dying': Maskwacis community members overwhelmed by suicides'. *CBC News – Edmonton*: January 24 2018. <https://www.cbc.ca/news/indigenous/we-are-dying-maskwacis-community-members-overwhelmed-by-suicides-1.4486933>

¹²⁵ Buckland, Jerry and Melanie O'Gorman. 'Re-envisioning the North? A Critical Socio-economic Assessment of Manitoba Hydro's 2012/13 to 2047/48 Preferred Development Plan'. *Public Utilities Board*: Winnipeg, MB. 17 March 2014. Accessed February 14 2017. pp. 19 http://www.pub.gov.mb.ca/nfat_hearing/NFAT%20Exhibits/CAC-48.pdf

government.¹²⁶ At its core, the PDP involves establishing partnerships, specifically with indigenous communities to further advance their development. This term has also been coined ‘social licence’ whereby, the interested party seeks “free, prior and informed consent of the local communities and stakeholders” before proceeding with any development.¹²⁷ According to Chaogang Wang, the Benefit-Sharing process is defined as the “the systematic efforts made by project proponents to sustainably benefit local communities affected by hydropower investments.”¹²⁸ These efforts include stakeholder consultation, monetary benefit-sharing, non-monetary benefit-sharing, transparent and efficient implementation of the benefit-sharing program, as well as the mitigation of harmful effects.¹²⁹ Therefore, it was based upon these principles that partnerships such as Wuskwatim and Keeyask were formed under the guise of benefit-sharing/social licence.

This contemporary approach to development established a new precedent in terms of relations between Manitoba Hydro, the province of Manitoba, the federal government and Manitoba’s northern indigenous peoples. While imperfections exist, the model is theorized based on four key arguments including the ‘social licence’ concept, environmental planning/assessment, profitability/shared equity and economic integration via labour opportunities with respect to skills and training. Firstly, the social licence model of obtaining “free, prior and informed consent of the local communities and stakeholders”¹³⁰ permits

¹²⁶ The Public Utilities Board. ‘The Report on the Need For and Alternatives To’. June 2014, pp. 47.
http://www.pub.gov.mb.ca/nfat/pdf/finalreport_pdp.pdf

¹²⁷ Dipple, Joseph. ‘Implications of hydroelectric partnerships in northern Manitoba: do partnership agreements provide social licence?’ Faculty of Graduate Studies: University of Manitoba, 2015. pp. 31

¹²⁸ Wang, C. ‘A guide for local benefit sharing in hydropower projects.’ Social development papers; no.128. Social sustainability and safeguard. Washington, DC: World Bank, 2012.

¹²⁹ *Ibid*, 2012.

¹³⁰ Dipple, Joseph. ‘Implications of hydroelectric partnerships in northern Manitoba: do partnership agreements provide social licence?’ Faculty of Graduate Studies: University of Manitoba, 2015. pp. 31

communities and/or affected stakeholders to decline development. Secondly, if development is permitted, the communities and/or affected stakeholders work with the utility and the province to provide input regarding planning and environmental assessment which includes traditional indigenous knowledge. The community and/or affected stakeholder also has the option to become a monetary partner in the development and as a result should be appraised of all relevant progress related to the project. For example, Nisichawayasihk Cree Nation under the guise of the Taskinigahp Power Corporation owns a third share in the Wuskwatim Power Limited Partnership; while KCN Investment Entities – representing four first nations (Tataskweyak Cree Nation, War Lake First Nation, York Factory First Nation and Fox Lake Cree Nation) own a quarter share in The Keyask Hydropower Limited Partnership. While Keyask remains under construction, according to W.E. Thomas and Kustra, by 2035 when all loans are expected to be paid off, the Nisichawayasihk Cree Nation stands to gain an estimated twenty-seven to fifty-nine million dollars each year from their equity in Wuskwatim.¹³¹ According to Manitoba Hydro, the “best case scenario for KCN would be \$9.9 million in profits per year from 2040-2054, and the worst case scenario would be \$2.2 million per year during that same time period.”¹³²

Since 1985, indigenous peoples have been engaged with Manitoba Hydro directly as per the Canada/Manitoba Limestone Project and the Employment Training Agreement (LETA) in addition to the Aboriginal Pre-Placement (APP) program. However, the newly formed partnerships were a catalyst for the construction of the *Atoskiwin Training and Employment Centre of Excellence* via the Hydro Northern Training Initiative which was used in the construction of the Wuskwatim generation facility and is currently educating/training individuals

¹³¹ Hultin, David A. Building New Relations: Nisichawayasihk Cree Nation, Manitoba Hydro, and the Proposed Wuskwatim Project. Department of Native Studies: University of Manitoba, 2005.

¹³² Dipple, Joseph. ‘Implications of hydroelectric partnerships in northern Manitoba: do partnership agreements provide social licence?’ Faculty of Graduate Studies: University of Manitoba, 2015. pp. 37

for the construction phases of the Keeyask project.¹³³ According to the Wuskwatim Limited Partnership, the project hired over six thousand employees in an eight year span, with 44% percent of hires declaring indigenous ancestry.¹³⁴ To date, nearly one in five employees report indigenous ancestry with more than 45% identifying as indigenous in Manitoba Hydro's northern operations.¹³⁵

Critics of benefit-sharing/social licence model have argued that the idea of a true partnerships is a misconception. The most vocal opposition cite that partnerships do not incorporate the environmental risks assumed by indigenous communities who are directly impacted. Therefore, although the community is a financial stakeholder and is positioned to benefit from its success; if the project fails, the community remains the only actor that will assume the environmental risk and subsequently the damages associated with the project.¹³⁶ These damages are permanent, not temporary. Other academics have indicated failure regarding the financial arrangement that exists among the partnership. As previously indicated, Wuskwatim is losing money and consequently Nisichawayasihk Cree Nation is losing money. According to Will Braun, their share of losses on "Wuskwatim was estimated to be approximately \$24 million dollars in 2013 and an estimated \$134 million dollars over the first decade of Wuskwatim's operation."¹³⁷ This arrangement forced Manitoba Hydro to renegotiate the partnership due to the fact Nisichawayasihk would be required "to pay their portion of the

¹³³Nisichawayasihk Cree Nation. 'Atoskiwin Training and Employment Centre of Excellence'. Nelson House, MB. Accessed February 9 2017. <http://www.ncncree.com/ncn/atec.html>

¹³⁴ Wuskwatim Power Limited Partnership. 'Employment Stats'. Accessed February 9 2017. <http://wuskwatim.ca/empstats.html>

¹³⁵ Manitoba Hydro. *Careers*. <https://www.hydro.mb.ca/careers/index.shtml>

¹³⁶ Dipple, Joseph. 'Implications of hydroelectric partnerships in northern Manitoba: do partnership agreements provide social licence?' Faculty of Graduate Studies: University of Manitoba, 2015. pp. 33

¹³⁷ Braun, Will. 'Dam deal loses shine: First Nations gambled on bold talk of prosperity.' *Winnipeg Free Press*, 24 April, 2014. 10 Dec. 2015

losses, and has instead decided to cover the losses of the community for now, essentially borrowing from future profits to pay the community at this point in time and spread the losses farther into the future.”¹³⁸

Therefore, in order for the benefit-sharing/social licence model to be a success, the financial arrangement of ‘partnership’ and/or share equity needs to be reformed. One model that has proven beneficial for indigenous communities in Quebec is known as ‘The Peace of the Braves’ or *La Paix des Braves* where the province of Quebec engaged hydro development from a nation-to-nation perspective. Unlike Manitoba Hydro’s comprehensive implementation agreements that sought to extinguish treaty rights, *La Paix des Braves* reaffirms and respects those rights. A key aspect of the multifaceted agreement includes a \$3.5 billion-dollar settlement with the Grand Council of the Crees over the course of a fifty-year period (\$70 million dollars annually).¹³⁹ The stability and predictability of this income, set fourth in the agreement, has positively transformed many communities that comprise the Grand Council of Crees. According to Lyle Stewart, “it has contributed to the relative economic prosperity of the communities, as can be seen in the new housing and community facilities in many of them.”¹⁴⁰ Such predictability would also afford community corporations such as the Taskinigahp Power Corporation and/or KCN Investment Entities to diversify their economic linkages from northern economic staples such as mining, forestry and of course, hydro development. For example, Peguis First Nation – Manitoba’s largest First Nation community with a population of approximately ten thousand – established the Peguis Development Corporation in 1984 in response to the “growing need for a

¹³⁸ *Ibid*, 2014,2015.

¹³⁹ Martin, Thibault. “Hydro Development in Québec and Manitoba: Old Relationships of New Social Contract?” *Power Struggles: Hydro Development and First Nations in Manitoba and Québec*. Eds. Thibault Martin and Steven Hoffman. Winnipeg: University of Manitoba Press, 2008. pp. 32

¹⁴⁰ Stewart, Lyle. ‘How the “Peace of the Brave” led to Internal Warfare among the Cree’. *The Nation*: 9 November 2018.

service organization to carry the specific mandate of delivering the Economic Development program for the community.”¹⁴¹ The corporation started out with five businesses which have now expanded into over seventy-five which includes everything from health, recreation and community services to cannabis, food/beverage and hospitality .

Contemporary history reveals that Manitoba Hydro’s adoption of the World Bank’s benefit-sharing/social licence model for building partnerships has fostered a positive approach and established precedent with northern and indigenous communities. However, imperfections such as the profitability/share equity arrangements need to be reformed, and treaty rights need to be reaffirmed and recognized. Manitoba’s indigenous communities have been clear in their convictions; in addition to monetary compensation, those affected by hydro development seek greater labour opportunities for their communities as well as the respect, inclusion and recognition of their treaty rights. The implementation of benefit-sharing and/or social licence model presents numerous opportunities to achieve these goals, however it must be improved. Combining the technicalities of the social licence model with the monetary and treaty assurances outlined in the *La Paix des Braves*; Manitoba Hydro, the federal government and the province of Manitoba would have an opportunity to build a real partnership today, and moving forward.

¹⁴¹ Peguis Development Corporation. ‘About’. Peguisfirstnation.ca/peguis-development-corporation

CHAPTER 6: THE 'GREEN' MISCONCEPTION

The conceptualization that hydroelectricity is environmentally neutral is false and misleading. Manitoba Hydro is neither 'green' nor environmentally neutral as recent political rhetoric would suggest. Jack Irving, head of the Canadian Hydropower Association who promotes the expansion of hydroelectric solutions, argues that while hydroelectricity limits carbon emissions, environmental damage is not immune to its productive processes. "When people refer to hydro as clean, it is in the context of air emissions. But often utilities use the term 'clean' categorically, without caveat or qualification. This is misleading. Just because dams do not have carbon-spewing smokestacks does not make them clean. A dam is not an environmental improvement or favor to a watershed, as the assertion of cleanliness is suggested."¹⁴² A 2011 Pew Environmental Report on Canada's boreal forests also conveyed this 'middle-ground' perspective stating that although hydropower projects are "comparatively low carbon emitters in comparison to many conventional energy sources, they cause significant impacts to wildlife habitat, ecological processes and aboriginal communities."¹⁴³

Within Manitoba's context, Will Braun argues that Manitoba Hydro's dams have "permanently flooded forest lands, negatively impacted water quality and disturbed the fragile ecological balance of highly productive riparian zones."¹⁴⁴ Oral testimony from northern indigenous communities reveals the stark contrast of ecological change. For example, Solange Garson of Tataskweyak Cree Nation argues that the community presided over "beautiful beaches, clean water, and edible fish" pre-development [...] "Now, [there are] ugly jagged rocks Hydro dumped on the shorelines, also the water is murky brown with manure and dead logs from

¹⁴² Braun, Will. 'Canada Looks to expand hydro exports to US.' In *World Rivers Review*, 27(1), 4-5. 2012

¹⁴³ *Ibid*, 2012. pp. 4

¹⁴⁴ *Ibid*, 2012. pp. 4

the erosions from the fluctuating water level, and fish are likely with high level of mercury and some are rotten with sickness.”¹⁴⁵ Fox Lake Cree Nation observed that four generating stations, converter stations, and portions of Bipoles I, II, and III all lie along a 100-kilometre stretch of the Nelson River in Fox Lake Cree Nation territory. While a contributing factor to the social challenges faced by the community, the environmental devastation is irreversible. The community expressed in the CEC submission that prior to development, their territory had an abundance of “harvested resources, clean water and various medicinal plants” all of which remain a distant memory.¹⁴⁶ Primary questioning conducted by Joseph Dipple revealed a central thesis in accordance with concerns raised by northern indigenous populations. While the impacts on community life and the lack of financial assurances remain a vital point of contention; the irreversible ecological damage to their territories was the primary response.¹⁴⁷

According to Martin Loney, the construction of the Grand Rapids dam, the first under the discretion of the *Manitoba Hydro Act*, caused nearly twenty-two hundred square kilometers of flooding, inundating the Saskatchewan River delta including the Summerberry Marsh.¹⁴⁸ The impact of flooding required the relocation of the Chemawawin people to their current location of Easterville. Environmental consequences for the upstream Moose Lake and The Pas First Nations, according to Loney resulted in “fish spawning being blocked by the dam and the fishery suffered. Commercial fishing was closed for three years in the 1970s due high levels of

¹⁴⁵ Garson, Solange. ‘Letter to the Manitoba Clean Environment Commission.’ Winnipeg, MB: September 13 2013. Accessed February 15 2017. [http://www.cecmanitoba.ca/resource/hearings/39/Sub-001%20Solange%20Garson%20for%20TCN%20\(redacted\).pdf](http://www.cecmanitoba.ca/resource/hearings/39/Sub-001%20Solange%20Garson%20for%20TCN%20(redacted).pdf)

¹⁴⁶ Manitoba Clean Environment Commission. ‘A Review of the Regional Cumulative Effects Assessment: For Hydroelectric Developments on the Nelson, Burntwood, and Churchill River Systems’. Government of Manitoba, 2018. pp. 36
cecmanitoba.ca/resource/hearings/42/RCEA%20Design%20Web%20Accessible%20

¹⁴⁷ Dipple, Joseph. ‘Implications of hydroelectric partnerships in northern Manitoba: do partnership agreements provide social licence?’ Faculty of Graduate Studies: University of Manitoba, 2015. pp. 47

¹⁴⁸ Loney, Martin. ‘The construction of dependency: The case of the Grand Rapids hydro project.’ *The Canadian Journal of Native Studies*, 7, 1987. pp. 58

methylmercury in the fish.”¹⁴⁹ Misipawistik Cree Nation, formerly Grand Rapids First Nation, regard the construction of the dam “as the single most destructive event in the history of the community.”¹⁵⁰ These challenges are not temporary in nature, but are felt day in, day out, by Manitoba’s northern communities. The continuity of this experience was mirrored by hydro development throughout the 1970s. Engineers sought to harness the productive potential of the Nelson River, and by doing so, diverted nearly eighty percent of Churchill River’s natural flow rate into the Nelson River system whereby the flow of Nelson River increased by twenty-five percent. This was accomplished via the Rat and Burntwood Rivers through a series of control dams (Missi Falls and Notigi) collectively referred to as the Churchill River Diversion (CRD). Additionally, Manitoba Hydro built a series of channels (Two-Mile Channel, Eight-Mile Channel, Kiskitto Dam and the Ominawin Bypass Channel) to increase the outflow of Lake Winnipeg therefore, regulating the flow rate into the Nelson River and subsequently creating one of the largest hydroelectric reservoirs (Lake Winnipeg) in the world (Figure 11).



Figure 11 - Source: Manitoba Sustainable Development

¹⁴⁹ Loney, Martin. ‘Social problems, community trauma and hydro project impacts’. *Canadian Journal of Native Studies*, 15(2), 1995. pp. 235

¹⁵⁰ Misipawistik Cree Nation. ‘History – Grand Rapids Dam’. Accessed February 16 2017. <http://misipawistik.com/history.html>

This project was completed via the construction of the Jenpeg generating station/control structure in 1976, officially marking the start of Lake Winnipeg being one of the largest hydroelectric reservoirs in the world. Identical to the Grand Rapids experience, communities shared similar effects of polluted drinking water, loss of fish and wildlife habitat, as well as increased rates of erosion.¹⁵¹ Sheldon Birnie cites the impact on “woodland caribou and the endangerment of sturgeon spawning areas, among other key species” as particularly crucial.¹⁵² In the case of the Churchill River Diversion, Nisichawayasihk Cree Nation was relocated to its current settlement of Nelson House as a result of flooding.

While there are numerous inputs that have had adverse effects on the ecology of Manitoba’s north, none compare to the actions of Manitoba Hydro. The completion of the Lake Winnipeg regulation in the 1970s directly affected the ecology of Lake Winnipeg, therefore exporting environmental degradation to Manitoba’s south. By harnessing its waters as a hydroelectric reservoir, Manitoba Hydro has kept the lake artificially high for the purposes of generation, therefore contributing to wetland destruction and shoreline erosion. Lake Winnipeg currently suffers from eutrophication which refers to the nutrient-overload of phosphorus and nitrogen. Long-term eutrophication could have detrimental effects to the ecology of the lake and its species. The lake’s wetlands act as ‘natural kidneys’ absorbing excess nutrients.¹⁵³ According to Manitoba’s Clean Environment Commission (CEC), Manitoba Hydro argued a “marsh requires periodic low-water periods when seeds of plants such as cattails and bulrushes can

¹⁵¹ Birnie, Sheldon. ‘Manitoba Hydro Really Wants New Dams.’ *Vice News*: February 24 2014. Accessed February 17 2017. https://www.vice.com/en_ca/article/winnipeg-hydro-fresh-concerns

¹⁵² *Ibid*, 2014.

¹⁵³ Goldsborough, Gordon. ‘Open Letter to the People and Government of Manitoba: Manitoba’s Lakes Need Our Help Protecting Wetlands and Shorelines is Essential for Maintaining Healthy Lake.’ University of Manitoba. Accessed February 16, 2017. <http://home.cc.umanitoba.ca/~ggoldsb/openletter.pdf>

germinate on exposed mudflats.”¹⁵⁴ Therefore, one would conclude that by reducing the level of Lake Winnipeg, the restoration of the lake’s wetlands would enhance its natural functions, while also limiting shoreline erosion. The CEC also published testimonies of citizens stating that “Manitoba Hydro should control lake levels to provide periodic low-water years, which would help to regenerate vegetation.”¹⁵⁵ While Manitoba Hydro is an actor, among many, contributing to the eutrophication of Lake Winnipeg, the lake’s current state of disrepair earned the designation of ‘Threatened Lake of the Year’ in 2013, by the Global Nature Fund.¹⁵⁶ Previous lakes recognized include the Dead Sea, Lake Victoria, and Lake Titicaca. Therefore, the actions of Manitoba Hydro become ever more relevant to Lake Winnipeg’s health; a fact Manitoba Hydro cannot but does disregard.

Contemporary analysis reveals that while flooding has been limited to less than a square kilometer at Wuskwatim, and even less at Keeyask, Bipole III intends to be just as destructive, as its predecessors.¹⁵⁷ According to the CEC, Bipole III crosses five ecozones and seven ecoregions. Therefore, its environmental impact is felt through a variety of mediums. For example, “Of the 585 kilometers of the Bipole III right-of-way that runs through agricultural Manitoba, approximately 42.5% is on agricultural land, amounting to a loss of 1,810 hectares.”¹⁵⁸ In northern Manitoba, the Sapotaweyak Cree Nation estimates that clear-cutting a

¹⁵⁴ Manitoba Clean Environment Commission. ‘Lake Winnipeg Regulation Report’. Government of Manitoba, 2015. pp. 96. http://www.cecmanitoba.ca/resource/reports/LWR_WEB.pdf

¹⁵⁵ *Ibid*, 2015. pp. 96

¹⁵⁶ Madondo, Obert. ‘Canada’s Lake Winnipeg is Threatened Lake of the Year 2013’. *The Canadian Progressive*: February 4 2013. Accessed February 28 2017. <http://www.canadianprogressiveworld.com/2013/02/04/canadas-lake-winnipeg-is-threatened-lake-of-the-year-2013/>

¹⁵⁷ Manitoba Clean Environment Commission. ‘Keeyask Generating Project’. Government of Manitoba, 2014. pp. 27. <http://www.cecmanitoba.ca/resource/reports/Keeyask%20WEB%20FINAL2.pdf>

¹⁵⁸ Manitoba Clean Environment Commission. ‘Bipole III Transmission Project’. Government of Manitoba, 2013. pp.41. http://www.cecmanitoba.ca/resource/hearings/36/FINAL%20WEB%20Bipole%20III%20Transmission%20Project_WEB3.pdf

path for Bipole III has resulted in a loss of over sixteen square kilometers of forest in their territory.¹⁵⁹ Therefore, while the approach to studying environmental impacts may have changed, the basic actions of Manitoba Hydro remain static. The very existence of Manitoba's Clean Environment Commission is a testament to a wider trend of collectively recognizing the effects of environmental degradation. Furthermore, Manitoba Hydro has established such programs as the Churchill River Diversion Archaeological Program, the Debris Management Program and the Lake Sturgeon Stewardship and Enhancement Program. However, the impact of development remains unchanged.

Manitoba Hydro's assertion that their activities are 'green' or environmentally neutral utility is a misconception. From permanently flooded forest lands, non-fluctuating riparian zones, clear cutting and altering entire ecosystems through diversion and controls has not improved the environment or is a favourable action to Manitoba's watersheds. Furthermore, while the perception of Manitoba Hydro may be that it is 'green' or carbon neutral, the utility's top industrial customers include TransCanada Keystone Pipeline, Enbridge Pipeline Inc. and Koch Fertilizer which are directly and indirectly associated with some of the largest carbon emitters in Canada.

For example, the Pallister PC's released their 'Manitoba Climate & Green Plan' in the fall of 2017. It noted that "Manitoba now has one of the cleanest electricity grids in Canada [...] its long-term commitment to developing its renewable energy sources, rather than relying on

¹⁵⁹ Patterson, Brent. 'Manitoba may reroute Bipole III hydro-line that would power Energy East pipeline.' *The Council of Canadians*: June 9 2016. Accessed March 1 2017. <https://canadians.org/blog/manitoba-may-reroute-bipole-iii-hydro-line-would-power-energy-east-pipeline>

imported fossil fuels, has significantly reduced the province's carbon footprint.”¹⁶⁰ In this context, the reduction of carbon emissions does not account for past and present ecological damages which affects the carbon equation and its assertion of neutrality.

¹⁶⁰ Government of Manitoba. 'A Made-in-Manitoba Climate and Green Plan' Department of Sustainable Development. October 27 2017. pp. 10. Accessed January 3 2018.
https://www.gov.mb.ca/asset_library/en/climatechange/climategreenplandiscussionpaper.pdf

CHAPTER 7: BIPOLE III

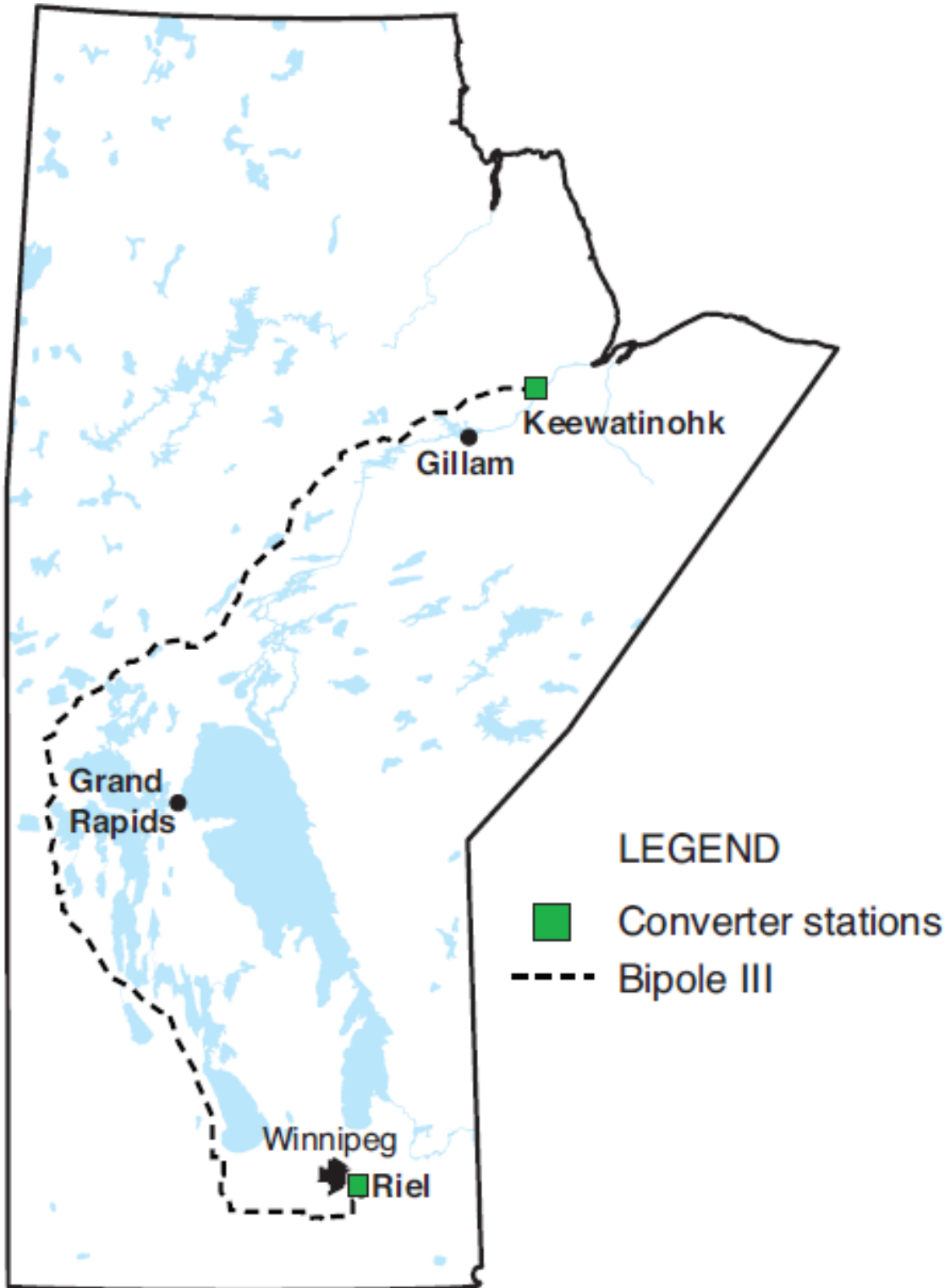


Figure 12 - Source: Manitoba Hydro - Final Preferred Route

At the turn of the twenty-first century, Manitoba Hydro developed a corporate strategy which proposed numerous infrastructure investments to incentivize greater hydroelectric capacity, including increasing export opportunities and domestic reliability. This strategy included a four-dam expansion, a new bipole/converter stations and the construction of an additional export transmission link between Manitoba and Minnesota. Most projects received approval, though some, such as Conawapa, have been suspended indefinitely. Nonetheless, while all these projects were criticized from numerous perspectives, no project in Manitoba Hydro's recent history was more contentious than Bipole III. Bipole III is a HVDC (High-Voltage Direct Current) power line that transmits electrical current from the Keewatinow converter station, northeast of Gillam to the Riel converter station, southeast of Winnipeg. Manitoba Hydro committed two critical errors in the process of planning Bipole III. Firstly, due to political interference the utility selected the wrong and/or inferior route. Secondly, Manitoba Hydro's new-found capacity from generating facilities (Wuskwatim, Keeyask) were not needed, and therefore Bipole III was unnecessary.

With the completion of Bipole II in the mid-1980s, engineers at Manitoba Hydro recognized a third bipole would be needed in anticipation of future increases in domestic capacity, reliability, and additional export opportunities. The strategy for a third bipole, while shelved for numerous decades, was subsequently initiated when Ontario Hydro signed a twenty-two year, one thousand-megawatt (MW) agreement with Manitoba Hydro in 1990.¹⁶¹ With service connection succeeding a decade thereafter, Manitoba Hydro was tasked with completing the proposed Conawapa generating station, and consequently building the required transmission in relation contract specifics. According to Will Tishinski, former Vice-President of

¹⁶¹ Manitoba Hydro. *A History of Electric Power in Manitoba*. 2010, pp. 51
https://www.hydro.mb.ca/corporate/history/history_of_electric_power_book.pdf

Transmission at Manitoba Hydro, the original plan called for Bipole III to be built along Lake Winnipeg's east side. He noted that "all of the relevant issues involved in planning a transmission line, including technical, economic, reliability, environment and social" were carried out by Manitoba Hydro before the project's submission.¹⁶² However, in late 1992, Ontario Hydro terminated the agreement, suspending Conawapa and Bipole III indefinitely, until plans were renewed in the early twenty-first century under the Gary Doer's NDP.¹⁶³

By the early 2000s, Manitoba Hydro realized the need for a third bipole in accordance with their development strategy. The utility submitted a proposal with reference to its previous submission outlined in the Ontario Hydro agreement, advocating for the construction to proceed on Lake Winnipeg's east side. According to Tishinski, Manitoba Hydro did all the due diligence, including indigenous consultation and route selection processes.¹⁶⁴ The initial plan revealed that there was no need for costly converter stations to be constructed, as is the case for the construction of the Riel converter station, southeast of Winnipeg.¹⁶⁵ Therefore, the line itself could be connected from the Henday converter station, north of Gillam, down the east side of Lake Winnipeg, and on towards the Dorsey converter station, northwest of Winnipeg.¹⁶⁶ According to the review, the construction of Bipole III addressed two outstanding concerns. Firstly, a third bipole would "mitigate longstanding system reliability risk" with reference to Bipole I and II which are located within 100 meters of each other for lengthy stretches, and secondly, it would "strengthen physical transmission capability", allowing for greater export

¹⁶² Tishinski, Will. 'Bipole III: \$4-billion political chicanery.' *Winnipeg Free Press*: November 7 2012. Accessed March 1 2017.

¹⁶³ Manitoba Hydro. *A History of Electric Power in Manitoba*. 2010, pp. 54
https://www.hydro.mb.ca/corporate/history/history_of_electric_power_book.pdf

¹⁶⁴ *Ibid*, 2012.

¹⁶⁵ The Boston Consulting Group. 'Bipole III, Keeyask and Tie-Line review.' Released September 19 2016. pp. 11.
<http://s3.documentcloud.org/documents/3111718/Bipole-III-Keeyask-and-Tie-Line-Review-Report.pdf>

¹⁶⁶ *Ibid*, 2016. pp. 10

capacity.¹⁶⁷

In 2004, Gary Doer's NDP government requested Manitoba Hydro temporarily suspend activities related to Bipole III. The government's justification "was that the province intended to apply to UNESCO for a heritage site designation of some 43,000 square kilometers of forest on the east side of Lake Winnipeg", known as *Pimachiowin Aki* – 'The Land that gives Life'.¹⁶⁸ The government also argued that woodland caribou would suffer from various forms of habitat destruction along Lake Winnipeg's eastern route. John Ryan noted that the Manitoba government and Manitoba Hydro exhausted all efforts conducting negotiations with First Nations for several years. "After some 80 meetings, stakeholders were unable to reach a consensus."¹⁶⁹ These justifications in terms of prevaricating the project were reviewed and deemed inadmissible shortly thereafter by Manitoba Hydro.¹⁷⁰ Gary Doer's NDP government disregarded these findings. In fact, by 2007 Minister of Conservation Stan Struthers permanently suspended the prospects of Bipole III on the eastside of Lake Winnipeg.¹⁷¹ Struthers instructed Manitoba Hydro to pursue alternative options in order to avoid traversing the heritage site proposal. In the following years, Manitoba Hydro engineered various alternative routes. However, it became evident that a proposed west side route would require the construction of a costly converter stations. The cost of Bipole III increased two-fold with the addition of converter stations Keewatinohk, north of Gillam, and Riel, southeast of Winnipeg before construction had

¹⁶⁷ The Boston Consulting Group. 'Bipole III, Keeyask and Tie-Line review.' Released September 19 2016. pp. 10. <http://s3.documentcloud.org/documents/3111718/Bipole-III-Keeyask-and-Tie-Line-Review-Report.pdf>

¹⁶⁸ Tishinski, Will. 'Bipole III: \$4-billion political chicanery.' *Winnipeg Free Press*: November 7 2012. Accessed March 1 2017.

¹⁶⁹ Ryan, John. 'Fast Facts: Bi Pole III: Winnipeg Free Press and the Conservative campaign of misinformation.' Canadian Centre for Policy Alternatives: July 7 2011. <https://www.policyalternatives.ca/publications/commentary/fast-facts-bi-pole-iii-winnipeg-free-press-and-conservative-campaign-misinfo#sthash.OrBHYvR6.dpuf>

¹⁷⁰ *Ibid*, 2012.

¹⁷¹ *Ibid*, 2016.

commenced. With the resignation of Premier Gary Doer in 2009, and Greg Selinger taking over the provincial NDP, a clear route was defined along the west side of the province. In comparison to Manitoba Hydro's east side route, the west side route offered numerous opportunities for criticism and scrutiny.

The new 'Final Preferred Route' (FPR-Figure 7), as outlined by Manitoba Hydro, is now fifty-four percent longer, nearly a billion dollars costlier, and electrical load loss will cause more than \$300 million dollars of lost revenue annually in comparison to the east side option, according to Boston Consulting Group.¹⁷² While the extra length and additional cost is a concern to Manitoba Hydro, it is in fact, the electrical load loss that will serve as a testament to the inferior route choice. \$300 million is equivalent to the value of electricity generated by Manitoba Hydro's wind farms. When Manitoba Hydro increases its export capacity through various means, the losses would continue to increase, therefore reducing the utility's ability to secure even greater market transactions. According to Manitoba Hydro, the load loss will range from 6.4 to 7 percent, while the east side route would have resulted in a load loss of 6 to 6.4 percent.¹⁷³ These discrepancies were justified on environmental grounds, yet the merit of these environmental concerns needs to be challenged.

Firstly, the prospects of a third bipole represented the need for energy security and reliability, with Manitoba Hydro citing a climatic anomaly such as an ice storm/tornado or a potential terrorist threat. According to Garland Laliberte, the "area where a western line is planned has been characterized by meteorological agencies as tornado alley."¹⁷⁴ In fact, as recent

¹⁷² The Boston Consulting Group. 'Bipole III, Keeyask and Tie-Line review.' Released September 19 2016. pp. 11.
<http://s3.documentcloud.org/documents/3111718/Bipole-III-Keeyask-and-Tie-Line-Review-Report.pdf>

¹⁷³ *Ibid*, 2016. pp. 11

¹⁷⁴ Laliberte, Garland. 'Discusses Bipole III.' *Farmers' Voice*: Fall 2011, pp. 26.
http://www.bipoleiii.coalition.ca/News/KAP_fall2011_BPIII_.pdf

as August 2018, a tornado touched down near Bipole III near the town of Alonsa in Manitoba's cattle country which was deemed as Canada's most powerful tornado (EF4) in 2018.¹⁷⁵ Two years earlier in August 2016, a tornado touched down by the town of Camperville in Manitoba's parkland region which also caused damage during construction of Bipole III.¹⁷⁶

The NDP government cited greater deforestation if Manitoba Hydro pursued the east side route, yet, this claim is also misleading. Tishinski notes that there will be "no mass deforestation."¹⁷⁷ Laliberte argues that both routes traverse through an equal distance of boreal forest, however, he claims the intrusion of western route results in an increase of deforestation nearly five hundred kilometers greater.¹⁷⁸ The evidence presented is based on a report commissioned by the Pimachiowin Aki Corporation, whereby Pimachiowin revealed that the area designated for the heritage site occupies thirty-two percent of dense forest. "The other 68 per cent is occupied by sparse stands of trees and shrubs, open areas, water, wetlands, rocks and rubble."¹⁷⁹ Therefore, the ecology mirrors that of Bipole I and II whereas, the challenges faced during construction and maintenance should be limited in reference to utility's current and previous experience. Laliberte claims that ten square kilometers out of forty thousand would have been affected.¹⁸⁰ There is also a misconception that the east side of Lake Winnipeg is void of existing power lines and right-of-way corridors whereby the presence of Bipole III would

¹⁷⁵ CBC News. 'Man dead following tornado near Alonsa, Man'. *CBC News – Manitoba*: August 4 2018. Accessed August 20 2018. <https://www.cbc.ca/news/canada/manitoba/tornado-alonsa-manitoba-damage-1.4774386>

¹⁷⁶ CBC News. 'Tornado spotted near Camperville, Man., on Sunday night, says Environment Canada.' *CBC News – Manitoba*: August 1 2016. Accessed March 15 2017. <http://www.cbc.ca/news/canada/manitoba/manitoba-tornado-sighting-camperville-1.3703031>

¹⁷⁷ Tishinski, Will. 'Bipole III: \$4-billion political chicanery.' *Winnipeg Free Press*: November 7 2012. Accessed March 1 2017.

¹⁷⁸ Laliberte, Garland. 'Discusses Bipole III.' *Farmers' Voice*: Fall 2011, pp. 25. http://www.bipoleiii.coalition.ca/News/KAP_fall2011_BPIII_.pdf 011

¹⁷⁹ *Ibid*, 2011. pp. 25

¹⁸⁰ *Ibid*, 2011. pp. 25

reduce the likelihood of obtaining heritage designation. This claim also has no factual basis. Aside of from existing mining operations, fishing camps, and indigenous communities, *Pimachiowin Aki* is also home to power lines and right-of-way corridors, such as winter roads. According to Manitoba Hydro, a sixty-six kilovolt transmission line serves the communities of Bloodvein, Berens River, Popular River, and Little Grand Rapids.¹⁸¹ In fact, the only area on the east side of Lake Winnipeg that is void of power lines, is a small section of less than one hundred kilometers between Popular River First Nation and Warrens Landing, near the northeast basin of Lake Winnipeg. Maps obtained through Manitoba Infrastructure also reveal winter roads run parallel to existing transmission lines that serve all four communities.¹⁸² Therefore, if the presence of these activities were a threat to the accreditation, then what would be the justification for other heritage sites whose internal economic activities embody greater environmental impacts. Furthermore, why is sovereign provincial policy being influenced by an international organization? Why would the provinces of Manitoba and Ontario seek their vindication and/or satisfy their prerequisites to obtain accreditation and to recognize its value? Historically, the onus should be on the federal/provincial government in addition to indigenous treaty relations to not only ensure hydro development is carried out in a sustainable manner, but also ensure that boreal is properly protected, promoted and enhanced.

With the dissolution of the east side route option, various external advantages for indigenous communities have also evaporated. This is unfortunate due to the fact fifteen of

¹⁸¹ Manitoba Wildlands. 'Manitoba Hydro's Major Electrical and Gas Facilities.' Accessed March 16 2017. http://manitobawildlands.org/develop_maps.htm

¹⁸² Manitoba Infrastructure. 'Winter Roads – Map 1'. Accessed March 16 2017. <https://www.gov.mb.ca/mit/winter/2016maps/map1.pdf>

sixteen First Nations expressed support for an east side Bipole III.¹⁸³ In fact, when the line was proposed along the west side of the province, various indigenous leaders along the east side lobbied potential companies/investors in Quebec, Alberta and Minnesota in order to regain interest in the proposed east side route.¹⁸⁴ Today, Bipole III currently affects the treaty lands of fifteen first nations. The only First Nation abstaining from opportunity was Poplar River, citing that a consensus could not be reached with either Manitoba Hydro or the province of Manitoba in terms various concessions and stipulations. Poplar River First Nation touted that “the community wanted to preserve its boreal forest.”¹⁸⁵ However, evidence indicated that the boreal would be minimally affected and would share a similar ecological impact as the westside route. Furthermore, Poplar River First Nation has expressed interest in all-weather road access which has a greater ecological impact than the construction of a HVDC bipole. Therefore, one could only interpret the communities’ lack of consensus was more likely an elusive response to pursue greater economic advantages for their community with either negotiating party given the circumstances. At the time of consultations, Manitoba Hydro spent nearly a decade committing “approximately \$400 million dollars on comprehensive community settlements, resource sector or remedial work settlements, and settlements with individuals to remedy problems and offset losses.”¹⁸⁶ That being said, it would be irrational for the Popular River First Nation not to secure the best possible compensation.

Nevertheless, with the NDP government initiating a submission for heritage

¹⁸³ CBC News. ‘East-Side First Nations want own Hydro Transmission Line’. *CBC News – Manitoba*. March 3 2008. <https://www.cbc.ca/news/canada/manitoba/east-side-first-nations-want-own-hydro-transmission-line-1.722345>

¹⁸⁴ *Ibid*, 2008.

¹⁸⁵ Manitoba Clean Environment Commission. *Hydroelectric Development in Northern Manitoba: A History of the Development of the Churchill, Burntwood and Nelson Rivers, 1960–2015*. Winnipeg: 2016

¹⁸⁶ Manitoba Hydro. *A History of Electric Power in Manitoba*. 2010, pp. 64
https://www.hydro.mb.ca/corporate/history/history_of_electric_power_book.pdf 010

accreditation, negotiations were soon suspended as they became irrelevant to the government's future goals. The assembly of Bipole III does not necessarily require road access for construction, and the presence of Manitoba Hydro's activities would have advanced the opportunity for road access along the east side of Lake Winnipeg. According to John Ryan, "no road is necessary for the construction of a transmission line, other than a caterpillar trail to haul the cable and cement for tower pads [...] in all likelihood, the steel towers would be brought in by helicopter and fastened by guy wires to the cement pads."¹⁸⁷

While the initial east side route stayed far from indigenous settlements, the route was not finalized and therefore not subject to revision; as was done on numerous occasions with the current FPR. In 2009, the NDP government created the 'East Side Road Authority', a "provincial government organization, with a mandate to build a 156-kilometre road, which would link numerous remote communities along the east side of Lake Winnipeg."¹⁸⁸ Mired-in by controversy since its inception, the road authority has dissolved within the province's department of infrastructure.¹⁸⁹ This governmental action is unfortunate as numerous residents of indigenous communities, as well as those of private industry, recognize the importance of road access. Recently, Ernie Gilroy, of the East Side Road Authority noted that road access will "bring immediate and long-term benefits to the communities."¹⁹⁰ This claim is not disputed, and more

¹⁸⁷ Ryan, John. 'Fast Facts: Bi Pole III: Winnipeg Free Press and the Conservative campaign of misinformation.' Canadian Centre for Policy Alternatives: July 7 2011.

<https://www.policyalternatives.ca/publications/commentary/fast-facts-bi-pole-iii-winnipeg-free-press-and-conservative-campaign-misinfo#sthash.OrBHYvR6.dpuf>

¹⁸⁸ CBC News. 'East Side Road project paused by federal agency over flaws in plan.' *CBC News – Manitoba*: August 26 2016. Accessed March 23 2017. <http://www.cbc.ca/news/canada/manitoba/east-side-road-ceaa-1.3737292>

¹⁸⁹ Legislative Assembly of Manitoba. 'Status of Bills - Second Session, Forty-First Legislature, 2016-17.' <https://www.gov.mb.ca/legislature/business/billstatus.pdf>

¹⁹⁰ Ross, Ian. 'Help for isolated Ontario First Nation comes from Manitoba.' *Northern Ontario Business*: April 26 2016. Accessed March 23 2017. <https://www.northernontariobusiness.com/industry-news/construction/help-for-isolated-ontario-first-nation-comes-from-manitoba-371947>

importantly, while the obvious benefits are apparent, road access would greatly increase the prospects of much needed water treatment facilities.¹⁹¹

Aside from the political chicanery, the world's changing climate perpetuated by anthropogenic activity will further increase the need for road access, as Manitoba's winter road season continually gets shorter each year.¹⁹² According to the NDP's 'Climate Change and Green Economy Action Plan', "warmer temperatures will result in permafrost thawing, which will continue to cause northern roads, railways and other community infrastructure to buckle and deteriorate, all the while reducing the winter road season."¹⁹³ The plan argues that southern Manitoba's climate will mirror that of North Dakota in 2020, Nebraska by 2050, and north Texas by 2080.¹⁹⁴ Therefore, it is without question, such infrastructure would have been imminently advanced through the construction of an east side bipole. There is also a misconception that hydroelectricity must be produced by massive dams, requiring copious amounts of inputs for production and transmission, while at the same time damaging its surrounding ecology. Dan McDermott of the Sierra Club's Ontario Chapters argues that "the age of big dams is over." According to McDermott, hydro proponents "have their heads turned backwards attempting to mortgage the future to maintain the past."¹⁹⁵

Will Braun builds upon his claim, stating that electrical demand in Canada has seen

¹⁹¹ Bipole III Coalition. 'Manitoba Hydro: The wrong and long way around.' *Thompson Citizen*: April 6 2011. Accessed March 23 2017. <http://www.thompsoncitizen.net/opinion/letters/manitoba-hydro-the-wrong-and-long-way-around-1.1368510>

¹⁹² CBC News. 'Manitoba ice roads closing after short season'. *CBC News – Manitoba*: March 13 2012. Accessed March 27 2017. <http://www.cbc.ca/news/canada/manitoba/manitoba-ice-roads-closing-after-short-season-1.1205269>

¹⁹³ Government of Manitoba. 'Manitoba's Climate Change and Green Action Plan': December 2015: Accessed March 23 2017, pp. 5. <http://www.gov.mb.ca/sd/climate/pdf/mb-climate-change-green-economy-action-plan.pdf>

¹⁹⁴ *Ibid*, 2015. pp.4

¹⁹⁵ Braun, Will. 'Canada's coming \$50-billion hydro boom brings environmental perils, too.' *THIS*: September 7 2011. Accessed March 23 2017. <https://this.org/2011/09/07/hydro-boom/>

limited growth, while export demand to the United States has flattened. He suggests, if demand for electricity should rise, growth may be supported by achieving greater efficiency standards.¹⁹⁶ According to Larry Kusch, Braun is not incorrect in his assessment. A 2010 comparative analysis showed that Manitoba Hydro was near the bottom in relation to its North American counterparts in terms of energy related savings.¹⁹⁷ However, if the need for electrical load expansion in Manitoba should arise, we do not necessarily need to build production facilities in Manitoba's north.

In 2004, Lindsay Melvin of the University of Manitoba researched the feasibility of implementing small hydroelectric projects as an alternative energy source. She concluded that "small hydro is potentially viable in Manitoba and warrants a more detailed feasibility study."¹⁹⁸ Nevertheless, Melvin's analysis suggested that there is notable hydroelectric potential along the east side of Lake Winnipeg, especially on Berens River. Out of nearly sixty 'study locations' throughout Manitoba, Berens River amassed the greatest potential capacity.¹⁹⁹ In fact, if total productive capacity were harnessed, it would provide nearly the megawatt capacity of the recently completed Wuskwatim dam.²⁰⁰ Proximity to the capital region would potentially recoup those losses through distance and transmission load capacity. It should be noted that the east side route would have crossed the Berens River. However; road access to the community has been delayed until 2020.²⁰¹

During the early twenty-first century, the NDP government also argued that the east side

¹⁹⁶ *Ibid*, 2011.

¹⁹⁷ Kusch, Larry. 'Pallister Creating New Energy-Saving Crown Corporation.' *Winnipeg Free Press*: March 8 2017.

¹⁹⁸ Melvin, Lindsay M.K. *Small Hydro in Manitoba*. Department of Mechanical & Industrial Engineering: University of Manitoba, 2004. Abstract.

¹⁹⁹ *Ibid*, 2004. P. 84

²⁰⁰ Manitoba Hydro, 2017 - Wuskwatim Facts.

²⁰¹ Graham, Ian. 'All-weather road to Berens River will be complete within four years.' *Thompson Citizen*: January 14 2016. Accessed March 23 2017. <http://www.thompsoncitizen.net/news/nickel-belt/all-weather-road-to-berens-river-will-be-complete-within-four-years-1.2150965#sthash.yfNxBuql.dpuf>

route would heavily impact the habitat and migration patterns of Manitoba's woodland caribou. Laliberte claims that the impact of development on the woodland caribou would be equal in reference to both route options. In fact, according to Manitoba Conservation, the west side route passes through the Bog, Reed, and Wabowden caribou ranges, while the east side route would have only effected the Atikaki-Berens caribou range.²⁰² The Clean Environment Commission reported that the current western route traversed various woodland caribou ranges, and correspondingly, Manitoba Hydro took the appropriate measures of rerouting the final preferred route.²⁰³ However, as the final preferred route suggests, Bipole III continues to cross the three identified ranges. While the actions of Manitoba Hydro will have some impact on Manitoba's woodland caribou, according to Fiona Scurrah and Doug Schindler, the largest threat to the populations' subsistence is illegal poaching.²⁰⁴ Prior to the conceptualization of the modern incarnation of Bipole III, Beth Vogel argued that "if research proves that the west corridor would be harmful to the woodland caribou in their winter ranges than the east corridor would become a more desirable alternative."²⁰⁵ Therefore, a coordinated effort must be made by the Clean Environment Commission in conjunction with Manitoba Conservation for the future of woodland caribou in Manitoba however, this need include the participation of Manitoba Hydro.

Furthermore, the Clean Environment Commission also modulated the impact on

²⁰² Schindler, Doug W. 'Home Range and Core Area Determination, Habitat Use and Sensory Effects of All Weather Access on Boreal Woodland Caribou, *Rangifer Tarandus Caribou*, in Eastern Manitoba.' University of Winnipeg: August 2006. pp. 16

²⁰³ Manitoba Clean Environment Commission. 'Bipole III Transmission Project'. Government of Manitoba, 2013. pp. 53.
http://www.cecmanitoba.ca/resource/hearings/36/FINAL%20WEB%20Bipole%20III%20Transmission%20Project_WEB3.pdf

²⁰⁴ Scurrah, Fiona E. and Doug W. Schindler. 'Towards a Manitoba Hydro boreal woodland caribou strategy: Outcomes from Manitoba Hydro boreal woodland caribou workshop.' *Rangifer*, Special Issue No. 20, 2012. pp. 122

²⁰⁵ Vogel, Beth Elaine. *A regional assessment of the effects of alternative transmission corridors on outdoor recreation: Manitoba Hydro's proposed D.C. line east of Lake Winnipeg*. University of Manitoba: 1978, pp. 61

agricultural producers in southern Manitoba. This statement of claim needs further investigation and analysis. Manitoba's 2017 Climate Change and Green Action Plan argues that increased warming could "increase the growing season by 50 per cent, boosting agricultural productivity and the number of crops grown." According to the Final Preferred Route, Bipole III intrudes on some of Manitoba's most productive agro-climatic regions. This, in of itself, raises some serious questions. Aside from their physical presence, Bipole III will affect various critical factors involved in modern agricultural processes. From GPS interference, irrigation disruption, and pesticide/herbicide application, it is nearly impossible to account for monetary losses in production. Concerns were also raised in reference to the impact of stray voltages induced by Bipole III that will affect not only the landowners, but the welfare of their livestock. Additionally, Bipole III will increase the risk of collision between farm equipment and transmission towers. In comparison to the east side route, this issue would be almost nonexistent due to the fact the "66-metre-wide right-of-way would occupy less than 0.03 per cent (three ten-thousandths) of the projected heritage area."²⁰⁶ Recently, a farmer in Manitoba's Interlake region accidentally reversed his tractor into Bipole II, resulting in a two-day stoppage, and required the import of electricity from foreign sources.²⁰⁷ Therefore, in response to the security and reliability claim, the west side route poses greater challenges in this context. Comparable to the lack of monetary compensation experienced by indigenous communities in Manitoba's north, the historical record would suggest that the landowners in Manitoba's south will suffer similar undervalued neglect.

²⁰⁶ Open Letter. 'Engineers United on East Side'. *Winnipeg Free Press*: 8 December 2010.

<https://www.winnipegfreepress.com/opinion/analysis/engineers-united-on-east-side-111511504.html>

²⁰⁷ CBC News. 'Bipole II tower down for 2 days after being hit by farmer in tractor'. *CBC News – Manitoba*: February 24 2017. Accessed March 23 2017. <http://www.cbc.ca/news/canada/manitoba/manitoba-hydro-bipole-ii-tower-down-1.3999287>

By 2010, the debate over Bipole III became central to Manitoba's political arena. While the affairs of Manitoba Hydro have always retained a fundamental position within Manitoba's polity, it should be of no surprise that it burdens much governmental criticism that is inexorably linked to the governing party, and its predecessors. In 2011, the fortieth general election of Manitoba was held on October 4th. While pollsters, pundits, and analysts anticipated a close race between the NDP and the PCs, it maintained the status quo. In fact, the NDP gained one seat, producing the largest majority in the party's history, and at the time, the largest ever recorded in Manitoba's political history.²⁰⁸ While the campaign fought alongside traditional norms of health, education, and infrastructure, no issue divided the parties more than the proposed construction of Manitoba Hydro's Bipole III. The governing NDP advocated for the current west side route, while the PCs argued it should return to the initially proposed east side route. Interestingly, the Liberals, whose provincial voice is limited within Manitoba's polity, advocated that Bipole III should run underneath Lake Winnipeg. They argued that in terms of environmental, indigenous, and reliability concerns, the underwater bipole would be an optimal choice. However, Manitoba Hydro thereafter reviewed the prospects of a submarine or underground cable that extended underneath Lake Winnipeg's length, and concluded that current technological standards were insufficient for Bipole III. Nevertheless, Manitoba Hydro noted that if a fourth bipole should be needed, the concept will be further investigated, especially with advancing technological capabilities.²⁰⁹ Therefore, as the evidence suggests, Bipole III's original east side route proposed in the 1990s, under all circumstantial considerations, was the practical solution. However, as this

²⁰⁸ Elections Manitoba. 'Summary of 2011 Election Results.' October 4 2011: Accessed March 1 2017.
http://www.electionsmanitoba.ca/downloads/PDF_Summary_GE2011.pdf

²⁰⁹ Manitoba Hydro. 'Potential Use of Submarine or Underground Cables for Long Distance Electricity Transmission in Manitoba.' A Post Bipole III Concepts Review: March 17 2011.
https://www.hydro.mb.ca/corporate/research_and_development/post_bipoleIII_concepts_review.pdf

thesis attests the consideration for the east side route among others was clearly negated by political interference.

As per the recommendations of the Boston Consulting review, the Pallister PCs decided that Bipole III and Keeyask will move forward. As of 2019, the most recent estimate provided by Manitoba Hydro suggests the Keeyask project will total nearly nine billion dollars, and its in-service network date has been delayed by two years.²¹⁰ Additionally, the *Pimachiowin Aki* Corporation had its submission referred by the United Nations World Heritage Committee for further review. This revision was caused by Pikangikum First Nation withdrawing its support for the project.²¹¹ However, the corporation has since rectified the concerns and subsequently received heritage designation.²¹²

The success of Bipole III will be determined by the future actions of Manitoba Hydro. However, one thing is for certain. “For the next 100 years, future generations will gaze at the towers and ponder how it happened that reckless politicians built this crazy west-side line instead of the vastly superior east-side line, as proposed by experienced, competent professionals within Manitoba Hydro.”²¹³ The dichotomy between Manitoba’s polity and Manitoba Hydro is one of crucial importance, and as the management of Bipole III suggests, this relationship must be reviewed for the future prosperity of the utility, and the province of Manitoba. The government

²¹⁰ Kavanagh, Sean. ‘Keeyask dam cost estimate balloons by \$2.2B’. *CBC News – Manitoba*: March 7 2017. Accessed March 23 2017. <http://www.cbc.ca/news/canada/manitoba/manitoba-hydro-keeyask-dam-cost-electricity-pc-government-1.4013521>

²¹¹ CBC News. ‘UNESCO bid for Manitoba-Ontario boreal forest suffers major blow’. *CBC News – Manitoba*: July 17 2016. Accessed March 23 2017. <http://www.cbc.ca/news/canada/manitoba/unesco-bid-hits-setback-1.3682811>

²¹² Robertson, Dylan. ‘Manitoba/Ontario forest designated World Heritage Site’. *Winnipeg Free Press*: July 1 2018. <https://www.winnipegfreepress.com/local/manitobaontario-forest-designated-world-heritage-site-487057261.html>

²¹³ Tishinski, Will. ‘Bipole III: \$4-billion political chicanery.’ *Winnipeg Free Press*: November 7 2012. Accessed March 1 2017.

of Manitoba has initiated a review of the Keeyask and Bipole projects; the review's findings will be due to Manitoba's Minister of Crown Services year end 2019.²¹⁴

²¹⁴ Government of Manitoba. 'Manitoba Launches Review of Manitoba Hydro Development of the Keeyask, Bipole III Projects'. October 18 2018. <https://news.gov.mb.ca/news/index.html?item=44695&posted=2018-10-18>

CHAPTER 8: POLITICAL CONTEXT AND INTERMEDIATE ACTIONS

With the Progressive Conservatives polling ahead of the New Democrats since December 2012²¹⁵, it became apparent the PCs were going to be victorious in Manitoba's forty-first general election however, the margin of victory was still unclear at the time of the election's commencement. What transpired was one of the largest electoral defeats in the province's history.²¹⁶ Therefore, it should be of no surprise, many Manitobans accustomed to NDP governance shared concerns for the future of Manitoba's crown corporations. Most notably, the relationship between the government and its crown corporations. These concerns are derived from the experience of privatization in the 1990s, particularly Manitoba Telecom Services, after repeated assurances the PCs would take no such action. Within a month of forming government, the PCs claimed that these concerns were unwarranted, stating that all crown corporations would remain safe.²¹⁷ These assurances were intended to be figurative, not literal. Therefore, is there a potential for a repeat of history? Historical analysis suggests it is possible however, only in the event the PCs secured a second mandate to govern. While the PCs approach to criticizing monetary policy was successful, particularly the role of debt and deficits, its mainstay for previous defeats was directly and indirectly related to Manitoba's public entities. The NDP consistently entrenched the notion that privatization of public utilities is a negative connotation, especially with 'hallway medicine' and MTS in the late 1990s.²¹⁸

²¹⁵ Probe Research Inc. 'NDP Continues to Slip in Manitoba – April 2013 Manitoba Party Standings.'
<http://probe-research.com/130418a%20Apr%202013%20Party%20Standings.pdf>

²¹⁶ Grenier, Eric. 'Brian Pallister's Manitoba PCs win record-breaking victory.' *CBC News – Manitoba*. April 20, 2016.
<http://www.cbc.ca/news/canada/manitoba/grenier-manitoba-results-analysis-1.3543307>

²¹⁷ The Canadian Press. 'Manitoba premier stresses non-privatization for Manitoba Hydro.' *Toronto Star* – May 20, 2016. <https://www.thestar.com/news/canada/2016/05/20/manitoba-premier-stresses-non-privatization-for-manitoba-hydro.html>

²¹⁸ My Toba. 'NDP: Pallister's cuts are regressive'. *Mytoba.ca* – April 18, 2016.
<http://mytoba.ca/featured/ndp-pallisters-cuts-regressive/>

Therefore, if history is indicative of what is on the horizon, expect the PCs to implement soft reforms in its first term in office. For example, when the PCs assumed the right to govern in 1988, they inherited recent education reforms by the exiting NDP. Kelly Saunders argues that hence, “while the Conservatives knew that we somehow had to start down that road, they recognized that they could not rush too quickly into reforms that Manitobans were not ready for, and that could potentially cost them electoral support.”²¹⁹ Suspect a similar path for the Pallister government in reference to Manitoba Hydro’s concerns. It is the second term, assuming reelection (historic probability), that Manitobans should be concerned for the future of their public entities. After the PCs won a majority government in 1995, they soon implemented some major, and very unpopular reforms. Saunders notes, “proposed legislative changes included the privatization of MTS (which 75 percent of Manitobans had opposed); new governance structures for health care and postsecondary education (with the introduction of Regional Health Authorities and the creation of the Council on Post-Secondary Education); as well as various amendments to the province’s labour laws that would make it harder for unions to organize, spend members’ dues, and hold votes on contract offers.”²²⁰

Upon this historical record, one would observe that Manitoba Hydro’s future is safe in public hands, for now. Therefore, what is going to happen in the immediate future? Aside from transferring fiscal blunders to employees and ratepayers, Graham Lane argues that the provincial government should inject seven billion dollars to maintain Manitoba’s electrical advantage and/or low commercial/rates.²²¹ In addition, this sentiment was echoed by the President and CEO

²¹⁹ Saunders, Kelly L. ‘Manitoba’s Progressive Conservative Party: A “Great Renewal” or Continued Disarray?’ Brandon University, November 2008. pp. 3

²²⁰ *Ibid*, 2008. pp. 4

²²¹ Lane, Graham. ‘Tories need to keep Manitoba Advantage.’ *Winnipeg Sun* – September 29, 2016. <http://www.winnipegsun.com/2016/09/29/tories-need-to-keep-manitoba-advantage>

of Manitoba's Business Council, Don Leitch, urging the province to "take the steps necessary to ensure Hydro is placed on a solid, independent financial footing."²²² Leitch noted that "while the government would have to borrow the money to prop up Hydro, the cash infusion would stabilize the corporation's finances and curb the pressure to boost consumer rates exorbitantly, adding that the province can borrow money at a more favourable interest rate than Manitoba Hydro."²²³ This process can be accomplished through Section 31 of *Manitoba Hydro Act*, stating the legislative parameters of 'temporary advances by government'.²²⁴

According to Lane, a similar situation occurred when Centra Gas, a division of Manitoba Hydro that supplies southern Manitoba with natural gas, whereby the subsidiary wagered on future speculative natural gas prices, and wound up being unsuccessful. Centra Gas initiated a request for a rate increase and was subsequently denied by the Public Utilities Board of Manitoba (PUB). The PUB of Manitoba "regulates the rates charged by Manitoba Hydro, Manitoba Public Insurance, gas and propane utilities (Centra Gas and Stittco) and all water and sewer utilities outside Winnipeg."²²⁵ In addition, the PUB is "charged with ensuring the financial health of a crown corporation seeking a general rate application is balanced with the best interests of consumers."²²⁶ Lane notes that the PUB should proceed in the same manner with future requests by Manitoba Hydro. He argues that the government as the guarantor and shareholder could satisfy bond holders through the massive equity injection.²²⁷ He accounts that

²²² Kusch, Larry. 'Business council urges PCs to bail out Hydro: Corporation's credit rating could take a hit if no steps taken, it warns.' *Winnipeg Free Press* – March 11, 2017. Accessed May 10, 2017.

²²³ *Ibid*, 2017.

²²⁴ *Manitoba Hydro Act*, Section 31.

²²⁵ Government of Manitoba. 'Public Utilities Board What We Do'. <http://www.pub.gov.mb.ca/>

²²⁶ Government of Manitoba. 'Manitoba gives PUB Authority to Review Hydro's Capital Program when setting rates'. April 18, 2017: Accessed May 10, 2017. <http://news.gov.mb.ca/news/index.html?archive=&item=41331>

²²⁷ Lane, Graham. 'Tories need to keep Manitoba Advantage.' *Winnipeg Sun* – September 29, 2016. <http://www.winnipegnews.com/2016/09/29/tories-need-to-keep-manitoba-advantage>.

the government would obtain repayment within fifteen years, as the government absorbs four hundred million annually in numerous taxes and fees placed.²²⁸ “With that burden taken off Hydro, rate increases could be held to no more than the inflation rate. Manitoba’s advantage — low electricity prices — could continue, benefiting particularly low-income households, rural and northern areas heated by electricity, industry, and the provincial economy [...] If ratepayers pick up the tab, poor people will be hurt the most, but also all those heating electrically, commercial firms and industry. If rates rise sharply, it would be a huge disincentive to invest in our province with the Manitoba advantage gone”²²⁹

Manitoba’s credit rating will also continue to decrease in the face of growing provincial debt, attributed by the current state of Manitoba Hydro. In July 2016, S&P Global Ratings downgraded Manitoba from a AA, to AA- in response to sustained debt, noting that the “downgrade reflects the expectation that Manitoba will have a sustained debt burden for several years higher than that of its peers.”²³⁰ In 2017, Manitoba was further downgraded.²³¹ This growing debt which, is inexorably linked to provincial actions, is conveyed through various pieces of the PCs most recent legislation. For example, Bill 21 -*The Fiscal Responsibility and Taxpayer Protection Act* outlines targets that seek the prospects of achieving numerous austerity measures for the province. However, this act which sets accountability targets for the government, is considered void under subsection six that states; “Manitoba Hydro's net income

²²⁸ Department of Finance. ‘Government Deficits and Debts.’ *Office of the Auditor General of Manitoba*. March 2014 – pp. 101. <http://www.oag.mb.ca/wp-content/uploads/2014/03/Chapter-3-Govt-Deficits-and-Debt-Web.pdf>

²²⁹ *Ibid*, 2016.

²³⁰ The Canadian Press. ‘Manitoba's provincial credit rating downgraded by S&P Global Ratings.’ *CBC News – Manitoba*. July 14, 2016. <http://www.cbc.ca/news/canada/manitoba/manitoba-provincial-credit-rating-downgraded-s-p-1.3680005>

²³¹ Kives, Bartley. ‘Manitoba credit rating downgraded for 2nd time in a year’ *CBC News – Manitoba*: 24 July 2017. Accessed 22 November 2017. <http://www.cbc.ca/news/canada/manitoba/manitoba-credit-rating-downgrade-1.4219032>

or loss is not included in determining the surplus or deficit for a fiscal year for the purposes of this Act.”²³²

Historically, sustained debt is considered unacceptable by Manitoba’s PCs. In the 1990s the PCs sustained economic growth that was higher than the national average, while also supporting one of the lowest unemployment rates in the country, despite “recessionary pressures and cuts in federal transfer payments implemented by the Chretien government [...] The PCs had also balanced the books for five years in a row and through eleven consecutive budgets had managed a freeze on major taxes; a claim that no other government in Canada or North America could make at the time. The PCs were also already ahead of their ambitious thirty-year debt repayment plan.”²³³ Therefore, expect numerous actions to be commenced immediately in terms of addressing Manitoba’s fiscal situation, particularly in the response to a further credit rating downgrade. With Sanford Riley (Chair) and Kevin Shepherd (CEO) decreeing that the construction on Bipole III and Keeyask will move forward, expect to witness internal movement (within Manitoba Hydro), and external marketing (Manitoba government) to grow Manitoba Hydro’s export potential, while addressing domestic concerns. In September 2016, Shepherd revealed his plans to cut nearly fifteen percent of Manitoba Hydro’s workforce. He notes there is “opportunity for staff reductions without layoffs, with around 900 employees on staff who could retire. Hydro has already eliminated about 400 full-time positions over the last three years, largely through retirements and managing vacant positions.”²³⁴ However, cuts will continue across government suggested Pallister and they will “continue in other sectors as well, including

²³² Government of Manitoba. *The Fiscal Responsibility and Taxpayer Protection Act*. March 13, 2017: Accessed May 16, 2017. <http://web2.gov.mb.ca/bills/41-2/b021e.php>

²³³ Saunders, Kelly L. ‘Manitoba’s Progressive Conservative Party: A “Great Renewal” or Continued Disarray?’ Brandon University, November 2008. pp.4

²³⁴ CBC News. ‘Manitoba Hydro to hike electricity rates, cut staff.’ *CBC News – Manitoba*, September 28 2016. <http://www.cbc.ca/news/canada/manitoba/manitoba-hydro-rate-hike-staff-cuts-1.3783321>

Crowns.²³⁵ These cuts will also define the future direction of all Manitoba's crowns.

Within a month of forming government, the PCs, revamped board positions within Manitoba's top crowns, such as Manitoba Hydro, Manitoba Public Insurance, and Manitoba Liquor and Lotteries.²³⁶ A common thread between these appointments are individuals who have overwhelmingly represented sectors of business, banking and financial services.²³⁷ Therefore, one would expect numerous market-oriented reforms within Manitoba's crowns. Not surprisingly however, one of the first orders of business, was the dissolution of the Crown Corporations Council "an organization that supports Manitoba Crown Corporations and advises government on Crown corporation-related matters [...] The PCs say doing away with the council will increase efficiency and transparency."²³⁸ However, how this will be achieved is unknown, considering the council was a 'check and balance' on Manitoba crowns in terms of oversight and strategic planning. Nevertheless, it is clear by over-viewing *The Crown Corporations Public Review and Accountability Act* they were not meeting their objectives and seen as increasingly irrelevant in terms of 'value-added' government expenditure.²³⁹

The next step for the Manitoba government and Manitoba Hydro is to find markets for Manitoba Hydro's 'bleeding' excess capacity, essentially generating a return on their completed (Wuskwatim) and on-going investments (Bipole III and Keeyask). According to David Hultin,

²³⁵ CBC News. 'Manitoba Hydro Faces Tough Choices to Battle Massive Debt.' *CBC News – Manitoba*. October 18, 2016.

<http://www.cbc.ca/news/canada/manitoba/manitoba-hydro-bipole-transmission-line-1.3811316>

²³⁶ CBC News. 'Board appointments to Manitoba Crown corporations include Tory donors.' *CBC News – Manitoba*, May 13 2016. <http://www.cbc.ca/news/canada/manitoba/manitoba-liquor-lotteries-board-appointments-1.3581752>

²³⁷ Martin, Nick and Larry Kusch. *New Manitoba Hydro board appointed*. Winnipeg Free Press, May 4 2016. <http://www.winnipegfreepress.com/business/new-manitoba-hydro-board-appointed-378182451.html>

²³⁸ Glowacki, Laura. 'PCs promise independent children's advocate, reduced red tape in throne speech.' *CBC News – Manitoba*, November 21 2016. <http://www.cbc.ca/news/canada/manitoba/throne-speech-2016-november-1.3860656>

²³⁹ Government of Manitoba. *The Crown Corporations Public Review and Accountability Act*. (Assented December 20, 1988). <http://web2.gov.mb.ca/laws/statutes/ccsm/c336e.php>

Wuskwatim was “expected to be designated a merchant dam, which means the electricity is produced for export only, though could conceivably meet electrical demands in Manitoba should the need arise.”²⁴⁰ Graham Lane notes that Wuskwatim has been a failure since its inception, stating that its objective has not materialized.²⁴¹ He argues that the “all-in costs per kilowatt hour of produced and transmitted power from Wuskwatim is in the range of 13 cents. Compared to the average price of [current] exported power, a bit more than four cents. Most Manitobans pay eight cents.”²⁴² Therefore, to lower the ‘all-in’ cost, and ensure the profitability of the dam, exports need to increase at exponential rates. In January 2016, Manitoba Hydro signed a 100 MW deal with SaskPower that will commence in 2020, which will require electricity generated by Keeyask, and dependent on a new transmission line linking the provinces between Birtle, Manitoba and Tantallon, Saskatchewan.²⁴³ A twenty-five megawatt transmission contract between Manitoba Hydro and SaskPower is currently in effect in terms of existing interprovincial connections. This contract is signed to provide twenty-five megawatts between November 2015 and May 2022.²⁴⁴ In September 2013, the province of Saskatchewan and the province of Manitoba signed a memorandum of understanding to allow up to five hundred megawatts of electricity to be purchased after 2020.²⁴⁵

Manitoba also signed a memorandum of understanding with the province of Alberta in

²⁴⁰ Hultin, David A. *Building New Relations: Nisichawayasihk Cree Nation, Manitoba Hydro, and the Proposed Wuskwatim Project*. Department of Native Studies: University of Manitoba, 2005. pp. 26

²⁴¹ Lane, Graham. ‘Consumers subsidize a flawed deal. Hydro’s dam shame exposed by Wuskwatim project.’ *Winnipeg Sun* – May 21 2015. <http://www.winnipegsun.com/2015/05/21/consumers-subsidize-a-flawed-deal>

²⁴² *Ibid*, 2015.

²⁴³ Manitoba Hydro. ‘Power sale arrangement with SaskPower.’ January 29 2016. https://www.hydro.mb.ca/corporate/electricity_exports/saskpower.shtml

²⁴⁴ Manitoba Hydro. ‘Manitoba Hydro Finalizes 25-Megawatt Power Sale with SaskPower.’ July 22 2014. https://www.hydro.mb.ca/corporate/electricity_exports/saskpower.shtml

²⁴⁵ Government of Manitoba. ‘Manitoba, Saskatchewan Announce \$100-Million Power Sale.’ November 18 2013. <http://news.gov.mb.ca/news/index.html?archive=week&item=19584>

early 2016, that will “further co-operation on their shared goals of greenhouse-gas emission reductions, innovation, energy efficiency and renewable energy development including hydroelectricity.”²⁴⁶ Recently, the government of Alberta initiated a 2030 plan, calling for five thousand megawatts of new generation to replace coal-fired power plants. However, it must do so only with Alberta-based companies.²⁴⁷ While creating infrastructure for the interprovincial transfer of hydroelectricity is a potential future endeavor by both provinces, the memorandum may also have been perceived as a vote of confidence in reference to the now terminated Energy East pipeline.²⁴⁸ This infrastructure was spearheaded by Calgary-based TransCanada Corp, who was seeking approval by the federal government as well as many provincial governments (including Manitoba) to convert existing natural gas pipelines; including constructing new sections, to allow for the export of Alberta’s crude, to markets served by Canada’s east coast. The pipeline would have connected Hardisty, Alberta with Saint John, New Brunswick. This pipeline would require a substantial amount of reliable and secure electricity which Manitoba Hydro could provide, for the operation of its pumps. In fact, TransCanada Corp and Enbridge Pipelines Incorporated, both Alberta based companies, are one of Manitoba Hydro’s top industrial consumers.²⁴⁹ It is also worth noting that Sanford Riley, chair of Manitoba Hydro, is the Managing Director of Richardson Capital Group, a subsidiary of the Richardson Financial

²⁴⁶ Government of Alberta. ‘Alberta and Manitoba sign MOU on shared energy and climate change priorities: Selinger, Notley.’ January 8, 2016: Accessed May 10, 2017.

<https://www.alberta.ca/release.cfm?xID=390705C45ADB9-D76C-6E1B-9EC6271FFF650EF6>

²⁴⁷ Braun, Will. ‘Manitoba Hydro needs to ignore the past and become an innovator.’ *Winnipeg Free Press*: October 26, 2016. Accessed May 16, 2017.

²⁴⁸ TransCanada Corporation. ‘TransCanada Announces Termination of Energy East Pipeline and Eastern Mainline Projects’. October 5 2017. Accessed January 5 2018.

<https://www.transcanada.com/en/announcements/2017-10-05-transcanada-announces-termination-of-energy-east-pipeline-and-eastern-mainline-projects/>

²⁴⁹ Lane, Graham. ‘Consumers subsidize a flawed deal. Hydro’s dam shame exposed by Wuskawatim project.’ *Winnipeg Sun* – May 21 2015. <http://www.winnipegssun.com/2015/05/21/consumers-subsidize-a-flawed-deal>

Group Limited who, recently expanded its oil and gas operations by increasing its production capacity by thirty-three percent in 2015.²⁵⁰ Therefore, Riley has a vested interest in the success of both operations.

Rhetoric pertaining to the construction of an east-west transmission grid, connecting various interprovincial utilities, has always fallen short in historical terms and has been impacted by various factors such as the energy prices, cost and subsequently political will. Currently, interprovincial electrical exports account for only seven percent of Manitoba Hydro's total export capacity, while the majority (ninety-three percent) is sold to firms in the United States. These connections remain critical for the viability and increased monetary returns on projects such as Wuskwatim and Keeyask. However, Manitoba Hydro must not solely rely on these transactions as leverage for the future prosperity of the utility. Contemporary research from the University of Texas – Austin (Energy Institute) argues that with new and innovative electrical technologies, combined with post-2008 natural gas prices, the most cost-effective means of electrical production in the United States is generation by-way of natural gas, wind, or nuclear.²⁵¹ Therefore, it is essential that Manitoba Hydro maintains these vital links, but also promotes creative and innovative solutions in terms of encouraging advanced domestic technologies. The evidence from the United States also supports this assertion.

Recently, the state of Minnesota put fourth its 2025 energy action plan which sets an aggressive target to have Minnesota seek alternatives to Manitoba's hydroelectric imports with

²⁵⁰ Skerrit, Jen.' Winnipeg's Richardsons betting on oil rebound'. *Bloomberg* – January 5, 2015. Accessed May 10, 2017. <https://www.bloomberg.com/news/articles/2015-01-04/canada-s-richest-grain-family-betting-on-rebound-in-oil>

²⁵¹ Energy Institute. 'New U.S. Power Costs: by County, with Environmental Externalities.' University of Texas – Austin, July 2016. http://energy.utexas.edu/files/2016/09/UTAustin_FCe_LCOE_2016-A.pdf

in-state renewables.²⁵² However, this target should account for reducing Minnesota's use of non-renewable electrical sources, rather than abandoning Manitoba Hydro. Currently, Minnesota's electricity is produced using seventy-one percent of non-renewable energy such as petroleum, coal, and natural gas.²⁵³ Therefore, one could conclude current contracts with Manitoba Hydro will remain static. In fact, Minnesota Power and Manitoba Hydro signed a fifteen year, two hundred and fifty megawatt deal in 2011 that will commence in 2020, requiring the construction of new five-hundred kilovolt transmission line serving northern Minnesota and the MISO network.²⁵⁴ Additionally, Manitoba Hydro also signed numerous contracts with the Wisconsin Public Service. It is currently providing the utility with over a hundred megawatts of electricity, with the option of expanding to three hundred megawatts once Keyask and the new transmission lines are complete. Manitoba Hydro is at a crossroads in its history whereby, it is presented with an opportunity to harness and promote various creative and innovative technologies for the future benefit of Manitobans. It must address its immediate concerns, while also fostering an environment that allows for an increase in diversified electrical technologies, via production and consumption. In the event Manitoba Hydro should choose to remain static in an era of great electrical transformation, the utility, the province, and its citizens will cease its once competitive economic advantage and will further permeate an existing crisis.

²⁵² Doig, Stephen, and Mark Dyson, Christa Owens Michelet. 'Minnesota's 2025 Energy Action Plan'. *Rocky Mountain Institute*: August 2016. pp. 8, Accessed May 16, 2017. <http://mn.gov/commerce-stat/pdfs/mn-e2025-finalreport.pdf>

²⁵³ *Ibid*, 2016, pp. 18

²⁵⁴ Manitoba Hydro. 'Power Purchase Agreement with Minnesota Power'. Accessed May 16, 2017. https://www.hydro.mb.ca/corporate/electricity_exports/minnesota.shtml

CHAPTER 9: POLICY CONSIDERATIONS

As the analysis suggests, the actions and inactions of Manitoba Hydro directly and indirectly envelop Manitoba's polity. Based on the evidence and in accordance with contemporary research and data, this thesis recommends the following policies which Manitoba Hydro should put forth for immediate implementation and/or future consideration.

1. **Manitoba Hydro must remain a crown corporation.**

Under *The Manitoba Hydro Act* the crown corporation is identified to provide for "the continuance of a supply of power adequate for the needs of the province, and to engage in and to promote economy and efficiency in the development, generation, transmission, distribution, supply and end-use of power and, in addition, are

(a) to provide and market products, services and expertise related to the development, generation, transmission, distribution, supply and end-use of power, within and outside the province; and

(b) to market and supply power to persons outside the province on terms and conditions acceptable to the board."²⁵⁵

In the context of these directives, Manitoba Hydro is achieving its purpose as outlined by *The Manitoba Hydro Act*. More importantly, it has provided an extensive return on investment for taxpayers, in addition to lower rates for residential and commercial rate payers. In comparison to other jurisdictions, lower residential rates act as an indirect tax subsidy. For example, Manitoba Hydro charges 8.71 cents per kWh for residential users. In Alberta, while they have lower

²⁵⁵ Government of Manitoba. *The Manitoba Hydro Act*. Accessed January 3 2018

provincial taxes, residential electricity rates are pegged at an average of 10.34 cents per kWh.²⁵⁶ Commercially, Manitoba Hydro's 'large-user' rates offer a competitive advantage for Manitoba's businesses. According to Hydro-Quebec's analysis of electricity rates for North American industrial users in 2017, Manitoba offers the most inexpensive electricity in North America (5.08 cents per kWh).²⁵⁷ Likewise, Manitoba Hydro's exported power also directly subsidizes domestic rates. In addition to internal analyses, external comparisons of privatization also suffice in reference to defending the historical value Manitoba Hydro brings to the province of Manitoba now, and in the future.

2. Immediate Monetary Advance from the province of Manitoba.

According to Manitoba Hydro's most recent annual report, the first and most important strategic priority is "restoring fiscal sustainability."²⁵⁸ This can be achieved through the assistance and leadership of the provincial government. Under section 31 of *The Manitoba Hydro Act*, a clause entitled 'temporary cash advance' would allow the province of Manitoba to inject monetary assistance in relation to stabilizing the finances of Manitoba Hydro. This would reduce the need for multiple rate increases which, would negatively impact the Manitoba advantage. Additionally, the province of Manitoba assesses annual water rental and debt loan guarantee fees, among numerous other taxes. As a consequence, these fees should be temporarily suspended until further financial stability is achieved. According to its most recent annual report,

²⁵⁶ Hydro-Quebec. 'Comparison of Electricity Prices in Major North American Cities'. April 1 2017. Accessed January 3 2018. pp. 4 <http://www.hydroquebec.com/publications/en/docs/comparaison-electricity-prices/comparison-electricity-prices-2017.pdf>

²⁵⁷ *Ibid*, 2017. pp. 5

²⁵⁸ *Ibid*, 2017. pp.7

the province of Manitoba assessed three hundred and eighty million in fees.²⁵⁹ Considering Manitoba Hydro's consolidated net income was seventy-one million in 2017, suspending these fees in addition to limiting taxation requirements would have a substantial effect on the annual consolidated net income.²⁶⁰

3. Improve Benefit-Sharing/Social Licence Model

This contemporary approach to development established a new precedent in terms of relations between Manitoba Hydro, the province of Manitoba, the federal government and Manitoba's northern indigenous peoples. While imperfections exist, the model is theorized based on four key arguments including the 'social licence' concept, environmental planning/assessment, profitability/shared equity and economic integration via labour opportunities with respect to skills and training. Firstly, the social licence model of obtaining "free, prior and informed consent of the local communities and stakeholders"²⁶¹ permits communities and/or affected stakeholders to decline development. Secondly, if development is permitted, the communities and/or affected stakeholders work with the utility and the province to provide input regarding planning and environmental assessment which includes traditional indigenous knowledge. The community and/or affected stakeholder also has the option to become a monetary partner in the development and as a result should be appraised of all relevant progress related to the project. The partnership also includes provisions for indigenous employment, training and contract opportunities. However, imperfections such as

²⁵⁹ Hydro-Quebec. 'Comparison of Electricity Prices in Major North American Cities'. April 1 2017. Accessed January 3 2018. pp. 35 <http://www.hydroquebec.com/publications/en/docs/comparaison-electricity-prices/comparison-electricity-prices-2017.pdf>017.

²⁶⁰ *Ibid*, 2017. pp. 29

²⁶¹ Dipple, Joseph. 'Implications of hydroelectric partnerships in northern Manitoba: do partnership agreements provide social licence?' Faculty of Graduate Studies: University of Manitoba, 2015015. pp. 31

the profitability/share equity arrangement need to be reformed, and treaty rights need to be reaffirmed and recognized. Manitoba's indigenous communities have been clear; in addition to monetary compensation, those affected by hydro development seek greater economic labour opportunities for their communities as well as the respect, inclusion and recognition of their treaty rights. The implementation of benefit-sharing and/or social licence model presents numerous opportunities to achieve these goals, however it must be improved.²⁶²

4. Privatize Centra Gas

According to the 2017 Manitoba Climate Green Plan, "Manitoba consumes around 1.6 billion cubic metres of natural gas annually which, translates to approximately 3,000 kilotonnes of carbon dioxide."²⁶³ This distribution is achieved by Manitoba Hydro's subsidiary – Centra Gas, which was purchased in 1999 from a private distribution firm. In 2017, the natural gas division of Manitoba Hydro accounted for 14.7% of the utility's total revenue.²⁶⁴ However, in the last decade, natural gas revenues have continued to decline as numerous efficiencies have been achieved in addition to climatic warming. Therefore, under Manitoba Hydro's current financial environment, privatization of Centra Gas would be beneficial for Manitoba Hydro, the province of Manitoba, and its rate payers. It is possible that further support rural economic development, Manitoba Hydro expand its natural gas connects to support and expand rural business opportunities. Given the current situation however, this is unlikely. An analysis completed by Ian Madsen of the Frontier Centre of Public Policy, suggests the subsidiary to be

²⁶²Dipple, Joseph. 'Implications of hydroelectric partnerships in northern Manitoba: do partnership agreements provide social licence?' Faculty of Graduate Studies: University of Manitoba, 2015.

²⁶³ Government of Manitoba. 'A Made-in-Manitoba Climate and Green Plan', 2017. pp. 11

²⁶⁴ *Ibid*, 2017. pp. 100

valued between \$700 and \$1,667 million dollars.²⁶⁵ This assessment analyzed two factors; “its intrinsic value as a cash-generating enterprise, and its standard market value in comparison with peer companies.”²⁶⁶ Consequently, the impacts of privatization could lead to varying results. Firstly, Manitoba Hydro could stabilize their growing debt burden. In doing so, there would be less pressure to increase rates at an accelerated pace therefore, rates would be momentarily stabilized. Subsequently, because of privatization, the affordability of natural gas would become less attractive, especially in the long-term which, will result in attracting greater applications of electrical inputs and therefore, generate domestic demand for hydroelectric alternatives. Secondly, in the event Centra Gas was privatized, the revenue generated from the transaction could be applied to various investments that target greater electrical demand, increased efficiencies, while evidently reducing our environmental impact.

For example, the province of Ontario implemented the Electric Vehicle Incentive Program (EVIP) in 2010.²⁶⁷ The program supports “the adoption of electric vehicles (EVs), rewards early adopters, and helps to create market demand for new technology in Ontario by providing incentives for the purchase and/or lease of eligible EVs.”²⁶⁸ The central goal indicated by the province of Ontario is to increase affordability and limit the environmental impacts of transportation emissions. This can also be applied in Manitoba however, in doing so, not only would the province share these goals, Manitoba Hydro would envelop a greater demand for electricity, and subsequently profitability. However, the province of Manitoba would need to

²⁶⁵ Madsen, Ian. ‘A Valuation of the Centra Gas Division of Manitoba Hydro’. Frontier Centre for Public Policy, June 8 2017. pp. 7 . Accessed January 8 2018. https://fcpp.org/wp-content/uploads/FC17007_CentraGas_JN0517_F3.pdf

²⁶⁶ *Ibid*, 2017. pp. 4

²⁶⁷ Government of Ontario. ‘Electric Vehicle Incentive Program’. January 1 2010. Accessed January 8 2018. <http://www.mto.gov.on.ca/english/vehicles/electric/electric-vehicle-incentive-program.shtml>

²⁶⁸ *Ibid*, 2010.

engage with various stakeholders such as industry, as well as our federal and municipal counterparts to implement infrastructure which, will promote the electrification of transportation networks.

5. Utilize the *Efficiency Manitoba Act*

In 2017, the province of Manitoba created *Efficiency Manitoba*, a new program that replaces Manitoba Hydro's *PowerSmart* program. Under recommendation of the Public Utilities Board (PUB) and consulting firm Dunsky Energy in 2014, the province of Manitoba passed legislation effectively mandating *Efficiency Manitoba* "achieve electrical energy savings of 1.5% annually and natural gas savings of 0.75% annually in Manitoba during the first 15 years of its operations." Therefore, while Manitoba Hydro seeks to find markets for their excess capacity, *Efficiency Manitoba* establishes goals for long-term savings that will benefit Manitoba Hydro and its rate payers. However, this thesis attests Manitoba Hydro address *Efficiency Manitoba's* mandate by fostering and actively supporting a 'net metering program', such as those offered in Ontario, New Brunswick, and Saskatchewan. A 'net metering program' allows the utility to assist in construction of various renewable technologies such wind, solar, or biomass. In doing so, the rate payer uses the electricity produced however, if the technology produces more than what is needed for consumption, the rate payer has the option of selling excess electricity to the power grid and therefore, the utility would offer a rebate or credit.²⁶⁹ This would encourage reinvest and support further advances in our electrical technologies. Additionally, such a program would help mitigate risk associated with droughts whereby, the electricity would be limited to means other the ebb and flow of water throughout Manitoba Hydro's network of dams.

²⁶⁹ Sask Power. 'Net Metering Program'. Accessed January 8 2018. <http://www.saskpower.com/efficiency-programs-and-tips/generate-your-own-power/self-generation-programs/net-metering-program/>

Furthermore, in the event electrical demand outstrips production in Manitoba, large dams – such as those in Manitoba’s north may be unnecessary. Advanced electrical technologies in conjunction with smaller hydroelectric potential may prove beneficial for future production, especially in Manitoba’s eastern region. However, efficiency targets should be prioritized above all other sources in the event electrical demand outweighs supply.

6. Increase Domestic Demand/East-West Grid

With static export markets and domestic efficiencies supporting net gains of internal growth, Manitoba Hydro must envision a future that supports increased domestic electrical demand. While existing export markets should continue to remain a focus, they should not envelop Manitoba Hydro’s priorities given the advancements in electrical technologies and policy indications from the United States. Hypothetically, if Manitoba Hydro were to sell Centra Gas, and combine those revenues with general revenues under the Manitoba Climate & Green Plan²⁷⁰; there would be a model to further advance and support various electrification programs through interest-free loans. For example, the province of Manitoba could institute an ‘EVIP’ program similar to the one being applied in Ontario for electrical vehicles (EV). Due to Manitoba’s seasonal climate, our homes, places of work, education and recreation are equipped to support EV infrastructure through the historical use of block-heaters.

With on-going innovation reducing the cost of ownership and electrical impact, the subsidization of EV vehicles could certainly benefit the province of Manitoba in terms of return on investment. Furthermore, these opportunities for increased electrification could be applied to our homes and public transportation. For example, in 2011 Winnipeg Transit partnered with

²⁷⁰ Kavanagh, Sean. ‘Carbon tax revenue should be used to offset rising energy rates: Hydro board chair’. *CBC News – Manitoba*. December 1 2017. Accessed January 29 2018.
<http://www.cbc.ca/news/canada/manitoba/hydro-rates-carbon-tax-1.4428401>

Manitoba Hydro, the federal and provincial government, Red River College, Mitsubishi and Winnipeg-based New Flyer Industries Inc. to launch a prototype electric bus. Four prototypes were put into the City of Winnipeg Transit network as of 2014.²⁷¹ Preliminary findings assessed found that “after more than 300,000 kilometers of data and analysis, the group found the ‘availability metrics’ – the extent to which the buses break down or become unavailable for use – was about the same as for diesel buses.”²⁷² In addition, due to improved battery density, electric buses rolling out of New Flyer in 2018 have a range of about 325 kilometers and are expected to improve to 500 kilometers by 2019.²⁷³ At the same time, the affordability of EV buses has been reduced from one million to today’s average price standard of \$750,000.²⁷⁴ Therefore, not only would the City of Winnipeg be transferring input expenditures from diesel to electricity which, subsequently reduces our carbon impact and further supports Manitoba Hydro, additionally the province via the city of Winnipeg would also be indirectly supporting a local economic linkage, Winnipeg-based manufacturer - New-Flyer Industries Inc. However, public transit is one example of many, with respect to advancing opportunities for increased electrification.

For many decades, federal and provincial leaders have lobbied for a national energy plan addressing electrical generation, specifically those with opportunity to sell, and those who are willing to purchase excess supply. This lobbying strategy while evidently lacking effectiveness must continue, due to changing legislation as a result of national and international environmental commitments. For example, in 2016 the federal government announced the phasing out of coal-

²⁷¹ CBC News. ‘Electric buses return to Winnipeg streets after 49 years’. *CBC News – Manitoba*. May 2 2014. Accessed January 30 2018. <http://www.cbc.ca/news/canada/manitoba/electric-buses-return-to-winnipeg-streets-after-49-years-1.2629788>

²⁷² Brodbeck, Tom. ‘Winnipeg falling behind other cities on electric buses’. January 28 2018. Accessed January 30 2018. <http://winnipeg.sun.com/opinion/columnists/winnipeg-falling-behind-other-cities-on-electric-buses>

²⁷³ *Ibid*, 2018.

²⁷⁴ *Ibid*, 2018.

fired electricity by 2030.²⁷⁵ While the successes of previous federal commitments in reference to the reduction of carbon emissions have been limited, the province of Manitoba and Manitoba Hydro should remain cognizant of this announcement. The province and utility should continue to lobby for federal monies in order to advance electrical infrastructure that would allow for the transfer of hydroelectricity to Manitoba's western neighbours. According to Natural Resources Canada, ten percent of Canada's electrical grid is supplied through coal-fired generation. Furthermore, Natural Resources Canada notes that ninety-one percent of the generation occurs in Alberta (67%) and Saskatchewan (24%).²⁷⁶ With excess capacity and reduced export options, Manitoba should further programs that advance opportunities for electrification, while continuing to search for export opportunities.

7. Intermediate LWR Actions

A historical synopsis of water levels on Lake Winnipeg (hydroelectric reservoir) is a good indicator of drought on the prairies whereby, Lake Winnipeg's watershed amounts to nearly one million square kilometres. With current data and analysis reported by Manitoba Hydro, the findings are clear the province is due for a drought which could be on the immediate horizon. According to Manitoba's Drought Management Strategy, the last drought occurred between 1999 and 2004 resulting in "the largest financial loss in Manitoba Hydro's history, accounting for \$436 million due to reduced flow in its system."²⁷⁷ Manitoba Hydro must remain cognizant of these patterns and therefore, openly monitor relevant projections. However, with excess capacity compounded with current, higher than average water levels, Manitoba Hydro should institute a

²⁷⁵ Natural Resources Canada. 'Coal Facts'. Accessed January 20 2018.
<http://www.nrcan.gc.ca/energy/facts/coal/20071>

²⁷⁶ *Ibid.*

²⁷⁷ Government of Manitoba. 'Manitoba's Drought Management Strategy'. Accessed January 30 2018.
https://www.gov.mb.ca/waterstewardship/water_info/drought/pdf/drought_management_strategy.pdf

drawdown of water levels on Lake Winnipeg via Jenpeg to allow for the rehabilitation of the Netley-Libau marsh, a key component in stabilizing the health of Lake Winnipeg. According to Manitoba's Clean Environment Commission, a "marsh requires periodic low-water periods when seeds of plants such as cattails and bulrushes can germinate on exposed mudflats."²⁷⁸ Therefore, it would be beneficial to calculate current megawatt demand and reduce water levels to allow for marsh rehabilitation and limit shoreline erosion while at the same time act accordingly in response to future precipitation/drought projections.

8. Continuation of Renewal Strategy

The Canadian Electricity Association argues that "Canada will need to invest around \$350 billion in its electricity sector by 2030. That's a national investment of approximately \$17.5 billion per year for 20 years."²⁷⁹ The association notes that the majority of Canada's electrical infrastructure was built during the 1970s and 80s and will need to be upgraded with a focus on safety, reliability, and increased capacity to support growing electrification. Manitoba Hydro recognizes this assessment and notes that "over the next 20 years, we will need to increase the frequency and quantity of replacements, as equipment that was installed up to 80 years ago nears the end of its useful life."²⁸⁰ While Manitoba Hydro's main input capacity is the result of dams built in the 1970s and 80s, the renewal strategy will focus on components that in some cases predate that era including, critical components, distribution stations, generating stations and distribution supply centres. For example, outside the City of Winnipeg's many distribution

²⁷⁸ Manitoba Clean Environment Commission. 'Lake Winnipeg Regulation Report'. Government of Manitoba, 2015. pp. 96 http://www.cecmanitoba.ca/resource/reports/LWR_WEB.pdf

²⁷⁹ Canadian Electricity Association. 'Investing in Tomorrow's Infrastructure'. Accessed January 31 2018. <https://electricity.ca/lead/powering-canadas-economy/investing-tomorrows-infrastructure/>

²⁸⁰ Manitoba Hydro. 'System Renewal'. Accessed January 31 2018. https://www.hydro.mb.ca/projects/system_renewal/index.shtml

stations were originally built because of the Rural Farm Electrification Program that followed the Second World War. These stations need replacement to enhance system capacity. Furthermore, aging dams such as that as Pine Falls are currently being rehabilitated which once complete, will be able to produce additional megawatts for Manitoba Hydro's network capacity. As per the 2013 Manitoba Hydro Corporate Strategic Plan, these investments must continue to maintain a network that is reliable, safe and efficient for all Manitobans.

9. Commission Provincial Inquiry

According to the Manitoba Historical Society, the 1979 Tritschler Commission was initiated due to "improper planning, coupled with government interference which, had cost the public millions of dollars."²⁸¹ Energy Manitoba argues that cost-overruns during the expansionist era ranged between thirteen and two hundred percent.²⁸² Given the historic and contemporary history of Manitoba Hydro including its inexorably link to the province's polity, the province of Manitoba should call an inquiry immediately into its recent activities. Manitoba Hydro is without question the province's most important crown corporation. The knowledge acquired through an inquiry would inform Manitobans for numerous generations and therefore, mitigate any future damages to the utility. Bipole III, the Manitoba-Minnesota Transmission project, Wuskwatim, and Keeyask have all not been on time nor on budget. The Keeyask generating station has nearly doubled in cost since its inception. The Newfoundland and Labrador government announced an inquiry into its troubled Muskrat Falls hydroelectric project which, is five billion over budget

²⁸¹ Goldsborough, Gordon. 'Memorable Manitobans: George Eric Tritschler (1901-1993)'. *The Manitoba Historical Society*: September 10 2016.
http://www.mhs.mb.ca/docs/people/tritschler_ge.shtml

²⁸² Energy Manitoba. 'Summary of 1979 Trischler Report'. Paskanake Project Management: November 2002.
http://www.energymanitoba.org/wusk_archives/documents/Tritschler2002_BHSummary

and experiencing similar delays.²⁸³ Keeyask in its entirety is nearly five billion over budget. The taxpayers and ratepayers deserve answers to this gross mismanagement. Luckily, the government announced a review that will investigate the projects of Bipole III and Keeyask.²⁸⁴

²⁸³ Government of Newfoundland & Labrador. 'Premier Ball Announces Muskrat Falls Public Inquiry'. November 20 2017. Accessed January 31 2018. <http://www.releases.gov.nl.ca/releases/2017/exec/1120n05.aspx>

²⁸⁴ Government of Manitoba. 'Manitoba Launches Review of Manitoba Hydro Development of the Keeyask, Bipole III Projects'. October 18 2018. <https://news.gov.mb.ca/news/index.html?item=44695&posted=2018-10-18>

CHAPTER 10: CONCLUSION

While there are many public policy challenges facing Manitoba that constitute great urgency, the future of Manitoba Hydro is undeniably one of immediate concern. Historically, Manitoba Hydro has been perceived as one of the top public utilities, not only in Manitoba, but on a national and international scale. Manitoba Hydro produces and distributes the most inexpensive electricity in North America that incentivizes commercial economic activity, while also lowering the cost of living for its citizens and its export partners. Manitoba's hydroelectric production has also had a minimal impact on carbon emissions and safety, in comparison to its major productive counterparts such as coal-fired, nuclear or natural gas generation. This advantage, however, has been obtained at the great expense of the environment in terms of flooding, erosion and the loss of wildlife habitat. The utility has also directly and indirectly contributed to the cultural and social destruction of many northern indigenous communities. The political economic structure of the utility's relationship with government, in addition to the realities of market fluctuation and technological advancement, has created a toxic environment that has fostered undue strain on the utility, the province, and its partners.

Contemporary actions by the utility have further exasperated an ongoing financial situation that has enveloped Manitoba's polity. The seriousness of the crisis could threaten its designation as a crown corporation and subsequently the financial health of Manitoba if the current situation is sustained. Competent public policy is required to provide sound direction and leadership in the succeeding decades. The policy considerations outlined in this document lay the foundation for immediate implementation by Manitoba Hydro, which will ensure the return to a stable and secure future for the utility, the province and its partners.

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